

**a-Si TFT LCD Single Chip Driver with
480(RGB) x 864 Resolution , 16.7M-color
without internal GRAM**

Application Notes

Version: V097

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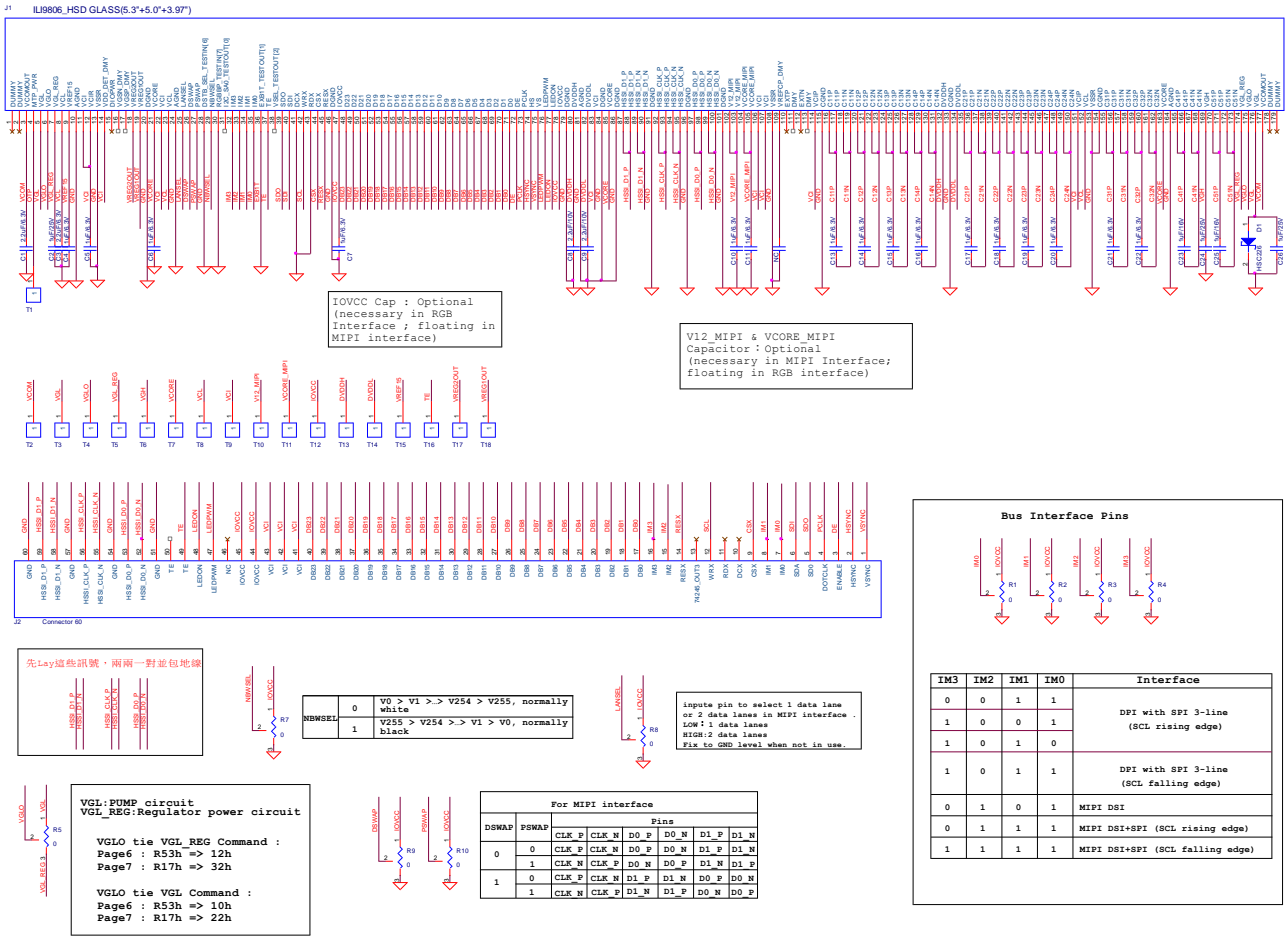
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1. HSD Panel



Note:

1. Please ensure the same naming pin is connected certainly.

1.1 HSD 3.97” (C0401D)Initial Code

```

Void ILI9806E_Initial_Code_HSD(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
delayms(5); // Delay 5ms // This delay time is necessary
LCD_nRESET = 0;
delayms(10); // Delay 10ms // This delay time is necessary
LCD_nRESET = 1;
delayms(120); // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF); // Change to Page 1 CMD
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x08); //Output SDA
LCD_ILI9806E_INDEX(0x10);

LCD_ILI9806E_CMD(0x21); //DE = 1 Active
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x30); //Resolution setting 480 X 800
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x31); //Inversion setting for 2-dot
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x40); //
LCD_ILI9806E_INDEX(0x15);

LCD_ILI9806E_CMD(0x41); //
LCD_ILI9806E_INDEX(0x33);

```

```
LCD_ILI9806E_CMD(0x42);           //
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x43);           //
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x44);           //
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x52);           //Flicker MSB
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x53);           //Flicker LSB
LCD_ILI9806E_INDEX(0x6E);

LCD_ILI9806E_CMD(0x57);           //Low voltage detection
LCD_ILI9806E_INDEX(0x50);

LCD_ILI9806E_CMD(0x60);           //
LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0x61);           //
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x62);           //
LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0x63);           //
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xA0);           //Positive Gamma
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0xA1);           //
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0xA2);           //
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0xA3);           //
LCD_ILI9806E_INDEX(0x0F);
```

```

LCD_ILI9806E_CMD(0xA4);           //
LCD_ILI9806E_INDEX(0x09);
LCD_ILI9806E_CMD(0xA5);           //
LCD_ILI9806E_INDEX(0x18);

LCD_ILI9806E_CMD(0xA6);           //
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0xA7);           //
LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0xA8);           //
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0xA9);           //
LCD_ILI9806E_INDEX(0x07);
LCD_ILI9806E_CMD(0xAA);           //
LCD_ILI9806E_INDEX(0x05);
LCD_ILI9806E_CMD(0xAB);           //
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0xAC);           //
LCD_ILI9806E_INDEX(0x0B);
LCD_ILI9806E_CMD(0xAD);           //
LCD_ILI9806E_INDEX(0x2E);
LCD_ILI9806E_CMD(0xAE);           //
LCD_ILI9806E_INDEX(0x28);
LCD_ILI9806E_CMD(0xAF);           //
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xC0);           //Negative Gamma
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0xC1);           //
LCD_ILI9806E_INDEX(0x02);
LCD_ILI9806E_CMD(0xC2);           //
LCD_ILI9806E_INDEX(0x09);
LCD_ILI9806E_CMD(0xC3);           //
LCD_ILI9806E_INDEX(0x0F);
LCD_ILI9806E_CMD(0xC4);           //
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0xC5);           //
LCD_ILI9806E_INDEX(0x17);

```

```

LCD_ILI9806E_CMD(0xC6);           //
LCD_ILI9806E_INDEX(0x0B);
LCD_ILI9806E_CMD(0xC7);           //
LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0xC8);           //
LCD_ILI9806E_INDEX(0x03);

LCD_ILI9806E_CMD(0xC9);           //
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0xCA);           //
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_CMD(0xCB);           //
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_CMD(0xCC);           //
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0xCD);           //
LCD_ILI9806E_INDEX(0x2D);
LCD_ILI9806E_CMD(0xCE);           //
LCD_ILI9806E_INDEX(0x29);
LCD_ILI9806E_CMD(0xCF);           //
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xFF);           // Change to Page 6 CMD for GIP timing
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0x00);           //
LCD_ILI9806E_INDEX(0x21);
LCD_ILI9806E_CMD(0x01);           //
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_CMD(0x02);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x03);           //
LCD_ILI9806E_INDEX(0x00);

```

LCD_ILI9806E_CMD(0x04); //
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x05); //
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x06); //
LCD_ILI9806E_INDEX(0x80);
LCD_ILI9806E_CMD(0x07); //
LCD_ILI9806E_INDEX(0x02);
LCD_ILI9806E_CMD(0x08); //
LCD_ILI9806E_INDEX(0x05);
LCD_ILI9806E_CMD(0x09); //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0A); //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0B); //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0C); //
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0x0D); //
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0x0E); //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0F); //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x10); //
LCD_ILI9806E_INDEX(0xF0);
LCD_ILI9806E_CMD(0x11); //
LCD_ILI9806E_INDEX(0xF4);
LCD_ILI9806E_CMD(0x12); //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x13); //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x14); //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x15); //
LCD_ILI9806E_INDEX(0xC0);
LCD_ILI9806E_CMD(0x16); //
LCD_ILI9806E_INDEX(0x08);


```
LCD_ILI9806E_CMD(0x17);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x18);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x19);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1A);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1B);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1C);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1D);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x20);           //
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x21);           //
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0x22);           //
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0x23);           //
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0x24);           //
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x25);           //
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0x26);           //
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0x27);           //
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0x30);           //
LCD_ILI9806E_INDEX(0x13);
LCD_ILI9806E_CMD(0x31);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x32);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x33);           //
LCD_ILI9806E_INDEX(0x22);
```

```

LCD_ILI9806E_CMD(0x34);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x35);           //
LCD_ILI9806E_INDEX(0xBB);
LCD_ILI9806E_CMD(0x36);           //
LCD_ILI9806E_INDEX(0xAA);
LCD_ILI9806E_CMD(0x37);           //
LCD_ILI9806E_INDEX(0xDD);
LCD_ILI9806E_CMD(0x38);           //
LCD_ILI9806E_INDEX(0xCC);
LCD_ILI9806E_CMD(0x39);           //
LCD_ILI9806E_INDEX(0x66);
LCD_ILI9806E_CMD(0x3A);           //
LCD_ILI9806E_INDEX(0x77);
LCD_ILI9806E_CMD(0x3B);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3C);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3D);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3E);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3F);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x40);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x52);           //
LCD_ILI9806E_INDEX(0x10);         //
LCD_ILI9806E_CMD(0x53);           //
LCD_ILI9806E_INDEX(0x10);         //Default
                                   //LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG;

LCD_ILI9806E_CMD(0xFF);           // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x07);

```

```

LCD_ILI9806E_CMD(0x17);           //
LCD_ILI9806E_INDEX(0x22);        //Default
                                   //LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG;

LCD_ILI9806E_CMD(0x02);          //
LCD_ILI9806E_INDEX(0x77);        //
LCD_ILI9806E_CMD(0XE1);          //
LCD_ILI9806E_INDEX(0x79);        //
LCD_ILI9806E_CMD(0X26);          //
LCD_ILI9806E_INDEX(0XB2);        //

LCD_ILI9806E_CMD(0xFF);          // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x11);          //Exit Sleep
Delayms(120);
LCD_ILI9806E_CMD(0x29);          // Display On
Delayms(10);
LCD_ILI9806E_CMD(0x35);          // TE On
Delayms(10);
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF);           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00);
Delaysms(1)
LCD_ILI9806E_CMD(0x28);           //Display Off
Delaysms(10);
LCD_ILI9806E_CMD(0x10);           //Sleep-In
Delaysms(120);
}
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF);           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00);
Delaysms(1)
LCD_ILI9806E_CMD(0x11);           // Sleep-Out
Delaysms(120);
LCD_ILI9806E_CMD(0x29);           // Display On
Delaysms(10);
}
```

1.2 HSD 5.0” (C0500)Initial Code

```

Void ILI9806E_Initial_Code_HSD(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
delayms(5); // Delay 5ms // This delay time is necessary
LCD_nRESET = 0;
delayms(10); // Delay 10ms // This delay time is necessary
LCD_nRESET = 1;
delayms(120); // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF); // Change to Page 1 CMD
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x08); //Output SDA
LCD_ILI9806E_INDEX(0x10);

LCD_ILI9806E_CMD(0x21); //DE = 1 Active
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x30); //Resolution setting 480 X 800
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x31); //Inversion setting for 2-dot
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x40); //BT
LCD_ILI9806E_INDEX(0x15);

LCD_ILI9806E_CMD(0x41); //Default
LCD_ILI9806E_INDEX(0x33);

```

```

LCD_ILI9806E_CMD(0x42);           //
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x43);           //Default
LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0x44);           //
LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0x50);           //VREG1OUT voltage
LCD_ILI9806E_INDEX(0x80);

LCD_ILI9806E_CMD(0x51);           //VREG2OUT voltage
LCD_ILI9806E_INDEX(0x80);

LCD_ILI9806E_CMD(0x52);           //Flicker MSB
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x53);           //Flicker LSB
LCD_ILI9806E_INDEX(0x64);

LCD_ILI9806E_CMD(0x57);           //Low voltage detection
LCD_ILI9806E_INDEX(0x50);

LCD_ILI9806E_CMD(0x60);           //
LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0x61);           //
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x62);           //
LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0x63);           //
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xA0);           //Positive Gamma
LCD_ILI9806E_INDEX(0x00);

```

```

LCD_ILI9806E_CMD(0xA1);           //
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0xA2);           //
LCD_ILI9806E_INDEX(0x07);
LCD_ILI9806E_CMD(0xA3);           //
LCD_ILI9806E_INDEX(0x0F);
LCD_ILI9806E_CMD(0xA4);           //
LCD_ILI9806E_INDEX(0x09);
LCD_ILI9806E_CMD(0xA5);           //
LCD_ILI9806E_INDEX(0x1A);
LCD_ILI9806E_CMD(0xA6);           //
LCD_ILI9806E_INDEX(0x0B);
LCD_ILI9806E_CMD(0xA7);           //
LCD_ILI9806E_INDEX(0x0A);

LCD_ILI9806E_CMD(0xA8);           //
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0xA9);           //
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0xAA);           //
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_CMD(0xAB);           //
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_CMD(0xAC);           //
LCD_ILI9806E_INDEX(0x0C);
LCD_ILI9806E_CMD(0xAD);           //
LCD_ILI9806E_INDEX(0x2D);
LCD_ILI9806E_CMD(0xAE);           //
LCD_ILI9806E_INDEX(0x28);
LCD_ILI9806E_CMD(0xAF);           //
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xC0);           //Negative Gamma
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0xC1);           //
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0xC2);           //
LCD_ILI9806E_INDEX(0x08);

```

```

LCD_ILI9806E_CMD(0xC3);           //
LCD_ILI9806E_INDEX(0x0F);
LCD_ILI9806E_CMD(0xC4);           //
LCD_ILI9806E_INDEX(0x09);
LCD_ILI9806E_CMD(0xC5);           //
LCD_ILI9806E_INDEX(0x19);
LCD_ILI9806E_CMD(0xC6);           //
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0xC7);           //
LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0xC8);           //
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0xC9);           //
LCD_ILI9806E_INDEX(0x07);
LCD_ILI9806E_CMD(0xCA);           //
LCD_ILI9806E_INDEX(0x05);
LCD_ILI9806E_CMD(0xCB);           //
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_CMD(0xCC);           //
LCD_ILI9806E_INDEX(0x0B);
LCD_ILI9806E_CMD(0xCD);           //
LCD_ILI9806E_INDEX(0x2C);
LCD_ILI9806E_CMD(0xCE);           //
LCD_ILI9806E_INDEX(0x28);
LCD_ILI9806E_CMD(0xCF);           //
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xFF);           // Change to Page 6 CMD for GIP timing
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0x00);           //
LCD_ILI9806E_INDEX(0x21);
LCD_ILI9806E_CMD(0x01);           //
LCD_ILI9806E_INDEX(0x06);

```



```
LCD_ILI9806E_CMD(0x02);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x03);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x04);           //
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x05);           //
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x06);           //
LCD_ILI9806E_INDEX(0x80);
LCD_ILI9806E_CMD(0x07);           //
LCD_ILI9806E_INDEX(0x02);
LCD_ILI9806E_CMD(0x08);           //
LCD_ILI9806E_INDEX(0x05);
LCD_ILI9806E_CMD(0x09);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0A);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0B);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0C);           //
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0x0D);           //
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0x0E);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0F);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x10);           //
LCD_ILI9806E_INDEX(0xF0);
LCD_ILI9806E_CMD(0x11);           //
LCD_ILI9806E_INDEX(0xF4);
LCD_ILI9806E_CMD(0x12);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x13);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x14);           //
LCD_ILI9806E_INDEX(0x00);
```

```

LCD_ILI9806E_CMD(0x15);           //
LCD_ILI9806E_INDEX(0xC0);
LCD_ILI9806E_CMD(0x16);           //
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0x17);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x18);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x19);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1A);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1B);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1C);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1D);           //
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x20);           //
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x21);           //
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0x22);           //
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0x23);           //
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0x24);           //
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x25);           //
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0x26);           //
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0x27);           //
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0x30);           //
LCD_ILI9806E_INDEX(0x13);
LCD_ILI9806E_CMD(0x31);           //
LCD_ILI9806E_INDEX(0x22);

```

```

LCD_ILI9806E_CMD(0x32);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x33);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x34);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x35);           //
LCD_ILI9806E_INDEX(0xBB);
LCD_ILI9806E_CMD(0x36);           //
LCD_ILI9806E_INDEX(0xAA);
LCD_ILI9806E_CMD(0x37);           //
LCD_ILI9806E_INDEX(0xDD);
LCD_ILI9806E_CMD(0x38);           //
LCD_ILI9806E_INDEX(0xCC);
LCD_ILI9806E_CMD(0x39);           //
LCD_ILI9806E_INDEX(0x66);
LCD_ILI9806E_CMD(0x3A);           //
LCD_ILI9806E_INDEX(0x77);
LCD_ILI9806E_CMD(0x3B);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3C);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3D);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3E);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3F);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x40);           //
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x52);           //
LCD_ILI9806E_INDEX(0x10);         //
LCD_ILI9806E_CMD(0x53);           //
LCD_ILI9806E_INDEX(0x10);         //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG;

```

```

LCD_ILI9806E_CMD(0xFF);           // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0x17);           //
LCD_ILI9806E_INDEX(0x22);         //Default
                                   //LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG;

LCD_ILI9806E_CMD(0x02);           //
LCD_ILI9806E_INDEX(0x77);         //
LCD_ILI9806E_CMD(0xE1);           //
LCD_ILI9806E_INDEX(0x79);         //
LCD_ILI9806E_CMD(0x26);           //
LCD_ILI9806E_INDEX(0xB2);         //

LCD_ILI9806E_CMD(0xFF);           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x11);           //Exit Sleep
Delayms(120);
LCD_ILI9806E_CMD(0x29);           // Display On
Delayms(10);
LCD_ILI9806E_CMD(0x35);           // TE On
Delayms(10);
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF);           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00);
Delaysms(1);
LCD_ILI9806E_CMD(0x28);           //Display Off
Delaysms(10);
LCD_ILI9806E_CMD(0x10);           //Sleep-In
Delaysms(120);
}
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF);           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00);
Delaysms(1)
LCD_ILI9806E_CMD(0x11);           // Sleep-Out
Delaysms(120);
LCD_ILI9806E_CMD(0x29);           // Display On
Delaysms(10);
}
```

1.3 HSD 5.0” (C0504D)Initial Code

```

Void ILI9806E_Initial_Code_BOE(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
delayms(5); // Delay 5ms // This delay time is necessary
LCD_nRESET = 0;
delayms(10); // Delay 10ms // This delay time is necessary
LCD_nRESET = 1;
delayms(120); // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF); //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x08); // Output SDA
LCD_ILI9806E_INDEX(0x10);

LCD_ILI9806E_CMD(0x21); // DE = 1 Active
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x30); // Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x31); // Inversion setting for for 2-dot
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x40); // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x16);

LCD_ILI9806E_CMD(0x41); // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x33);

```

```

LCD_ILI9806E_CMD(0x42);           // VGH/VGL
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x43);
LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0x44);
LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0x50);           // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x80);

LCD_ILI9806E_CMD(0x51);           // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x80);

LCD_ILI9806E_CMD(0x52);           // Flicker MSB
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x53);           // Flicker LSB
LCD_ILI9806E_INDEX(0x63);

LCD_ILI9806E_CMD(0x57);           //Low voltage detection
LCD_ILI9806E_INDEX(0x50);

LCD_ILI9806E_CMD(0x60);           // SDTI
LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0x61);           // CRTI
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x62);           // EQTI
LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0x63);           // PCTI
LCD_ILI9806E_INDEX(0x00);

```

LCD_ILI9806E_CMD(0XA0); // Positive Gamma

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XA1);

LCD_ILI9806E_INDEX(0x17);

LCD_ILI9806E_CMD(0XA2);

LCD_ILI9806E_INDEX(0x1E);

LCD_ILI9806E_CMD(0XA3);

LCD_ILI9806E_INDEX(0x0C);

LCD_ILI9806E_CMD(0XA4);

LCD_ILI9806E_INDEX(0x05);

LCD_ILI9806E_CMD(0XA5);

LCD_ILI9806E_INDEX(0x0A);

LCD_ILI9806E_CMD(0XA6);

LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0XA7);

LCD_ILI9806E_INDEX(0x05);

LCD_ILI9806E_CMD(0XA8);

LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0XA9);

LCD_ILI9806E_INDEX(0x0C);

LCD_ILI9806E_CMD(0XAA);

LCD_ILI9806E_INDEX(0x11);

LCD_ILI9806E_CMD(0XAB);

LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0XAC);

LCD_ILI9806E_INDEX(0x0F);

LCD_ILI9806E_CMD(0XAD);

LCD_ILI9806E_INDEX(0x16)

LCD_ILI9806E_CMD(0XAE);

LCD_ILI9806E_INDEX(0x0E)

LCD_ILI9806E_CMD(0XAF);

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XC0); // Negative Gamma

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XC1);

LCD_ILI9806E_INDEX(0x17);

LCD_ILI9806E_CMD(0XC2);
LCD_ILI9806E_INDEX(0x1E);
LCD_ILI9806E_CMD(0XC3);
LCD_ILI9806E_INDEX(0x0C);
LCD_ILI9806E_CMD(0XC4);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_CMD(0XC5);
LCD_ILI9806E_INDEX(0x0B);
LCD_ILI9806E_CMD(0XC6);
LCD_ILI9806E_INDEX(0x07);
LCD_ILI9806E_CMD(0XC7);
LCD_ILI9806E_INDEX(0x04);

LCD_ILI9806E_CMD(0XC8);
LCD_ILI9806E_INDEX(0x07);
LCD_ILI9806E_CMD(0XC9);
LCD_ILI9806E_INDEX(0x0C);
LCD_ILI9806E_CMD(0XCA);
LCD_ILI9806E_INDEX(0x11);
LCD_ILI9806E_CMD(0XCB);
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0XCC);
LCD_ILI9806E_INDEX(0x0E);
LCD_ILI9806E_CMD(0XCD);
LCD_ILI9806E_INDEX(0x16);
LCD_ILI9806E_CMD(0XCE);
LCD_ILI9806E_INDEX(0x0E);
LCD_ILI9806E_CMD(0XCF);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XFF);
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x06);

//Change to page6 for GIP timing

LCD_ILI9806E_CMD(0x00);
LCD_ILI9806E_INDEX(0x21);

LCD_ILI9806E_CMD(0x01);
LCD_ILI9806E_INDEX(0x09);
LCD_ILI9806E_CMD(0x02);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x03);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x04);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x05);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x06);
LCD_ILI9806E_INDEX(0x80);
LCD_ILI9806E_CMD(0x07);
LCD_ILI9806E_INDEX(0x05);
LCD_ILI9806E_CMD(0x08);
LCD_ILI9806E_INDEX(0x02);
LCD_ILI9806E_CMD(0x09);
LCD_ILI9806E_INDEX(0x80);
LCD_ILI9806E_CMD(0x0A);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0B);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0C);
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0x0D);
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0x0E);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0F);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x10);
LCD_ILI9806E_INDEX(0xE0);
LCD_ILI9806E_CMD(0x11);
LCD_ILI9806E_INDEX(0xE4);
LCD_ILI9806E_CMD(0x12);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_CMD(0x13);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x14) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x15) ;
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x31) ;

```

LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0x32) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x33) ;
LCD_ILI9806E_INDEX(0xEE) ;
LCD_ILI9806E_CMD(0x34) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_CMD(0x35) ;
LCD_ILI9806E_INDEX(0xBB) ;
LCD_ILI9806E_CMD(0x36) ;
LCD_ILI9806E_INDEX(0xCA) ;
LCD_ILI9806E_CMD(0x37) ;
LCD_ILI9806E_INDEX(0xDD) ;
LCD_ILI9806E_CMD(0x38) ;
LCD_ILI9806E_INDEX(0xAC) ;
LCD_ILI9806E_CMD(0x39) ;
LCD_ILI9806E_INDEX(0x76) ;
LCD_ILI9806E_CMD(0x3A) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x3B) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3C) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x77) ; //
LCD_ILI9806E_CMD(0xE1) ; //
LCD_ILI9806E_INDEX(0x79) ; //
LCD_ILI9806E_CMD(0x26) ; //
LCD_ILI9806E_INDEX(0xB2) ; //

LCD_ILI9806E_CMD(0xFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ; //Change to page0

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x35) ; // TE On
Delaysms(10) ;
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1) ;
LCD_ILI9806E_CMD(0x28) ;           //Display Off
Delaysms(10) ;
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ;           // Display On
Delaysms(10) ;
}
```

1.4 HSD 5.3” (C0501)Initial Code

```

Void ILI9806E_Initial_Code_HSD(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
delayms(5); // Delay 5ms // This delay time is necessary
LCD_nRESET = 0;
delayms(10); // Delay 10ms // This delay time is necessary
LCD_nRESET = 1;
delayms(120); // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; // Change to Page 1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; //Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; //DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; //Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x31) ; //Inversion setting for 2-dot
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x40) ; //Default
LCD_ILI9806E_INDEX(0x16) ;

LCD_ILI9806E_CMD(0x41) ; //Default
LCD_ILI9806E_INDEX(0x44) ;
LCD_ILI9806E_CMD(0x42) ; //
LCD_ILI9806E_INDEX(0x02) ;

```

```

LCD_ILI9806E_CMD(0x43) ; //Default
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x44) ; //
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x50) ; //VREG1OUT voltage
LCD_ILI9806E_INDEX(0x80) ;

LCD_ILI9806E_CMD(0x51) ; //VREG2OUT voltage
LCD_ILI9806E_INDEX(0x80) ;

LCD_ILI9806E_CMD(0x52) ; //Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ; //Flicker LSB
LCD_ILI9806E_INDEX(0x40) ;

LCD_ILI9806E_CMD(0x57) ; //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ; //
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x61) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ; //
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x63) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xA0) ; //Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xA1) ; //
LCD_ILI9806E_INDEX(0x05) ;

```



```

LCD_ILI9806E_CMD(0xA2) ; //
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xA3) ; //
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0xA4) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xA5) ; //
LCD_ILI9806E_INDEX(0x19) ;
LCD_ILI9806E_CMD(0xA6) ; //
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0xA7) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xA8) ; //
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0xA9) ; //
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xAA) ; //
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0xAB) ; //
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xAC) ; //
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xAD) ; //
LCD_ILI9806E_INDEX(0x2C) ;
LCD_ILI9806E_CMD(0xAE) ; //
LCD_ILI9806E_INDEX(0x28) ;
LCD_ILI9806E_CMD(0xAF) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC0) ; //Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xC1) ; //
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0xC2) ; //
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xC3) ; //
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0xC4) ; //
LCD_ILI9806E_INDEX(0x0A) ;

```

```

LCD_ILI9806E_CMD(0xC5) ; //
LCD_ILI9806E_INDEX(0x18) ;
LCD_ILI9806E_CMD(0xC6) ; //
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xC7) ; //
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xC8) ; //
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xC9) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xCA) ; //
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0xCB) ; //
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xCC) ; //
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0xCD) ; //
LCD_ILI9806E_INDEX(0x2B) ;
LCD_ILI9806E_CMD(0xCE) ; //
LCD_ILI9806E_INDEX(0x27) ;
LCD_ILI9806E_CMD(0xCF) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 6 CMD for GIP timing
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x00) ; //
LCD_ILI9806E_INDEX(0x21) ;
LCD_ILI9806E_CMD(0x01) ; //
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x03) ; //
LCD_ILI9806E_INDEX(0x00) ;

```

```
LCD_ILI9806E_CMD(0x04) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x05) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x06) ; //
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ; //
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0x08) ; //
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0x09) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0A) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ; //
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0x0D) ; //
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0x0E) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0F) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ; //
LCD_ILI9806E_INDEX(0xF0) ;
LCD_ILI9806E_CMD(0x11) ; //
LCD_ILI9806E_INDEX(0xF4) ;
LCD_ILI9806E_CMD(0x12) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x14) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x15) ; //
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ; //
LCD_ILI9806E_INDEX(0x08) ;
```

```

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ; //
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ; //
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ; //
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ; //
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ; //
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ; //
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ; //
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0x31) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x32) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x33) ; //
LCD_ILI9806E_INDEX(0x22) ;

```

```

LCD_ILI9806E_CMD(0x34) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x35) ; //
LCD_ILI9806E_INDEX(0xBB) ;
LCD_ILI9806E_CMD(0x36) ; //
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0x37) ; //
LCD_ILI9806E_INDEX(0xDD) ;
LCD_ILI9806E_CMD(0x38) ; //
LCD_ILI9806E_INDEX(0xCC) ;
LCD_ILI9806E_CMD(0x39) ; //
LCD_ILI9806E_INDEX(0x66) ;
LCD_ILI9806E_CMD(0x3A) ; //
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0x3B) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3C) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

```

```

LCD_ILI9806E_CMD(0x17) ;           //
LCD_ILI9806E_INDEX(0x22) ;       //Default
                                   //LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ;         //
LCD_ILI9806E_INDEX(0x77) ;       //
LCD_ILI9806E_CMD(0XE1) ;         //
LCD_ILI9806E_INDEX(0x79) ;       //
LCD_ILI9806E_CMD(0X26) ;         //
LCD_ILI9806E_INDEX(0XB2) ;       //

LCD_ILI9806E_CMD(0xFF) ;         // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x11);          //Exit Sleep
Delayms(120);
LCD_ILI9806E_CMD(0x29);          // Display On
Delayms(10);
LCD_ILI9806E_CMD(0x35);          // TE On
Delayms(10);
}

```

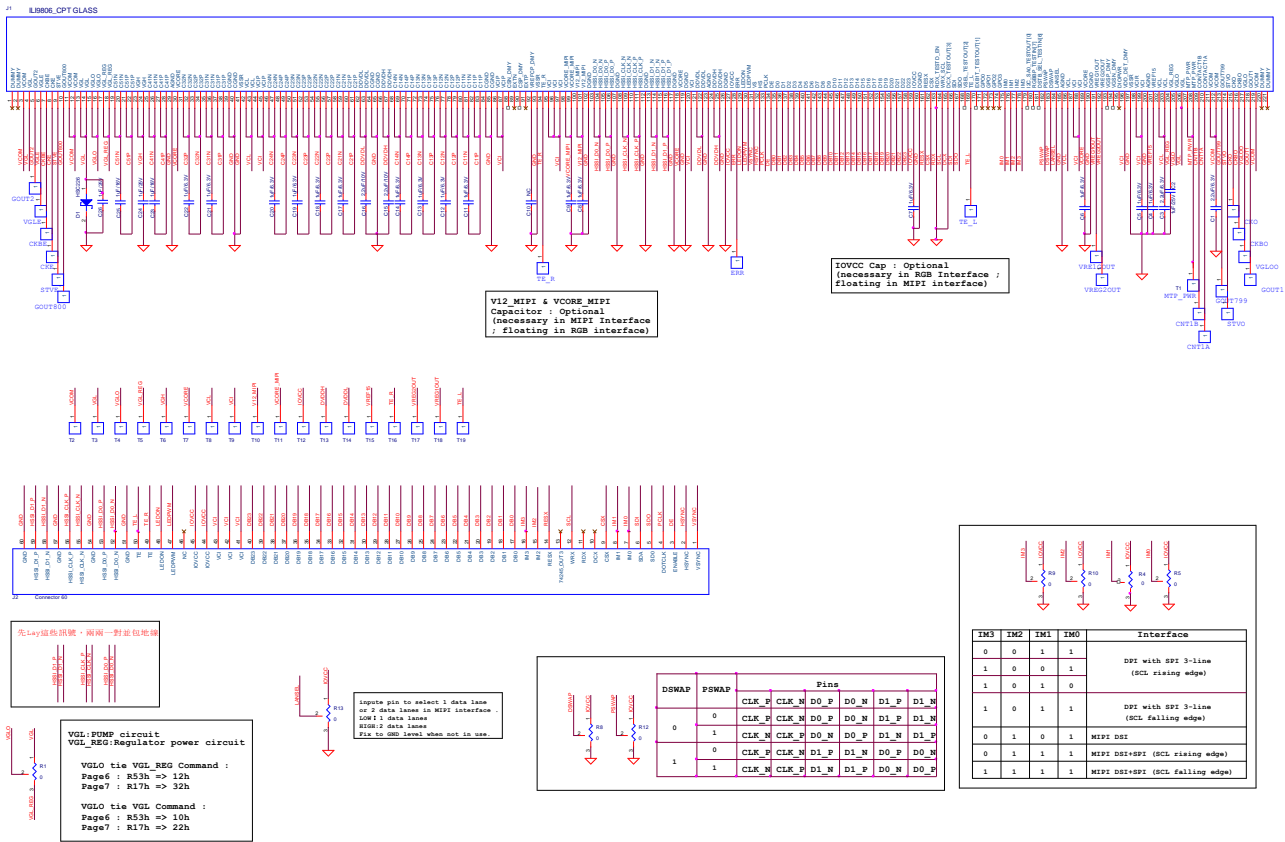
Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1);
LCD_ILI9806E_CMD(0x28);           //Display Off
Delaysms(10);
LCD_ILI9806E_CMD(0x10);           //Sleep-In
Delaysms(120);
}
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11);           // Sleep-Out
Delaysms(120);
LCD_ILI9806E_CMD(0x29);           // Display On
Delaysms(10);
}
```

2. CPT Panel



Note:

1. Please ensure the same naming pin is connected certainly.

2.1 CPT 3.97” (040LJ) Initial Code

```

Void ILI9806E_Initial_Code_CPT(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; // Change to Page 1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; //Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; //DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; //Resolution setting 480 X 800
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x31) ; //Inversion setting for 2-dot
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x40) ; //
LCD_ILI9806E_INDEX(0x11) ;

LCD_ILI9806E_CMD(0x41) ; //
LCD_ILI9806E_INDEX(0x11) ;

```

```

LCD_ILI9806E_CMD(0x42) ; //
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x43) ; //
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x44) ; //
LCD_ILI9806E_INDEX(0x87) ;

LCD_ILI9806E_CMD(0x50) ; //VREG1OUT voltage
LCD_ILI9806E_INDEX(0x70) ;

LCD_ILI9806E_CMD(0x51) ; //VREG2OUT voltage
LCD_ILI9806E_INDEX(0x70) ;

LCD_ILI9806E_CMD(0x52) ; //Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ; //Flicker LSB
LCD_ILI9806E_INDEX(0x4C) ;

LCD_ILI9806E_CMD(0x57) ; //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ; //
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x61) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ; //
LCD_ILI9806E_INDEX(0x0A) ;

LCD_ILI9806E_CMD(0x63) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xA0) ; //Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;

```

```

LCD_ILI9806E_CMD(0xA1) ; //
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xA2) ; //
LCD_ILI9806E_INDEX(0x15) ;
LCD_ILI9806E_CMD(0xA3) ; //
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0xA4) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xA5) ; //
LCD_ILI9806E_INDEX(0x19) ;
LCD_ILI9806E_CMD(0xA6) ; //
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xA7) ; //
LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0xA8) ; //
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0xA9) ; //
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xAA) ; //
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xAB) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xAC) ; //
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0xAD) ; //
LCD_ILI9806E_INDEX(0x31) ;
LCD_ILI9806E_CMD(0xAE) ; //
LCD_ILI9806E_INDEX(0x24) ;
LCD_ILI9806E_CMD(0xAF) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC0) ; //Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xC1) ; //
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0xC2) ; //
LCD_ILI9806E_INDEX(0x1A) ;

```

```

LCD_ILI9806E_CMD(0xC3) ; //
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xC4) ; //
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xC5) ; //
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xC6) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xC7) ; //
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0xC8) ; //
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xC9) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0xCA) ; //
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xCB) ; //
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0xCC) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xCD) ; //
LCD_ILI9806E_INDEX(0x25) ;
LCD_ILI9806E_CMD(0xCE) ; //
LCD_ILI9806E_INDEX(0x25) ;
LCD_ILI9806E_CMD(0xCF) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 6 CMD for GIP timing
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x00) ; //
LCD_ILI9806E_INDEX(0x21) ;
LCD_ILI9806E_CMD(0x01) ; //
LCD_ILI9806E_INDEX(0x06) ;

```

```
LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x03) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x04) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x05) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x06) ; //
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ; //
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0x08) ; //
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0x09) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0A) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x0D) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x0E) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0F) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ; //
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0x11) ; //
LCD_ILI9806E_INDEX(0xF0) ;
LCD_ILI9806E_CMD(0x12) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x14) ; //
LCD_ILI9806E_INDEX(0x00) ;
```

```
LCD_ILI9806E_CMD(0x15) ; //
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ; //
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ; //
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ; //
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ; //
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ; //
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ; //
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ; //
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ; //
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0x31) ; //
LCD_ILI9806E_INDEX(0x22) ;
```

```

LCD_ILI9806E_CMD(0x32) ; //
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0x33) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x34) ; //
LCD_ILI9806E_INDEX(0x66) ;
LCD_ILI9806E_CMD(0x35) ; //
LCD_ILI9806E_INDEX(0x88) ;
LCD_ILI9806E_CMD(0x36) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x37) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x38) ; //
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0x39) ; //
LCD_ILI9806E_INDEX(0xCC) ;
LCD_ILI9806E_CMD(0x3A) ; //
LCD_ILI9806E_INDEX(0xBB) ;
LCD_ILI9806E_CMD(0x3B) ; //
LCD_ILI9806E_INDEX(0xDD) ;
LCD_ILI9806E_CMD(0x3C) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x77) ; //
LCD_ILI9806E_CMD(0xE1) ; //
LCD_ILI9806E_INDEX(0x79) ; //
LCD_ILI9806E_CMD(0x26) ; //
LCD_ILI9806E_INDEX(0xB2) ; //

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x35); // TE On
Delaysms(10);
}

```


Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delays(1);

LCD_ILI9806E_CMD(0x28) ;           //Display Off
Delays(10) ;
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In
Delays(120) ;
}
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delays(1)
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out
Delays(120) ;
LCD_ILI9806E_CMD(0x29) ;           // Display On
Delays(10) ;
}
```

2.2 CPT 4.5” (CLAF045LH41) Initial Code

```

Void ILI9806E_Initial_Code_BOE(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; // Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; // DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; // Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for Column
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x40) ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x15) ;

LCD_ILI9806E_CMD(0x41) ; // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x55) ;

```

```

LCD_ILI9806E_CMD(0x42) ;           // VGH/VGL
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x43) ;
LCD_ILI9806E_INDEX(0x0C) ;

LCD_ILI9806E_CMD(0x44) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x50) ;           // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x51) ;           // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x52) ;           // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ;           // Flicker LSB
LCD_ILI9806E_INDEX(0x35) ;

LCD_ILI9806E_CMD(0x57) ;           //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ;           // SDTI
LCD_ILI9806E_INDEX(0x13) ;

LCD_ILI9806E_CMD(0x61) ;           // CRTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ;           // EQTI
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x63) ;           // PCTI
LCD_ILI9806E_INDEX(0x00) ;

```

```
LCD_ILI9806E_CMD(0xA0) ;           // Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xA1) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xA2) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xA3) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xA4) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xA5) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xA6) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xA7) ;
LCD_ILI9806E_INDEX(0x05) ;
```

```
LCD_ILI9806E_CMD(0xA8) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xA9) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0xAA) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xAB) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xAC) ;
LCD_ILI9806E_INDEX(0x0E) ;
LCD_ILI9806E_CMD(0xAD) ;
LCD_ILI9806E_INDEX(0x15) ;
LCD_ILI9806E_CMD(0xAE) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xAF) ;
LCD_ILI9806E_INDEX(0x00) ;
```

```
LCD_ILI9806E_CMD(0xC0) ;           // Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xC1) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xC2) ;
```

LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xC3) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xC4) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xC5) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xC6) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xC7) ;
LCD_ILI9806E_INDEX(0x05) ;

LCD_ILI9806E_CMD(0xC8) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xC9) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xCA) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xCB) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xCC) ;
LCD_ILI9806E_INDEX(0x0E) ;
LCD_ILI9806E_CMD(0xCD) ;
LCD_ILI9806E_INDEX(0x15) ;
LCD_ILI9806E_CMD(0xCE) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0xCF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

//Change to page6 for GIP timing

LCD_ILI9806E_CMD(0x00) ;
LCD_ILI9806E_INDEX(0x21) ;

LCD_ILI9806E_CMD(0x01) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x03) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x04) ;
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x05) ;
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x08) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x09) ;
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0x0A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0x0D) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0x0E) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ;
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0x11) ;
LCD_ILI9806E_INDEX(0xE0) ;
LCD_ILI9806E_CMD(0x12) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ;
LCD_ILI9806E_INDEX(0x85) ;
LCD_ILI9806E_CMD(0x14) ;

LCD_ILI9806E_INDEX(0x85) ;
LCD_ILI9806E_CMD(0x15) ;
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x31) ;
LCD_ILI9806E_INDEX(0x22) ;

```

LCD_ILI9806E_CMD(0x32) ;
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0x33) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x34) ;
LCD_ILI9806E_INDEX(0x86) ;
LCD_ILI9806E_CMD(0x35) ;
LCD_ILI9806E_INDEX(0x68) ;
LCD_ILI9806E_CMD(0x36) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x37) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x38) ;
LCD_ILI9806E_INDEX(0xCA) ;
LCD_ILI9806E_CMD(0x39) ;
LCD_ILI9806E_INDEX(0xAC) ;
LCD_ILI9806E_CMD(0x3A) ;
LCD_ILI9806E_INDEX(0xBB) ;
LCD_ILI9806E_CMD(0x3B) ;
LCD_ILI9806E_INDEX(0xDD) ;
LCD_ILI9806E_CMD(0x3C) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x54) ; //LVD for XOA GIP
LCD_ILI9806E_INDEX(0x13) ;

```



```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0xE1) ;
LCD_ILI9806E_INDEX(0x79) ;
LCD_ILI9806E_CMD(0xB3) ; //LVD for XOA setting
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0xFF) ; //Change to page0
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x35) ; // TE On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delaysms(10) ;
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1) ;  
LCD_ILI9806E_CMD(0x28) ;           //Display Off  
Delaysms(10) ;  
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In  
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1)  
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out  
Delaysms(120) ;  
LCD_ILI9806E_CMD(0x29) ;           // Display On  
Delaysms(10) ;  
}
```

2.3 CPT 4.5” (045LA) Initial Code

```

Void ILI9806E_Initial_Code_CPT(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; // Change to Page 1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; //Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; //DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; //Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x31) ; // Column Inversion
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x40) ; //
LCD_ILI9806E_INDEX(0x14) ;

LCD_ILI9806E_CMD(0x41) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x42) ; //
LCD_ILI9806E_INDEX(0x02) ;

```

```

LCD_ILI9806E_CMD(0x43) ; //
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x44) ; //
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x50) ; //
LCD_ILI9806E_INDEX(0x75) ;

LCD_ILI9806E_CMD(0x51) ; //
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x52) ; //Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ; //Flicker LSB
LCD_ILI9806E_INDEX(0x29) ;

LCD_ILI9806E_CMD(0x57) ; //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ; //
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x61) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ; //
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x63) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xA0) ; //Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xA1) ; //
LCD_ILI9806E_INDEX(0x09) ;

```

```

LCD_ILI9806E_CMD(0xA2) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0xA3) ; //
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0xA4) ; //
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xA5) ; //
LCD_ILI9806E_INDEX(0x19) ;
LCD_ILI9806E_CMD(0xA6) ; //
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xA7) ; //
LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0xA8) ; //
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0xA9) ; //
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xAA) ; //
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xAB) ; //
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xAC) ; //
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xAD) ; //
LCD_ILI9806E_INDEX(0x2C) ;
LCD_ILI9806E_CMD(0xAE) ; //
LCD_ILI9806E_INDEX(0x28) ;
LCD_ILI9806E_CMD(0xAF) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC0) ; //Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xC1) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xC2) ; //
LCD_ILI9806E_INDEX(0x14) ;
LCD_ILI9806E_CMD(0xC3) ; //
LCD_ILI9806E_INDEX(0x0F) ;

```

```

LCD_ILI9806E_CMD(0xC4) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xC5) ; //
LCD_ILI9806E_INDEX(0x17) ;
LCD_ILI9806E_CMD(0xC6) ; //
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xC7) ; //
LCD_ILI9806E_INDEX(0x05) ;

LCD_ILI9806E_CMD(0xC8) ; //
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xC9) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xCA) ; //
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xCB) ; //
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xCC) ; //
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xCD) ; //
LCD_ILI9806E_INDEX(0x26) ;
LCD_ILI9806E_CMD(0xCE) ; //
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0xCF) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 6 CMD for GIP timing
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x00) ; //
LCD_ILI9806E_INDEX(0x21) ;
LCD_ILI9806E_CMD(0x01) ; //
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x00) ;

```

LCD_ILI9806E_CMD(0x03) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x04) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x05) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x06) ; //
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ; //
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0x08) ; //
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0x09) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0A) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x0D) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x0E) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0F) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ; //
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0x11) ; //
LCD_ILI9806E_INDEX(0xF0) ;
LCD_ILI9806E_CMD(0x12) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x14) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x15) ; //
LCD_ILI9806E_INDEX(0xC0) ;

```

LCD_ILI9806E_CMD(0x16) ; //
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ; //
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ; //
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ; //
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ; //
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ; //
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ; //
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ; //
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0x31) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x32) ; //
LCD_ILI9806E_INDEX(0x11) ;

```



```

LCD_ILI9806E_CMD(0x33) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x34) ; //
LCD_ILI9806E_INDEX(0x66) ;
LCD_ILI9806E_CMD(0x35) ; //
LCD_ILI9806E_INDEX(0x88) ;
LCD_ILI9806E_CMD(0x36) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x37) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x38) ; //
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0x39) ; //
LCD_ILI9806E_INDEX(0xCC) ;
LCD_ILI9806E_CMD(0x3A) ; //
LCD_ILI9806E_INDEX(0xBB) ;
LCD_ILI9806E_CMD(0x3B) ; //
LCD_ILI9806E_INDEX(0xDD) ;
LCD_ILI9806E_CMD(0x3C) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x77) ; //
LCD_ILI9806E_CMD(0xE1) ; //
LCD_ILI9806E_INDEX(0x79) ; //

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delays(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delays(10) ;
LCD_ILI9806E_CMD(0x35); // TE On
Delays(10);
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1) ;
LCD_ILI9806E_CMD(0x28) ;           //Display Off
Delaysms(10) ;
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In
Delaysms(120) ;
}
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ;           // Display On
Delaysms(10) ;
}
```

2.4 CPT 5.0” (050LD) Initial Code

```

Void ILI9806E_Initial_Code_CPT(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; // Change to Page 1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; //Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; //DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; //Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for Column Inversion
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x40) ; //
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x41) ; //
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0x42) ; //
LCD_ILI9806E_INDEX(0x01) ;

```

```

LCD_ILI9806E_CMD(0x43) ; //
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x44) ; //
LCD_ILI9806E_INDEX(0x86) ;

LCD_ILI9806E_CMD(0x50) ; //
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x51) ; //
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x52) ; //Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ; //Flicker LSB
LCD_ILI9806E_INDEX(0x2E) ;

LCD_ILI9806E_CMD(0x57) ; //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ; //
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x61) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ; //
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x63) ; //
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xA0) ; //Positive Gamma
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0xA1) ; //
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xA2) ; //
LCD_ILI9806E_INDEX(0x19) ;

```

```

LCD_ILI9806E_CMD(0xA3) ; //
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0xA4) ; //
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xA5) ; //
LCD_ILI9806E_INDEX(0x17) ;
LCD_ILI9806E_CMD(0xA6) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xA7) ; //
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0xA8) ; //
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xA9) ; //
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xAA) ; //
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xAB) ; //
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xAC) ; //
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xAD) ; //
LCD_ILI9806E_INDEX(0x2A) ;
LCD_ILI9806E_CMD(0xAE) ; //
LCD_ILI9806E_INDEX(0x28) ;
LCD_ILI9806E_CMD(0xAF) ; //
LCD_ILI9806E_INDEX(0x1F) ;

LCD_ILI9806E_CMD(0xC0) ; //Negative Gamma
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0xC1) ; //
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xC2) ; //
LCD_ILI9806E_INDEX(0x19) ;
LCD_ILI9806E_CMD(0xC3) ; //
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0xC4) ; //
LCD_ILI9806E_INDEX(0x0A) ;

```

```

LCD_ILI9806E_CMD(0xC5) ; //
LCD_ILI9806E_INDEX(0x17) ;
LCD_ILI9806E_CMD(0xC6) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xC7) ; //
LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0xC8) ; //
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xC9) ; //
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xCA) ; //
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xCB) ; //
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xCC) ; //
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xCD) ; //
LCD_ILI9806E_INDEX(0x2B) ;
LCD_ILI9806E_CMD(0xCE) ; //
LCD_ILI9806E_INDEX(0x28) ;
LCD_ILI9806E_CMD(0xCF) ; //
LCD_ILI9806E_INDEX(0x1F) ;

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 6 CMD for GIP timing
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x00) ; //
LCD_ILI9806E_INDEX(0x21) ;
LCD_ILI9806E_CMD(0x01) ; //
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x03) ; //
LCD_ILI9806E_INDEX(0x00) ;

```

```

LCD_ILI9806E_CMD(0x04) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x05) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x06) ; //
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ; //
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0x08) ; //
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0x09) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0A) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x0D) ; //
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0x0E) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0F) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ; //
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0x11) ; //
LCD_ILI9806E_INDEX(0xF0) ;
LCD_ILI9806E_CMD(0x12) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x14) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x15) ; //
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ; //
LCD_ILI9806E_INDEX(0x08) ;

```



```

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ; //
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ; //
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ; //
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ; //
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ; //
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ; //
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ; //
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ; //
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ; //
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0x31) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x32) ; //
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0x33) ; //
LCD_ILI9806E_INDEX(0x00) ;

```

```

LCD_ILI9806E_CMD(0x34) ; //
LCD_ILI9806E_INDEX(0x66) ;
LCD_ILI9806E_CMD(0x35) ; //
LCD_ILI9806E_INDEX(0x88) ;
LCD_ILI9806E_CMD(0x36) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x37) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x38) ; //
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0x39) ; //
LCD_ILI9806E_INDEX(0xCC) ;
LCD_ILI9806E_CMD(0x3A) ; //
LCD_ILI9806E_INDEX(0xBB) ;
LCD_ILI9806E_CMD(0x3B) ; //
LCD_ILI9806E_INDEX(0xDD) ;
LCD_ILI9806E_CMD(0x3C) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ; //
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

```

```

LCD_ILI9806E_CMD(0x17) ;           //
LCD_ILI9806E_INDEX(0x22) ;        //Default
                                   //LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ;          //
LCD_ILI9806E_INDEX(0x77) ;        //
LCD_ILI9806E_CMD(0XE1) ;          //
LCD_ILI9806E_INDEX(0x79) ;        //

LCD_ILI9806E_CMD(0xFF) ;          // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x11) ;          //Exit Sleep
Delayms(120) ;
LCD_ILI9806E_CMD(0x29) ;          // Display On
Delayms(10) ;
LCD_ILI9806E_CMD(0x35);           // TE On
Delayms(10);
}

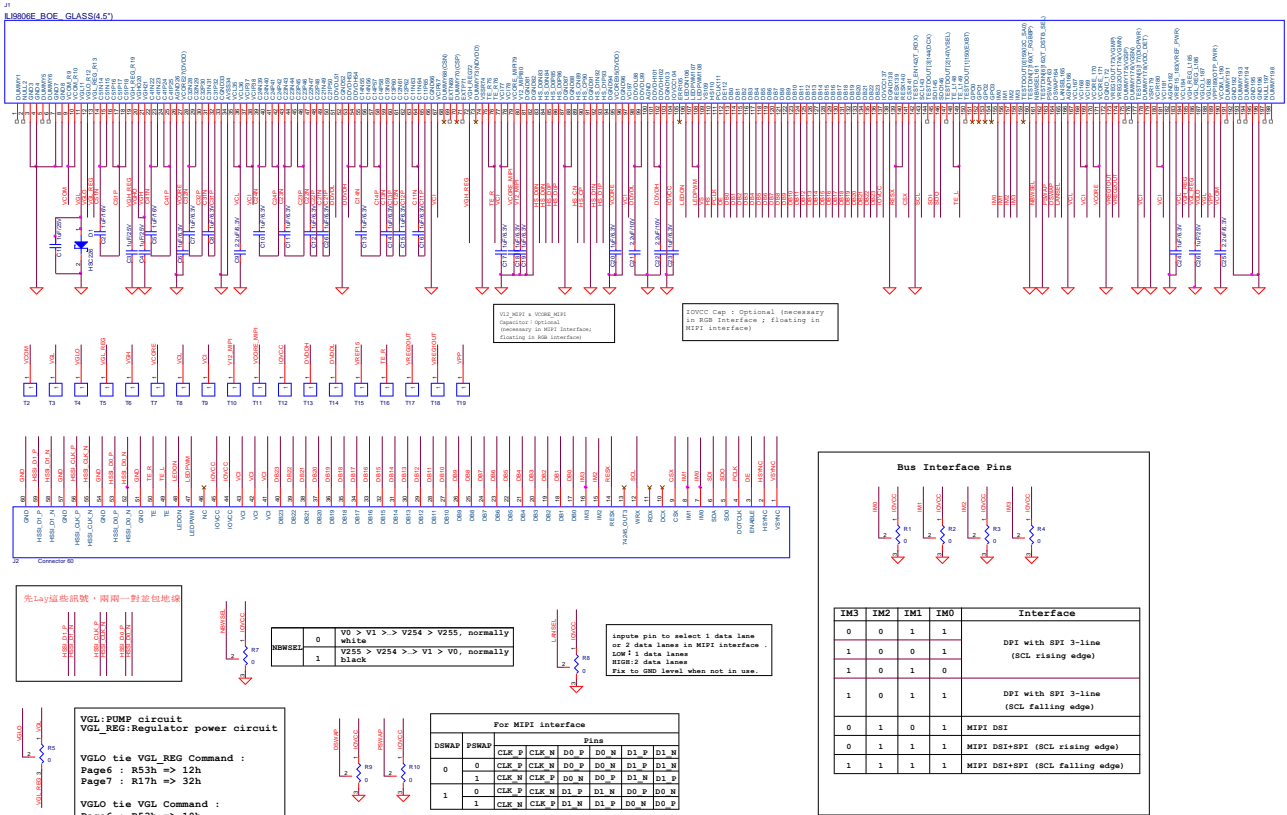
Void ILI9806E_EnterSleep_Code(void)
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delayms(1) ;
LCD_ILI9806E_CMD(0x28) ;           //Display Off
Delayms(10) ;
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In
Delayms(120) ;
}

```

Void ILI9806E_ExitSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1)  
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out  
Delaysms(120) ;  
LCD_ILI9806E_CMD(0x29) ;           // Display On  
Delaysms(10) ;  
}
```

3. BOE Panel



Note:

- 1. Please ensure the same naming pin is connected certainly.

3.1 BOE 3.97”(BD039WVE-810) Initial Code

Void ILI9806E_Initial_code_BOE (void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
delayms(5); // Delay 5ms // This delay time is necessary
LCD_nRESET = 0;
delayms(10); // Delay 10ms // This delay time is necessary
LCD_nRESET = 1;
delayms(120); // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF); //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x08); // Output SDA
LCD_ILI9806E_INDEX(0x10);

LCD_ILI9806E_CMD(0x21); // DE = 1 Active
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x30); // Resolution setting 480 X 800
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x31); // Inversion setting for for 2-dot inversion
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x40); // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x14);

LCD_ILI9806E_CMD(0x41); // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x33);
```

```

LCD_ILI9806E_CMD(0x42) ; // VGH/VGL
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x43) ;
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x44) ;
LCD_ILI9806E_INDEX(0x0C) ;

LCD_ILI9806E_CMD(0x50) ; // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x51) ; // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x52) ; // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ; // Flicker LSB
LCD_ILI9806E_INDEX(0x41) ;

LCD_ILI9806E_CMD(0x57) ; //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ; // SDTI
LCD_ILI9806E_INDEX(0x1C) ;

LCD_ILI9806E_CMD(0x61) ; // CRTI
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x62) ; // EQTI
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x63) ; // PCTI
LCD_ILI9806E_INDEX(0x04) ;

```

```
LCD_ILI9806E_CMD(0xA0) ;           // Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xA1) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xA2) ;
LCD_ILI9806E_INDEX(0x14) ;
LCD_ILI9806E_CMD(0xA3) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xA4) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xA5) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0xA6) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0xA7) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xA8) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xA9) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xAA) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xAB) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xAC) ;
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xAD) ;
LCD_ILI9806E_INDEX(0x1D) ;
LCD_ILI9806E_CMD(0xAE) ;
LCD_ILI9806E_INDEX(0x17) ;
LCD_ILI9806E_CMD(0xAF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC0) ;           // Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xC1) ;
LCD_ILI9806E_INDEX(0x0D) ;
```


LCD_ILI9806E_CMD(0xC2) ;
LCD_ILI9806E_INDEX(0x14) ;
LCD_ILI9806E_CMD(0xC3) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xC4) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xC5) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0xC6) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xC7) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0xC8) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xC9) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xCA) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xCB) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xCC) ;
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xCD) ;
LCD_ILI9806E_INDEX(0x1D) ;
LCD_ILI9806E_CMD(0xCE) ;
LCD_ILI9806E_INDEX(0x17) ;
LCD_ILI9806E_CMD(0xCF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xFF) ; //Change to page6 for GIP timing
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x00) ;
LCD_ILI9806E_INDEX(0x21) ;

LCD_ILI9806E_CMD(0x01) ;
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x03) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x05) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0x08) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x09) ;
LCD_ILI9806E_INDEX(0x90) ;
LCD_ILI9806E_CMD(0x0A) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0x0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x0D) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x0E) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ;
LCD_ILI9806E_INDEX(0x50) ;
LCD_ILI9806E_CMD(0x11) ;
LCD_ILI9806E_INDEX(0x50) ;
LCD_ILI9806E_CMD(0x12) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ;
LCD_ILI9806E_INDEX(0x85) ;
LCD_ILI9806E_CMD(0x14) ;

LCD_ILI9806E_INDEX(0x85) ;
LCD_ILI9806E_CMD(0x15) ;
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0x31) ;
LCD_ILI9806E_INDEX(0x22) ;

```

LCD_ILI9806E_CMD(0x32) ;
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0x33) ;
LCD_ILI9806E_INDEX(0xBA) ;
LCD_ILI9806E_CMD(0x34) ;
LCD_ILI9806E_INDEX(0xAB) ;
LCD_ILI9806E_CMD(0x35) ;
LCD_ILI9806E_INDEX(0x66) ;
LCD_ILI9806E_CMD(0x36) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x37) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x38) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x39) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3A) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3B) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3C) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; // Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG

LCD_ILI9806E_CMD(0x54) ;
LCD_ILI9806E_INDEX(0x13) ; //LVD for XOA GIP

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0xE1) ;
LCD_ILI9806E_INDEX(0x79) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0xB2) ;
LCD_ILI9806E_CMD(0xB3) ;
LCD_ILI9806E_INDEX(0x10) ; //LVD for XOA setting
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0xFF); //Change to page0
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x35); // TE On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x11); //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29); // Display On
Delaysms(10) ;
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1);
LCD_ILI9806E_CMD(0x28);           //Display Off
Delaysms(10);
LCD_ILI9806E_CMD(0x10);           //Sleep-In
Delaysms(120);
}
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11);           // Sleep-Out
Delaysms(120);
LCD_ILI9806E_CMD(0x29);           // Display On
Delaysms(10);
}
```

3.2 BOE 3.97”(BD039WVS-810) Initial Code

Void ILI9806E_Initial_code_BOE (void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
delayms(5); // Delay 5ms // This delay time is necessary
LCD_nRESET = 0;
delayms(10); // Delay 10ms // This delay time is necessary
LCD_nRESET = 1;
delayms(120); // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF); //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x08); // Output SDA
LCD_ILI9806E_INDEX(0x10);

LCD_ILI9806E_CMD(0x21); // DE = 1 Active
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x30); // Resolution setting 480 X 800
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x31); // Inversion setting for for 2-dot inversion
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x40); // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x14);

LCD_ILI9806E_CMD(0x41); // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x33);
```

```

LCD_ILI9806E_CMD(0x42);           // VGH/VGL
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x43);
LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0x44);
LCD_ILI9806E_INDEX(0x0C);

LCD_ILI9806E_CMD(0x50);           // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78);

LCD_ILI9806E_CMD(0x51);           // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78);

LCD_ILI9806E_CMD(0x52);           // Flicker MSB
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x53);           // Flicker LSB
LCD_ILI9806E_INDEX(0x5A);

LCD_ILI9806E_CMD(0x57);           //Low voltage detection
LCD_ILI9806E_INDEX(0x50);

LCD_ILI9806E_CMD(0x60);           // SDTI
LCD_ILI9806E_INDEX(0x0F);

LCD_ILI9806E_CMD(0x61);           // CRTI
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0x62);           // EQTI
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0x63);           // PCTI
LCD_ILI9806E_INDEX(0x04);

```


LCD_ILI9806E_CMD(0xA0); // Positive Gamma

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xA1);

LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0xA2);

LCD_ILI9806E_INDEX(0x12);

LCD_ILI9806E_CMD(0xA3);

LCD_ILI9806E_INDEX(0x12);

LCD_ILI9806E_CMD(0xA4);

LCD_ILI9806E_INDEX(0x0C);

LCD_ILI9806E_CMD(0xA5);

LCD_ILI9806E_INDEX(0x1D);

LCD_ILI9806E_CMD(0xA6);

LCD_ILI9806E_INDEX(0x05);

LCD_ILI9806E_CMD(0xA7);

LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0xA8);

LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0xA9);

LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0xAA);

LCD_ILI9806E_INDEX(0x04);

LCD_ILI9806E_CMD(0xAB);

LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0xAC);

LCD_ILI9806E_INDEX(0x0D);

LCD_ILI9806E_CMD(0xAD);

LCD_ILI9806E_INDEX(0x25);

LCD_ILI9806E_CMD(0xAE);

LCD_ILI9806E_INDEX(0x20);

LCD_ILI9806E_CMD(0xAF);

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xC0); // Negative Gamma

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xC1);

LCD_ILI9806E_INDEX(0x05);

LCD_ILI9806E_CMD(0xC2);
LCD_ILI9806E_INDEX(0x12);
LCD_ILI9806E_CMD(0xC3);
LCD_ILI9806E_INDEX(0x12);
LCD_ILI9806E_CMD(0xC4);
LCD_ILI9806E_INDEX(0x0C);
LCD_ILI9806E_CMD(0xC5);
LCD_ILI9806E_INDEX(0x1C);
LCD_ILI9806E_CMD(0xC6);
LCD_ILI9806E_INDEX(0x0D);
LCD_ILI9806E_CMD(0xC7);
LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0xC8);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0xC9);
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0xCA);
LCD_ILI9806E_INDEX(0x05);
LCD_ILI9806E_CMD(0xCB);
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0xCC);
LCD_ILI9806E_INDEX(0x0B);
LCD_ILI9806E_CMD(0xCD);
LCD_ILI9806E_INDEX(0x27);
LCD_ILI9806E_CMD(0xCE);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0xCF);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xFF); //Change to page6 for GIP timing
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0x00);
LCD_ILI9806E_INDEX(0x21);

LCD_ILI9806E_CMD(0x01);
LCD_ILI9806E_INDEX(0x05);
LCD_ILI9806E_CMD(0x02);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x03);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x04);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x05);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x06);
LCD_ILI9806E_INDEX(0x80);
LCD_ILI9806E_CMD(0x07);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_CMD(0x08);
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0x09);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0A);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0B);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0C);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x0D);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x0E);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0F);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x10);
LCD_ILI9806E_INDEX(0x50);
LCD_ILI9806E_CMD(0x11);
LCD_ILI9806E_INDEX(0x50);
LCD_ILI9806E_CMD(0x12);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x13);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x14);

LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x15);
LCD_ILI9806E_INDEX(0xC0);
LCD_ILI9806E_CMD(0x16);
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0x17);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x18);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x19);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1A);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1B);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1C);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1D);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x20);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x21);
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0x22);
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0x23);
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0x24);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x25);
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0x26);
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0x27);
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0x30);
LCD_ILI9806E_INDEX(0x12);
LCD_ILI9806E_CMD(0x31);
LCD_ILI9806E_INDEX(0x22);

```

LCD_ILI9806E_CMD(0x32);
LCD_ILI9806E_INDEX(0x11);
LCD_ILI9806E_CMD(0x33);
LCD_ILI9806E_INDEX(0xBA);
LCD_ILI9806E_CMD(0x34);
LCD_ILI9806E_INDEX(0xAB);
LCD_ILI9806E_CMD(0x35);
LCD_ILI9806E_INDEX(0x66);
LCD_ILI9806E_CMD(0x36);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x37);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x38);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x39);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3A);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3B);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3C);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3D);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3E);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3F);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x40);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG

LCD_ILI9806E_CMD(0x54);
LCD_ILI9806E_INDEX(0x13); //LVD for XOA GIP

```

```

LCD_ILI9806E_CMD(0xFF);           // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0x17);           //
LCD_ILI9806E_INDEX(0x22);         //Default
                                   //LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02);
LCD_ILI9806E_INDEX(0x77);
LCD_ILI9806E_CMD(0xE1);
LCD_ILI9806E_INDEX(0x79);
LCD_ILI9806E_CMD(0x26);
LCD_ILI9806E_INDEX(0xB2);
LCD_ILI9806E_CMD(0xB3);
LCD_ILI9806E_INDEX(0x10);         //LVD for XOA setting
LCD_ILI9806E_CMD(0x06);
LCD_ILI9806E_INDEX(0x10);

LCD_ILI9806E_CMD(0xFF);           //Change to page0
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x35);           // TE On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x11);           //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29);           // Display On
Delaysms(10) ;
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1);  
LCD_ILI9806E_CMD(0x28);           //Display Off  
Delaysms(10);  
LCD_ILI9806E_CMD(0x10);           //Sleep-In  
Delaysms(120);  
}
```

Void ILI9806E_ExitSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1)  
LCD_ILI9806E_CMD(0x11);           // Sleep-Out  
Delaysms(120);  
LCD_ILI9806E_CMD(0x29);           // Display On  
Delaysms(10);  
}
```

3.3 BOE 3.97”(BF045WVE-400) Initial Code

Void ILI9806E_Initial_code_BOE (void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
delayms(5); // Delay 5ms // This delay time is necessary
LCD_nRESET = 0;
delayms(10); // Delay 10ms // This delay time is necessary
LCD_nRESET = 1;
delayms(120); // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF); //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x08); // Output SDA
LCD_ILI9806E_INDEX(0x10);

LCD_ILI9806E_CMD(0x21); // DE = 1 Active
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x30); // Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x31); // Inversion setting for for 2-dot inversion
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x40); ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x16);

LCD_ILI9806E_CMD(0x41); // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x33);
```

```
LCD_ILI9806E_CMD(0x42);           // VGH/VGL
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x43);
LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0x44);
LCD_ILI9806E_INDEX(0x0C);

LCD_ILI9806E_CMD(0x50);           // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x60);

LCD_ILI9806E_CMD(0x51);           // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x60);

LCD_ILI9806E_CMD(0x52);           // Flicker MSB
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x53);           // Flicker LSB
LCD_ILI9806E_INDEX(0x43);

LCD_ILI9806E_CMD(0x57);           //Low voltage detection
LCD_ILI9806E_INDEX(0x50);

LCD_ILI9806E_CMD(0x60);           // SDTI
LCD_ILI9806E_INDEX(0x14);

LCD_ILI9806E_CMD(0x61);           // CRTI
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0x62);           // EQTI
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0x63);           // PCTI
LCD_ILI9806E_INDEX(0x04);
```

LCD_ILI9806E_CMD(0xA0); // Positive Gamma

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xA1);

LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0xA2);

LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0xA3);

LCD_ILI9806E_INDEX(0x0C);

LCD_ILI9806E_CMD(0xA4);

LCD_ILI9806E_INDEX(0x04);

LCD_ILI9806E_CMD(0xA5);

LCD_ILI9806E_INDEX(0x09);

LCD_ILI9806E_CMD(0xA6);

LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0xA7);

LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0xA8);

LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0xA9);

LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0xAA);

LCD_ILI9806E_INDEX(0x12);

LCD_ILI9806E_CMD(0xAB);

LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0xAC);

LCD_ILI9806E_INDEX(0x0F);

LCD_ILI9806E_CMD(0xAD);

LCD_ILI9806E_INDEX(0x1D);

LCD_ILI9806E_CMD(0xAE);

LCD_ILI9806E_INDEX(0x16);

LCD_ILI9806E_CMD(0xAF);

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xC0); // Negative Gamma

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xC1);

LCD_ILI9806E_INDEX(0x05);

LCD_ILI9806E_CMD(0xC2);
LCD_ILI9806E_INDEX(0x10);
LCD_ILI9806E_CMD(0xC3);
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0xC4);
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0xC5);
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0xC6);
LCD_ILI9806E_INDEX(0x07);
LCD_ILI9806E_CMD(0xC7);
LCD_ILI9806E_INDEX(0x04);

LCD_ILI9806E_CMD(0xC8);
LCD_ILI9806E_INDEX(0x07);
LCD_ILI9806E_CMD(0xC9);
LCD_ILI9806E_INDEX(0x0D);
LCD_ILI9806E_CMD(0xCA);
LCD_ILI9806E_INDEX(0x10);
LCD_ILI9806E_CMD(0xCB);
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0xCC);
LCD_ILI9806E_INDEX(0x0E);
LCD_ILI9806E_CMD(0xCD);
LCD_ILI9806E_INDEX(0x1C);
LCD_ILI9806E_CMD(0xCE);
LCD_ILI9806E_INDEX(0x10);
LCD_ILI9806E_CMD(0xCF);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0xFF); //Change to page6 for GIP timing
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0x00);
LCD_ILI9806E_INDEX(0x21);

LCD_ILI9806E_CMD(0x01);
LCD_ILI9806E_INDEX(0x05);
LCD_ILI9806E_CMD(0x02);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x03);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x04);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x05);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x06);
LCD_ILI9806E_INDEX(0x80);
LCD_ILI9806E_CMD(0x07);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_CMD(0x08);
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0x09);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0A);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0B);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0C);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x0D);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x0E);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x0F);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x10);
LCD_ILI9806E_INDEX(0x50);
LCD_ILI9806E_CMD(0x11);
LCD_ILI9806E_INDEX(0x50);
LCD_ILI9806E_CMD(0x12);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x13);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x14);

LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x15);
LCD_ILI9806E_INDEX(0xC0);
LCD_ILI9806E_CMD(0x16);
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0x17);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x18);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x19);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1A);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1B);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1C);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x1D);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x20);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x21);
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0x22);
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0x23);
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0x24);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0x25);
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0x26);
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0x27);
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0x30);
LCD_ILI9806E_INDEX(0x12);
LCD_ILI9806E_CMD(0x31);
LCD_ILI9806E_INDEX(0x22);

```

LCD_ILI9806E_CMD(0x32);
LCD_ILI9806E_INDEX(0x11);
LCD_ILI9806E_CMD(0x33);
LCD_ILI9806E_INDEX(0xAA);
LCD_ILI9806E_CMD(0x34);
LCD_ILI9806E_INDEX(0xBB);
LCD_ILI9806E_CMD(0x35);
LCD_ILI9806E_INDEX(0x66);
LCD_ILI9806E_CMD(0x36);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0x37);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x38);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x39);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3A);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3B);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3C);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3D);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3E);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x3F);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x40);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG

LCD_ILI9806E_CMD(0x54);
LCD_ILI9806E_INDEX(0x13); //LVD for XOA GIP

```

```

LCD_ILI9806E_CMD(0xFF);           // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0x17);           //
LCD_ILI9806E_INDEX(0x22);         //Default
                                   //LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02);
LCD_ILI9806E_INDEX(0x77);
LCD_ILI9806E_CMD(0xE1);
LCD_ILI9806E_INDEX(0x79);
LCD_ILI9806E_CMD(0x26);
LCD_ILI9806E_INDEX(0xB2);
LCD_ILI9806E_CMD(0xB3);
LCD_ILI9806E_INDEX(0x10);         //LVD for XOA setting

LCD_ILI9806E_CMD(0xFF);           //Change to page0
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x35);           // TE On
Delays(10) ;
LCD_ILI9806E_CMD(0x11);           //Exit Sleep
Delays(120) ;
LCD_ILI9806E_CMD(0x29);           // Display On
Delays(10) ;
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1);
LCD_ILI9806E_CMD(0x28);           //Display Off
Delaysms(10);
LCD_ILI9806E_CMD(0x10);           //Sleep-In
Delaysms(120);
}
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11);           // Sleep-Out
Delaysms(120);
LCD_ILI9806E_CMD(0x29);           // Display On
Delaysms(10);
}
```


3.4 BOE 4.46” Initial Code

Void ILI9806E_Initial_code_BOE (void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
delayms(5); // Delay 5ms // This delay time is necessary
LCD_nRESET = 0;
delayms(10); // Delay 10ms // This delay time is necessary
LCD_nRESET = 1;
delayms(120); // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF); //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x08); // Output SDA
LCD_ILI9806E_INDEX(0x10);

LCD_ILI9806E_CMD(0x21); // DE = 1 Active
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x30); // Resolution setting 480 X 800
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x31); // Inversion setting for Column inversion
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x40); // BT 2.5/-2.5 pump for DDVDH-L
LCD_ILI9806E_INDEX(0x16);

LCD_ILI9806E_CMD(0x41); // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x42); // VGH/VGL
LCD_ILI9806E_INDEX(0x00);
```

```

LCD_ILI9806E_CMD(0x43);
LCD_ILI9806E_INDEX(0x85);

LCD_ILI9806E_CMD(0x44);
LCD_ILI9806E_INDEX(0x8B);

LCD_ILI9806E_CMD(0x45);
LCD_ILI9806E_INDEX(0x1B);

LCD_ILI9806E_CMD(0x50);           // VREG1OUT voltage
LCD_ILI9806E_INDEX(0x78);

LCD_ILI9806E_CMD(0x51);           // VREG2OUT voltage
LCD_ILI9806E_INDEX(0x78);

LCD_ILI9806E_CMD(0x52);           // Flicker MSB
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x53);           // Flicker LSB
LCD_ILI9806E_INDEX(0x53);

LCD_ILI9806E_CMD(0x57) ;           //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ;           // SDTI
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x61) ;           // CRTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ;           // EQTI
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x63) ;           // PCTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0XA0) ;           // Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;

```

LCD_ILI9806E_CMD(0XA1) ;
LCD_ILI9806E_INDEX(0x10);
LCD_ILI9806E_CMD(0XA2);
LCD_ILI9806E_INDEX(0x17);
LCD_ILI9806E_CMD(0XA3);
LCD_ILI9806E_INDEX(0x0F);
LCD_ILI9806E_CMD(0XA4);
LCD_ILI9806E_INDEX(0x05);
LCD_ILI9806E_CMD(0XA5);
LCD_ILI9806E_INDEX(0x0C);
LCD_ILI9806E_CMD(0XA6);
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0XA7);
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0XA8);
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0XA9);
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0XAA);
LCD_ILI9806E_INDEX(0x10);
LCD_ILI9806E_CMD(0XAB);
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0XAC);
LCD_ILI9806E_INDEX(0x0F);
LCD_ILI9806E_CMD(0XAD);
LCD_ILI9806E_INDEX(0x18);
LCD_ILI9806E_CMD(0XAE);
LCD_ILI9806E_INDEX(0x11);
LCD_ILI9806E_CMD(0XAF);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XC0); // Negative Gamma
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0XC1);
LCD_ILI9806E_INDEX(0x10);
LCD_ILI9806E_CMD(0XC2);
LCD_ILI9806E_INDEX(0x17);

LCD_ILI9806E_CMD(0XC3);
LCD_ILI9806E_INDEX(0x0F);
LCD_ILI9806E_CMD(0XC4);
LCD_ILI9806E_INDEX(0x05);
LCD_ILI9806E_CMD(0XC5);
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0XC6);
LCD_ILI9806E_INDEX(0x07);
LCD_ILI9806E_CMD(0XC7);
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0XC8);
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0XC9);
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0XCA);
LCD_ILI9806E_INDEX(0x12);
LCD_ILI9806E_CMD(0XCB);
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0XCC);
LCD_ILI9806E_INDEX(0x0F);
LCD_ILI9806E_CMD(0XCD);
LCD_ILI9806E_INDEX(0x17);
LCD_ILI9806E_CMD(0XCE);
LCD_ILI9806E_INDEX(0x11);
LCD_ILI9806E_CMD(0XCF);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XFF);
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x06);

//Change to page6 for GIP timing

LCD_ILI9806E_CMD(0X00);
LCD_ILI9806E_INDEX(0x20);
LCD_ILI9806E_CMD(0X01);
LCD_ILI9806E_INDEX(0x05);

LCD_ILI9806E_CMD(0X02);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X03);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X04);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X05);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X06);
LCD_ILI9806E_INDEX(0x88);
LCD_ILI9806E_CMD(0X07);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_CMD(0X08);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X09);
LCD_ILI9806E_INDEX(0x90);
LCD_ILI9806E_CMD(0X0A);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_CMD(0X0B);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X0C);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X0D);
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0X0E);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X0F);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X10);
LCD_ILI9806E_INDEX(0x55);
LCD_ILI9806E_CMD(0X11);
LCD_ILI9806E_INDEX(0x50);
LCD_ILI9806E_CMD(0X12);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X13);
LCD_ILI9806E_INDEX(0x0C);
LCD_ILI9806E_CMD(0X14);
LCD_ILI9806E_INDEX(0x0D);

LCD_ILI9806E_CMD(0X15);
LCD_ILI9806E_INDEX(0x43);
LCD_ILI9806E_CMD(0X16);
LCD_ILI9806E_INDEX(0x0B);
LCD_ILI9806E_CMD(0X17);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X18);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X19);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X1A);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X1B);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X1C);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X1D);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X20);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X21);
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0X22);
LCD_ILI9806E_INDEX(0x45);

LCD_ILI9806E_CMD(0X23);
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0X24);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X25);
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0X26);
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0X27);
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0X30);
LCD_ILI9806E_INDEX(0x02);
LCD_ILI9806E_CMD(0X31);
LCD_ILI9806E_INDEX(0x22);

```

LCD_ILI9806E_CMD(0X32);
LCD_ILI9806E_INDEX(0x11);
LCD_ILI9806E_CMD(0X33);
LCD_ILI9806E_INDEX(0xAA);
LCD_ILI9806E_CMD(0X34);
LCD_ILI9806E_INDEX(0xBB);
LCD_ILI9806E_CMD(0X35);
LCD_ILI9806E_INDEX(0x66);
LCD_ILI9806E_CMD(0X36);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X37);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X38);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X39);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3A);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3B);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3C);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3D);
LCD_ILI9806E_INDEX(0x22);

LCD_ILI9806E_CMD(0X3E);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3F);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X40);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x77) ; //
LCD_ILI9806E_CMD(0xE1) ; //
LCD_ILI9806E_INDEX(0x79) ; //

LCD_ILI9806E_CMD(0xFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00); //Change to page0

LCD_ILI9806E_CMD(0x11); //Exit Sleep
Delaysms(120);
LCD_ILI9806E_CMD(0x29); // Display On
Delaysms(10);
LCD_ILI9806E_CMD(0x35); // TE On
Delaysms(10);
}

```


Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1);
LCD_ILI9806E_CMD(0x28);           //Display Off
Delaysms(10);
LCD_ILI9806E_CMD(0x10);           //Sleep-In
Delaysms(120);
}
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11);           // Sleep-Out
Delaysms(120);
LCD_ILI9806E_CMD(0x29);           // Display On
Delaysms(10);
}
```

3.5 BOE 4.95" Initial Code (4.5G)

```

Void ILI9806E_Initial_Code_BOE(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1;
delayms(5); // Delay 5ms // This delay time is necessary
LCD_nRESET = 0;
delayms(10); // Delay 10ms // This delay time is necessary
LCD_nRESET = 1;
delayms(120); // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF); //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x08); // Output SDA
LCD_ILI9806E_INDEX(0x10);

LCD_ILI9806E_CMD(0x21); // DE = 1 Active
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x30); // Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0x31); // Inversion setting for for 2-dot
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x40); // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x16);

LCD_ILI9806E_CMD(0x41); // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x77);

```

LCD_ILI9806E_CMD(0x42); // VGH/VGL
LCD_ILI9806E_INDEX(0x02);

LCD_ILI9806E_CMD(0x43);
LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0x44);
LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0x50); // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78);

LCD_ILI9806E_CMD(0x51); // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78);

LCD_ILI9806E_CMD(0x52); // Flicker MSB
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x53); // Flicker LSB
LCD_ILI9806E_INDEX(0x38);

LCD_ILI9806E_CMD(0x57); //Low voltage detection
LCD_ILI9806E_INDEX(0x50);

LCD_ILI9806E_CMD(0x60); // SDTI
LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0x61); // CRTI
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0x62); // EQTI
LCD_ILI9806E_INDEX(0x08);

LCD_ILI9806E_CMD(0x63); // PCTI
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XA0); // Positive Gamma

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XA1);

LCD_ILI9806E_INDEX(0x1C);

LCD_ILI9806E_CMD(0XA2);

LCD_ILI9806E_INDEX(0x20);

LCD_ILI9806E_CMD(0XA3);

LCD_ILI9806E_INDEX(0x0D);

LCD_ILI9806E_CMD(0XA4);

LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0XA5);

LCD_ILI9806E_INDEX(0x0B);

LCD_ILI9806E_CMD(0XA6);

LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0XA7);

LCD_ILI9806E_INDEX(0x06);

LCD_ILI9806E_CMD(0XA8);

LCD_ILI9806E_INDEX(0x03);

LCD_ILI9806E_CMD(0XA9);

LCD_ILI9806E_INDEX(0x0A);

LCD_ILI9806E_CMD(0XAA);

LCD_ILI9806E_INDEX(0x0D);

LCD_ILI9806E_CMD(0XAB);

LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0XAC);

LCD_ILI9806E_INDEX(0x0E);

LCD_ILI9806E_CMD(0XAD);

LCD_ILI9806E_INDEX(0x17)

LCD_ILI9806E_CMD(0XAE);

LCD_ILI9806E_INDEX(0x11)

LCD_ILI9806E_CMD(0XAF);

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XC0); // Negative Gamma

LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XC1);

LCD_ILI9806E_INDEX(0x1E);

LCD_ILI9806E_CMD(0XC2);
LCD_ILI9806E_INDEX(0x25);
LCD_ILI9806E_CMD(0XC3);
LCD_ILI9806E_INDEX(0x0D);
LCD_ILI9806E_CMD(0XC4);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_CMD(0XC5);
LCD_ILI9806E_INDEX(0x0B);
LCD_ILI9806E_CMD(0XC6);
LCD_ILI9806E_INDEX(0x07);
LCD_ILI9806E_CMD(0XC7);
LCD_ILI9806E_INDEX(0x03);

LCD_ILI9806E_CMD(0XC8);
LCD_ILI9806E_INDEX(0x0C);
LCD_ILI9806E_CMD(0XC9);
LCD_ILI9806E_INDEX(0x0D);
LCD_ILI9806E_CMD(0XCA);
LCD_ILI9806E_INDEX(0x10);
LCD_ILI9806E_CMD(0XCB);
LCD_ILI9806E_INDEX(0x0A);
LCD_ILI9806E_CMD(0XCC);
LCD_ILI9806E_INDEX(0x0E);
LCD_ILI9806E_CMD(0XCD);
LCD_ILI9806E_INDEX(0x17);
LCD_ILI9806E_CMD(0XCE);
LCD_ILI9806E_INDEX(0x11);
LCD_ILI9806E_CMD(0XCF);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0XFF);
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x06);

//Change to page6 for GIP timing (For 4.5G)

LCD_ILI9806E_CMD(0X00);
LCD_ILI9806E_INDEX(0xA1);
LCD_ILI9806E_CMD(0X01);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_CMD(0X02);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X03);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X04);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X05);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X06);
LCD_ILI9806E_INDEX(0x80);
LCD_ILI9806E_CMD(0X07);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_CMD(0X08);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X09);
LCD_ILI9806E_INDEX(0x90);
LCD_ILI9806E_CMD(0X0A);
LCD_ILI9806E_INDEX(0x03);
LCD_ILI9806E_CMD(0X0B);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X0C);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X0D);
LCD_ILI9806E_INDEX(0x01);

LCD_ILI9806E_CMD(0X0E);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X0F);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X10);
LCD_ILI9806E_INDEX(0x50);
LCD_ILI9806E_CMD(0X11);
LCD_ILI9806E_INDEX(0x50);
LCD_ILI9806E_CMD(0X12);
LCD_ILI9806E_INDEX(0x00);

LCD_ILI9806E_CMD(0X13);
LCD_ILI9806E_INDEX(0x86);
LCD_ILI9806E_CMD(0X14);
LCD_ILI9806E_INDEX(0x86);
LCD_ILI9806E_CMD(0X15);
LCD_ILI9806E_INDEX(0XC0);
LCD_ILI9806E_CMD(0X16);
LCD_ILI9806E_INDEX(0x08);
LCD_ILI9806E_CMD(0X17);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X18);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X19);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X1A);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X1B);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X1C);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X1D);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X20);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X21);
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0X22);
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0X23);
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0X24);
LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X25);
LCD_ILI9806E_INDEX(0x23);
LCD_ILI9806E_CMD(0X26);
LCD_ILI9806E_INDEX(0x45);
LCD_ILI9806E_CMD(0X27);
LCD_ILI9806E_INDEX(0x67);
LCD_ILI9806E_CMD(0X30);

```

LCD_ILI9806E_INDEX(0x01);
LCD_ILI9806E_CMD(0X31);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X32);
LCD_ILI9806E_INDEX(0x00);
LCD_ILI9806E_CMD(0X33);
LCD_ILI9806E_INDEX(0xBB);
LCD_ILI9806E_CMD(0X34);
LCD_ILI9806E_INDEX(0xAA);
LCD_ILI9806E_CMD(0X35);
LCD_ILI9806E_INDEX(0x66);
LCD_ILI9806E_CMD(0X36);
LCD_ILI9806E_INDEX(0x11);
LCD_ILI9806E_CMD(0X37);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X38);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X39);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3A);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3B);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3C);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3D);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3E);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X3F);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0X40);
LCD_ILI9806E_INDEX(0x22);
LCD_ILI9806E_CMD(0x52); //
LCD_ILI9806E_INDEX(0x10); //
LCD_ILI9806E_CMD(0x53); //
LCD_ILI9806E_INDEX(0x10); //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG;

```



```

LCD_ILI9806E_CMD(0xFF);           // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x07);

LCD_ILI9806E_CMD(0x17);           //
LCD_ILI9806E_INDEX(0x22);         //Default
                                   //LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG;

LCD_ILI9806E_CMD(0x02);           //
LCD_ILI9806E_INDEX(0x77);         //
LCD_ILI9806E_CMD(0xE1);           //
LCD_ILI9806E_INDEX(0x79);         //
LCD_ILI9806E_CMD(0x26);           //
LCD_ILI9806E_INDEX(0xB2);         //

LCD_ILI9806E_CMD(0xFF);
LCD_ILI9806E_INDEX(0xFF);
LCD_ILI9806E_INDEX(0x98);
LCD_ILI9806E_INDEX(0x06);
LCD_ILI9806E_INDEX(0x04);
LCD_ILI9806E_INDEX(0x00);         //Change to page0

LCD_ILI9806E_CMD(0x11);           //Exit Sleep
Delayms(120);
LCD_ILI9806E_CMD(0x29);           // Display On
Delayms(10);
LCD_ILI9806E_CMD(0x35);           // TE On
Delayms(10);
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF);           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF);  
LCD_ILI9806E_INDEX(0x98);  
LCD_ILI9806E_INDEX(0x06);  
LCD_ILI9806E_INDEX(0x04);  
LCD_ILI9806E_INDEX(0x00);  
Delaysms(1);  
LCD_ILI9806E_CMD(0x28);           //Display Off  
Delaysms(10);  
LCD_ILI9806E_CMD(0x10);           //Sleep-In  
Delaysms(120);
```

Void ILI9806E_ExitSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF);           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF);  
LCD_ILI9806E_INDEX(0x98);  
LCD_ILI9806E_INDEX(0x06);  
LCD_ILI9806E_INDEX(0x04);  
LCD_ILI9806E_INDEX(0x00);  
Delaysms(1)  
LCD_ILI9806E_CMD(0x11);           // Sleep-Out  
Delaysms(120);  
LCD_ILI9806E_CMD(0x29);           // Display On  
Delaysms(10);  
}
```

3.6 BOE 4.95” Initial Code (6G)

```

Void ILI9806E_Initial_Code_BOE(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; // Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; // DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; // Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for 2-dot
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x40) ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x16) ;

LCD_ILI9806E_CMD(0x41) ; // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x77) ;

```

```

LCD_ILI9806E_CMD(0x42) ;           // VGH/VGL
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x43) ;
LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0x44) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x50) ;           // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x51) ;           // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x52) ;           // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ;           // Flicker LSB
LCD_ILI9806E_INDEX(0x38) ;

LCD_ILI9806E_CMD(0x57) ;           //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ;           // SDTI
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x61) ;           // CRTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ;           // EQTI
LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0x63) ;           // PCTI
LCD_ILI9806E_INDEX(0x00) ;

```

```
LCD_ILI9806E_CMD(0XA0) ; // Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0XA1) ;
LCD_ILI9806E_INDEX(0x1C) ;
LCD_ILI9806E_CMD(0XA2) ;
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0XA3) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0XA4) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0XA5) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0XA6) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0XA7) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0XA8) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0XA9) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0XAA) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0XAB) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0XAC) ;
LCD_ILI9806E_INDEX(0x0E) ;
LCD_ILI9806E_CMD(0XAD) ;
LCD_ILI9806E_INDEX(0x17) ;
LCD_ILI9806E_CMD(0XAE) ;
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0XAF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0XC0) ; // Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0XC1) ;
LCD_ILI9806E_INDEX(0x1E) ;
```

LCD_ILI9806E_CMD(0XC2) ;
LCD_ILI9806E_INDEX(0x25) ;
LCD_ILI9806E_CMD(0XC3) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0XC4) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0XC5) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0XC6) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0XC7) ;
LCD_ILI9806E_INDEX(0x03) ;

LCD_ILI9806E_CMD(0XC8) ;
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0XC9) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0XCA) ;
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0XCB) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0XCC) ;
LCD_ILI9806E_INDEX(0x0E) ;
LCD_ILI9806E_CMD(0XCD) ;
LCD_ILI9806E_INDEX(0x17) ;
LCD_ILI9806E_CMD(0XCE) ;
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0XCF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0XFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

//Change to page6 for GIP timing (For 6G)

LCD_ILI9806E_CMD(0X00) ;
LCD_ILI9806E_INDEX(0xA1) ;

LCD_ILI9806E_CMD(0X01) ;
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0X02) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X03) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X04) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X05) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X06) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0X07) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0X08) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X09) ;
LCD_ILI9806E_INDEX(0x90) ;
LCD_ILI9806E_CMD(0X0A) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0X0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X0C) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X0D) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X0E) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X10) ;
LCD_ILI9806E_INDEX(0x50) ;
LCD_ILI9806E_CMD(0X11) ;
LCD_ILI9806E_INDEX(0x50) ;
LCD_ILI9806E_CMD(0X12) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X13) ;
LCD_ILI9806E_INDEX(0x85) ;

LCD_ILI9806E_CMD(0X14) ;
LCD_ILI9806E_INDEX(0x85) ;
LCD_ILI9806E_CMD(0X15) ;
LCD_ILI9806E_INDEX(0XC0) ;
LCD_ILI9806E_CMD(0X16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0X17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0X22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0X23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0X24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0X26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0X27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0X30) ;
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0X31) ;


```

LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X32) ;
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0X33) ;
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0X34) ;
LCD_ILI9806E_INDEX(0xBB) ;
LCD_ILI9806E_CMD(0X35) ;
LCD_ILI9806E_INDEX(0x66) ;
LCD_ILI9806E_CMD(0X36) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X37) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X38) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X39) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3A) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3B) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3C) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x77) ; //
LCD_ILI9806E_CMD(0xE1) ; //
LCD_ILI9806E_INDEX(0x79) ; //
LCD_ILI9806E_CMD(0x26) ; //
LCD_ILI9806E_INDEX(0xB2) ; //

LCD_ILI9806E_CMD(0xFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ; //Change to page0

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x35) ; // TE On
Delaysms(10) ;
}

```

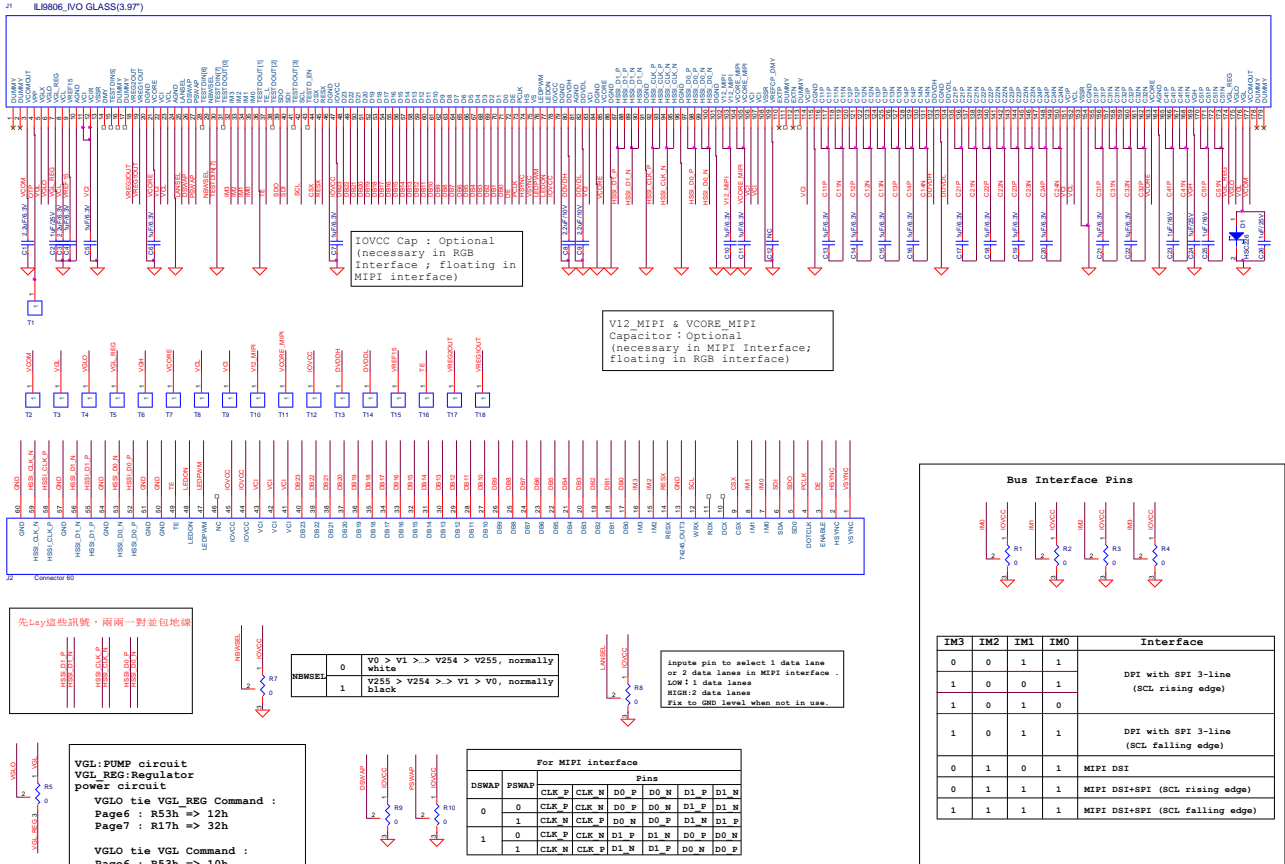
Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1) ;
LCD_ILI9806E_CMD(0x28) ;           //Display Off
Delaysms(10) ;
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ;           // Display On
Delaysms(10) ;
}
```

4. IVO Panel



Note:

1. Please ensure the same naming pin is connected certainly.

4.1 IVO 3.97”(C039SWN2-1) Initial Code

Void ILI9806E_Initial_Code_IVO (void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; // Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; // DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; // Resolution setting 480 X 800
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for Column inversion
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x40) ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x41) ; // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x33) ;
```

```

LCD_ILI9806E_CMD(0x42) ;           // VGH/VGL
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x43) ;
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x44) ;
LCD_ILI9806E_INDEX(0x03) ;

LCD_ILI9806E_CMD(0x45) ;           //
LCD_ILI9806E_INDEX(0x05) ;

LCD_ILI9806E_CMD(0x50) ;           // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x80) ;

LCD_ILI9806E_CMD(0x51) ; ;         // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x80) ;

LCD_ILI9806E_CMD(0x52) ;           // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ;           // Flicker LSB
LCD_ILI9806E_INDEX(0x4F) ;

LCD_ILI9806E_CMD(0x60) ;           // SDTI
LCD_ILI9806E_INDEX(0x12) ;

LCD_ILI9806E_CMD(0x61) ;           // CRTI
LCD_ILI9806E_INDEX(0x04) ;

LCD_ILI9806E_CMD(0x62) ;           // EQTI
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x63) ; ;         // PCTI
LCD_ILI9806E_INDEX(0x00) ;

```

LCD_ILI9806E_CMD(0xA0) ; // Positive Gamma

LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xA1) ;

LCD_ILI9806E_INDEX(0x17) ;

LCD_ILI9806E_CMD(0xA2) ;

LCD_ILI9806E_INDEX(0x20) ;

LCD_ILI9806E_CMD(0xA3) ;

LCD_ILI9806E_INDEX(0x12) ;

LCD_ILI9806E_CMD(0xA4) ;

LCD_ILI9806E_INDEX(0x0A) ;

LCD_ILI9806E_CMD(0xA5) ;

LCD_ILI9806E_INDEX(0x1C) ;

LCD_ILI9806E_CMD(0xA6) ;

LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0xA7) ;

LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0xA8) ;

LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0xA9) ;

LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0xAA) ;

LCD_ILI9806E_INDEX(0x04) ;

LCD_ILI9806E_CMD(0xAB) ;

LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0xAC) ;

LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0xAD) ;

LCD_ILI9806E_INDEX(0x34) ;

LCD_ILI9806E_CMD(0xAE) ;

LCD_ILI9806E_INDEX(0x31) ;

LCD_ILI9806E_CMD(0xAF) ;

LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC0) ; // Negative Gamma

LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC1) ;

LCD_ILI9806E_INDEX(0x15) ;

LCD_ILI9806E_CMD(0xC2) ;
LCD_ILI9806E_INDEX(0x24) ;
LCD_ILI9806E_CMD(0xC3) ;
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0xC4) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xC5) ;
LCD_ILI9806E_INDEX(0x15) ;
LCD_ILI9806E_CMD(0xC6) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xC7) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0xC8) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xC9) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0xCA) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xCB) ;
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0xCC) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xCD) ;
LCD_ILI9806E_INDEX(0x1A) ;
LCD_ILI9806E_CMD(0xCE) ;
LCD_ILI9806E_INDEX(0x15) ;
LCD_ILI9806E_CMD(0xCF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

//Change to page6 for GIP timing

LCD_ILI9806E_CMD(0x00) ;

LCD_ILI9806E_INDEX(0x21) ;
LCD_ILI9806E_CMD(0x01) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0x03) ;
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x05) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_CMD(0x07) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0x08) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0x09) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x0D) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x0E) ;
LCD_ILI9806E_INDEX(0x3A) ;
LCD_ILI9806E_CMD(0x0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_CMD(0x11) ;
LCD_ILI9806E_INDEX(0xE0) ;
LCD_ILI9806E_CMD(0x12) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x14) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x15) ;
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0x31) ;

```

LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x32) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x33) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x34) ;
LCD_ILI9806E_INDEX(0x87) ;
LCD_ILI9806E_CMD(0x35) ;
LCD_ILI9806E_INDEX(0x96) ;
LCD_ILI9806E_CMD(0x36) ;
LCD_ILI9806E_INDEX(0xBA) ;
LCD_ILI9806E_CMD(0x37) ;
LCD_ILI9806E_INDEX(0xAB) ;
LCD_ILI9806E_CMD(0x38) ;
LCD_ILI9806E_INDEX(0xDC) ;
LCD_ILI9806E_CMD(0x39) ;
LCD_ILI9806E_INDEX(0xCD) ;
LCD_ILI9806E_CMD(0x3A) ;
LCD_ILI9806E_INDEX(0x78) ;
LCD_ILI9806E_CMD(0x3B) ;
LCD_ILI9806E_INDEX(0x69) ;
LCD_ILI9806E_CMD(0x3C) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG

LCD_ILI9806E_CMD(0x06) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x77) ; //
LCD_ILI9806E_CMD(0xE1) ; //
LCD_ILI9806E_INDEX(0x79) ; //

LCD_ILI9806E_CMD(0xFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ; //Change to page0

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x35); // TE On
Delaysms(10);
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1) ;
LCD_ILI9806E_CMD(0x28) ;           //Display Off
Delaysms(10) ;
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ;           // Display On
Delaysms(10) ;
}
```

4.2 IVO 4.5”(C045SWY1-1) Initial Code

Void ILI9806E_Initial_Code_IVO (void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; // Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; // DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; // Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for Column
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x40) ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x18) ;

LCD_ILI9806E_CMD(0x41) ; // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x74) ;
}
```

```

LCD_ILI9806E_CMD(0x42) ;           // VGH/VGL
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x43) ;
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x44) ;
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x50) ;           // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x51) ;           // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x52) ;           // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ;           // Flicker LSB
LCD_ILI9806E_INDEX(0x5B) ;

LCD_ILI9806E_CMD(0x57) ;           //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ;           // SDTI
LCD_ILI9806E_INDEX(0x15) ;

LCD_ILI9806E_CMD(0x61) ;           // CRTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ;           // EQTI
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x63) ;           // PCTI
LCD_ILI9806E_INDEX(0x00) ;

```

```
LCD_ILI9806E_CMD(0xA0) ;           // Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xA1) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xA2) ;
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0xA3) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0xA4) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xA5) ;
LCD_ILI9806E_INDEX(0x1F) ;
LCD_ILI9806E_CMD(0xA6) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xA7) ;
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0xA8) ;
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0xA9) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xAA) ;
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0xAB) ;
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0xAC) ;
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0xAD) ;
LCD_ILI9806E_INDEX(0x30) ;
LCD_ILI9806E_CMD(0xAE) ;
LCD_ILI9806E_INDEX(0x2D) ;
LCD_ILI9806E_CMD(0xAF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC0) ;           // Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xC1) ;
LCD_ILI9806E_INDEX(0x03) ;
```


LCD_ILI9806E_CMD(0xC2) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xC3) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0xC4) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xC5) ;
LCD_ILI9806E_INDEX(0x19) ;
LCD_ILI9806E_CMD(0xC6) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xC7) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0xC8) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0xC9) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xCA) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xCB) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0xCC) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xCD) ;
LCD_ILI9806E_INDEX(0x21) ;
LCD_ILI9806E_CMD(0xCE) ;
LCD_ILI9806E_INDEX(0x1C) ;
LCD_ILI9806E_CMD(0xCF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xFF) ; //Change to page6 for GIP timing
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x00) ;
LCD_ILI9806E_INDEX(0x21) ;

LCD_ILI9806E_CMD(0x01) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0xA0) ;
LCD_ILI9806E_CMD(0x03) ;
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x05) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0x08) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x09) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x0A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ;
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0x0D) ;
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0x0E) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0x0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_CMD(0x11) ;
LCD_ILI9806E_INDEX(0xE0) ;
LCD_ILI9806E_CMD(0x12) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x14) ;

LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x15) ;
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0x31) ;
LCD_ILI9806E_INDEX(0x22) ;

```

LCD_ILI9806E_CMD(0x32) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x33) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x34) ;
LCD_ILI9806E_INDEX(0x87) ;
LCD_ILI9806E_CMD(0x35) ;
LCD_ILI9806E_INDEX(0x96) ;
LCD_ILI9806E_CMD(0x36) ;
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0x37) ;
LCD_ILI9806E_INDEX(0xDB) ;
LCD_ILI9806E_CMD(0x38) ;
LCD_ILI9806E_INDEX(0xCC) ;
LCD_ILI9806E_CMD(0x39) ;
LCD_ILI9806E_INDEX(0xBD) ;
LCD_ILI9806E_CMD(0x3A) ;
LCD_ILI9806E_INDEX(0x78) ;
LCD_ILI9806E_CMD(0x3B) ;
LCD_ILI9806E_INDEX(0x69) ;
LCD_ILI9806E_CMD(0x3C) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x54) ; //LVD for XOA GIP
LCD_ILI9806E_INDEX(0x13) ;

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0xE1) ;
LCD_ILI9806E_INDEX(0x79) ;
LCD_ILI9806E_CMD(0xB3) ; //LVD for XOA setting
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0xFF) ; //Change to page0
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delays(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delays(10) ;
LCD_ILI9806E_CMD(0x35); // TE On
Delays(10);
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1) ;
LCD_ILI9806E_CMD(0x28) ;           //Display Off
Delaysms(10) ;
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ;           // Display On
Delaysms(10) ;
}
```

4.3 IVO 4.7”(C047SWY2-0) Initial Code

Void ILI9806E_Initial_Code_IVO (void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; // Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; // DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; // Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for Column
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x40) ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x41) ; // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x44) ;
```

```

LCD_ILI9806E_CMD(0x42) ; // VGH/VGL
LCD_ILI9806E_INDEX(0x03) ;

LCD_ILI9806E_CMD(0x43) ;
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x44) ;
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x50) ; // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x88) ;

LCD_ILI9806E_CMD(0x51) ; // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x88) ;

LCD_ILI9806E_CMD(0x52) ; // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ; // Flicker LSB
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x57) ; //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ; // SDTI
LCD_ILI9806E_INDEX(0x15) ;

LCD_ILI9806E_CMD(0x61) ; // CRTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ; // EQTI
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x63) ; ; // PCTI
LCD_ILI9806E_INDEX(0x00) ;

```



```
LCD_ILI9806E_CMD(0xA0) ; // Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xA1) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0xA2) ;
LCD_ILI9806E_INDEX(0x1D) ;
LCD_ILI9806E_CMD(0xA3) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xA4) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xA5) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xA6) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xA7) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0xA8) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xA9) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0xAA) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xAB) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xAC) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xAD) ;
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0xAE) ;
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0xAF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC0) ; // Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xC1) ;
LCD_ILI9806E_INDEX(0x12) ;
```

LCD_ILI9806E_CMD(0xC2) ;
LCD_ILI9806E_INDEX(0x1D) ;
LCD_ILI9806E_CMD(0xC3) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xC4) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xC5) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xC6) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xC7) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0xC8) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xC9) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0xCA) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xCB) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xCC) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xCD) ;
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0xCE) ;
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0xCF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xFF) ; //Change to page6 for GIP timing
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x00) ;
LCD_ILI9806E_INDEX(0x21) ;

LCD_ILI9806E_CMD(0x01) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0xA0) ;
LCD_ILI9806E_CMD(0x03) ;
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x05) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0x08) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x09) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x0A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ;
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0x0D) ;
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0x0E) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0x0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_CMD(0x11) ;
LCD_ILI9806E_INDEX(0xE0) ;
LCD_ILI9806E_CMD(0x12) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x14) ;

LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x15) ;
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0x31) ;
LCD_ILI9806E_INDEX(0x22) ;

```

LCD_ILI9806E_CMD(0x32) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x33) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x34) ;
LCD_ILI9806E_INDEX(0x87) ;
LCD_ILI9806E_CMD(0x35) ;
LCD_ILI9806E_INDEX(0x96) ;
LCD_ILI9806E_CMD(0x36) ;
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0x37) ;
LCD_ILI9806E_INDEX(0xDB) ;
LCD_ILI9806E_CMD(0x38) ;
LCD_ILI9806E_INDEX(0xCC) ;
LCD_ILI9806E_CMD(0x39) ;
LCD_ILI9806E_INDEX(0xBD) ;
LCD_ILI9806E_CMD(0x3A) ;
LCD_ILI9806E_INDEX(0x78) ;
LCD_ILI9806E_CMD(0x3B) ;
LCD_ILI9806E_INDEX(0x69) ;
LCD_ILI9806E_CMD(0x3C) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x54) ; //LVD for XOA GIP
LCD_ILI9806E_INDEX(0x13) ;

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0xE1) ;
LCD_ILI9806E_INDEX(0x79) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0xB2) ;
LCD_ILI9806E_CMD(0xB3) ; //LVD for XOA setting
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0xFF) ; //Change to page0
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x35) ; // TE On
Delaysms(10);
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1) ;
LCD_ILI9806E_CMD(0x28) ;           //Display Off
Delaysms(10) ;
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ;           // Display On
Delaysms(10) ;
}
```

4.4 IVO 5.0”(C050SWY7-1) Initial Code

Void ILI9806E_Initial_Code_IVO (void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; // Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; // DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; // Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for Column
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x40) ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x18) ;

LCD_ILI9806E_CMD(0x41) ; // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x55) ;
```



```

LCD_ILI9806E_CMD(0x42) ; // VGH/VGL
LCD_ILI9806E_INDEX(0x03) ;

LCD_ILI9806E_CMD(0x43) ;
LCD_ILI9806E_INDEX(0x0A) ;

LCD_ILI9806E_CMD(0x44) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x50) ; // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x88) ;

LCD_ILI9806E_CMD(0x51) ; // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x88) ;

LCD_ILI9806E_CMD(0x52) ; // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ; // Flicker LSB
LCD_ILI9806E_INDEX(0x47) ;

LCD_ILI9806E_CMD(0x57) ; //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ; // SDTI
LCD_ILI9806E_INDEX(0x15) ;

LCD_ILI9806E_CMD(0x61) ; // CRTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ; ; // EQTI
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x63) ; // PCTI
LCD_ILI9806E_INDEX(0x00) ;

```

```
LCD_ILI9806E_CMD(0xA0) ;           // Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xA1) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xA2) ;
LCD_ILI9806E_INDEX(0x16) ;
LCD_ILI9806E_CMD(0xA3) ;
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0xA4) ;
LCD_ILI9806E_INDEX(0x0E) ;
LCD_ILI9806E_CMD(0xA5) ;
LCD_ILI9806E_INDEX(0x1E) ;
LCD_ILI9806E_CMD(0xA6) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xA7) ;
LCD_ILI9806E_INDEX(0x0C) ;

LCD_ILI9806E_CMD(0xA8) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xA9) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xAA) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xAB) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xAC) ;
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0xAD) ;
LCD_ILI9806E_INDEX(0x30) ;
LCD_ILI9806E_CMD(0xAE) ;
LCD_ILI9806E_INDEX(0x2D) ;
LCD_ILI9806E_CMD(0xAF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC0) ;           // Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xC1) ;
LCD_ILI9806E_INDEX(0x04) ;
```

LCD_ILI9806E_CMD(0xC2) ;
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0xC3) ;
LCD_ILI9806E_INDEX(0x14) ;
LCD_ILI9806E_CMD(0xC4) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0xC5) ;
LCD_ILI9806E_INDEX(0x1D) ;
LCD_ILI9806E_CMD(0xC6) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xC7) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0xC8) ;
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0xC9) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0xCA) ;
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0xCB) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0xCC) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xCD) ;
LCD_ILI9806E_INDEX(0x1C) ;
LCD_ILI9806E_CMD(0xCE) ;
LCD_ILI9806E_INDEX(0x17) ;
LCD_ILI9806E_CMD(0xCF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xFF) ; //Change to page6 for GIP timing
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x00) ;
LCD_ILI9806E_INDEX(0x21) ;

LCD_ILI9806E_CMD(0x01) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0xA0) ;
LCD_ILI9806E_CMD(0x03) ;
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x05) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0x08) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x09) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x0A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ;
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0x0D) ;
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0x0E) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0x0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_CMD(0x11) ;
LCD_ILI9806E_INDEX(0xE0) ;
LCD_ILI9806E_CMD(0x12) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x14) ;

LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x15) ;
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0x31) ;
LCD_ILI9806E_INDEX(0x22) ;

```

LCD_ILI9806E_CMD(0x32) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x33) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x34) ;
LCD_ILI9806E_INDEX(0x87) ;
LCD_ILI9806E_CMD(0x35) ;
LCD_ILI9806E_INDEX(0x96) ;
LCD_ILI9806E_CMD(0x36) ;
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0x37) ;
LCD_ILI9806E_INDEX(0xDB) ;
LCD_ILI9806E_CMD(0x38) ;
LCD_ILI9806E_INDEX(0xCC) ;
LCD_ILI9806E_CMD(0x39) ;
LCD_ILI9806E_INDEX(0xBD) ;
LCD_ILI9806E_CMD(0x3A) ;
LCD_ILI9806E_INDEX(0x78) ;
LCD_ILI9806E_CMD(0x3B) ;
LCD_ILI9806E_INDEX(0x69) ;
LCD_ILI9806E_CMD(0x3C) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; // Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG

LCD_ILI9806E_CMD(0x54) ; //LVD for XOA GIP
LCD_ILI9806E_INDEX(0x13) ;

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG

LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0xE1) ;
LCD_ILI9806E_INDEX(0x79) ;
LCD_ILI9806E_CMD(0xB3) ; //LVD for XOA setting
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0xB2) ;

LCD_ILI9806E_CMD(0xFF) ; //Change to page0
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x35); // TE On
Delaysms(10);
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1) ;  
LCD_ILI9806E_CMD(0x28) ;           //Display Off  
Delaysms(10) ;  
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In  
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1)  
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out  
Delaysms(120) ;  
LCD_ILI9806E_CMD(0x29) ;           // Display On  
Delaysms(10) ;  
}
```


4.5 IVO 5.0”(C050SWY8-2) Initial Code

Void ILI9806E_Initial_Code_IVO (void)

```
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; // Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; // DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; // Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for Column
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x40) ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x14) ;

LCD_ILI9806E_CMD(0x41) ; // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x44) ;
}
```

```
LCD_ILI9806E_CMD(0x42) ;           // VGH/VGL
LCD_ILI9806E_INDEX(0x03) ;

LCD_ILI9806E_CMD(0x43) ;
LCD_ILI9806E_INDEX(0x0A) ;

LCD_ILI9806E_CMD(0x44) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x50) ;           // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x51) ;           // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x52) ;           // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ;           // Flicker LSB
LCD_ILI9806E_INDEX(0x17) ;

LCD_ILI9806E_CMD(0x57) ;           //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ;           // SDTI
LCD_ILI9806E_INDEX(0x17) ;

LCD_ILI9806E_CMD(0x61) ;           // CRTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ;           // EQTI
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x63) ;           // PCTI
LCD_ILI9806E_INDEX(0x00) ;
```

LCD_ILI9806E_CMD(0xA0) ; // Positive Gamma

LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xA1) ;

LCD_ILI9806E_INDEX(0x0B) ;

LCD_ILI9806E_CMD(0xA2) ;

LCD_ILI9806E_INDEX(0x13) ;

LCD_ILI9806E_CMD(0xA3) ;

LCD_ILI9806E_INDEX(0x0D) ;

LCD_ILI9806E_CMD(0xA4) ;

LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0xA5) ;

LCD_ILI9806E_INDEX(0x0C) ;

LCD_ILI9806E_CMD(0xA6) ;

LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0xA7) ;

LCD_ILI9806E_INDEX(0x03) ;

LCD_ILI9806E_CMD(0xA8) ;

LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0xA9) ;

LCD_ILI9806E_INDEX(0x0C) ;

LCD_ILI9806E_CMD(0xAA) ;

LCD_ILI9806E_INDEX(0x11) ;

LCD_ILI9806E_CMD(0xAB) ;

LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0xAC) ;

LCD_ILI9806E_INDEX(0x0D) ;

LCD_ILI9806E_CMD(0xAD) ;

LCD_ILI9806E_INDEX(0x17) ;

LCD_ILI9806E_CMD(0xAE) ;

LCD_ILI9806E_INDEX(0x0F) ;

LCD_ILI9806E_CMD(0xAF) ;

LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC0) ; // Negative Gamma

LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xC1) ;

LCD_ILI9806E_INDEX(0x0B) ;

LCD_ILI9806E_CMD(0xC2) ;
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0xC3) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xC4) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xC5) ;
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xC6) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xC7) ;
LCD_ILI9806E_INDEX(0x03) ;

LCD_ILI9806E_CMD(0xC8) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0xC9) ;
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xCA) ;
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0xCB) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xCC) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xCD) ;
LCD_ILI9806E_INDEX(0x17) ;
LCD_ILI9806E_CMD(0xCE) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0xCF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xFF) ; //Change to page6 for GIP timing
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x00) ;
LCD_ILI9806E_INDEX(0x21) ;

LCD_ILI9806E_CMD(0x01) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0xA0) ;
LCD_ILI9806E_CMD(0x03) ;
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x05) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0x08) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0x09) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x0A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ;
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0x0D) ;
LCD_ILI9806E_INDEX(0x20) ;
LCD_ILI9806E_CMD(0x0E) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0x0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_CMD(0x11) ;
LCD_ILI9806E_INDEX(0xE0) ;
LCD_ILI9806E_CMD(0x12) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x13) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x14) ;

LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x15) ;
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0x31) ;
LCD_ILI9806E_INDEX(0x22) ;

```

LCD_ILI9806E_CMD(0x32) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x33) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x34) ;
LCD_ILI9806E_INDEX(0x87) ;
LCD_ILI9806E_CMD(0x35) ;
LCD_ILI9806E_INDEX(0x96) ;
LCD_ILI9806E_CMD(0x36) ;
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0x37) ;
LCD_ILI9806E_INDEX(0xDB) ;
LCD_ILI9806E_CMD(0x38) ;
LCD_ILI9806E_INDEX(0xCC) ;
LCD_ILI9806E_CMD(0x39) ;
LCD_ILI9806E_INDEX(0xBD) ;
LCD_ILI9806E_CMD(0x3A) ;
LCD_ILI9806E_INDEX(0x78) ;
LCD_ILI9806E_CMD(0x3B) ;
LCD_ILI9806E_INDEX(0x69) ;
LCD_ILI9806E_CMD(0x3C) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x54) ; //LVD for XOA GIP
LCD_ILI9806E_INDEX(0x13) ;

```

```

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0xE1) ;
LCD_ILI9806E_INDEX(0x79) ;
LCD_ILI9806E_CMD(0xB3) ; // LVD for XOA setting
LCD_ILI9806E_INDEX(0x10) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0xB2) ;

LCD_ILI9806E_CMD(0xFF) ; //Change to page0
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delays(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delays(10) ;
LCD_ILI9806E_CMD(0x35); // TE On
Delays(10);
}

```

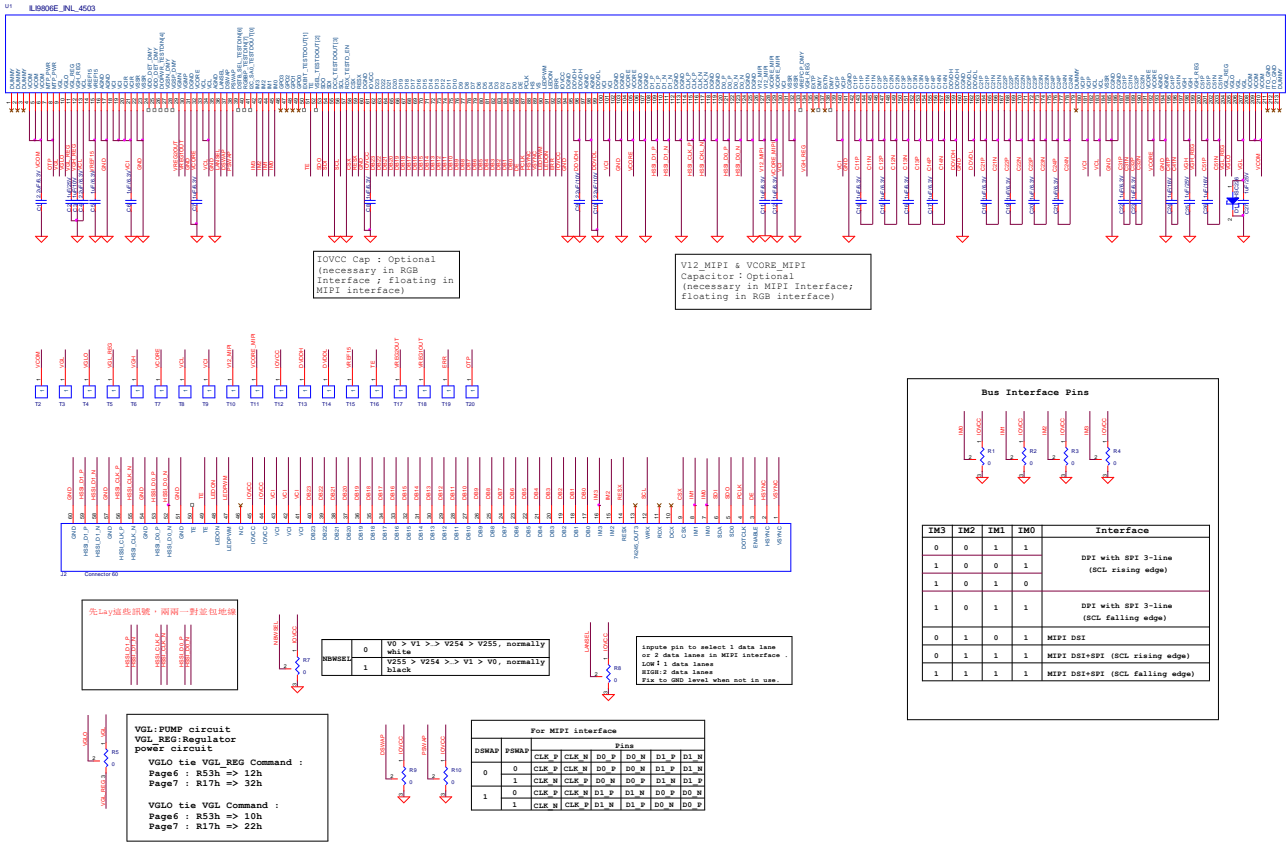

Void ILI9806E_EnterSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1) ;  
LCD_ILI9806E_CMD(0x28) ;           //Display Off  
Delaysms(10) ;  
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In  
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1)  
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out  
Delaysms(120) ;  
LCD_ILI9806E_CMD(0x29) ;           // Display On  
Delaysms(10) ;  
}
```

5. INL Panel



Note:

1. Please ensure the same naming pin is connected certainly.

5.1 INL 4.0” (F040A16-603)Initial Code

```

Void ILI9806E_Initial_Code_BOE(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; // Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x01) ; // DE = 1 Active

LCD_ILI9806E_CMD(0x30) ; // Resolution setting 480 X 800
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for 2-dot inversion
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x40) ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x1A) ;

LCD_ILI9806E_CMD(0x41) ; // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x77) ;

```

```

LCD_ILI9806E_CMD(0x42) ; // VGH/VGL
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x50) ; // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x8E) ;

LCD_ILI9806E_CMD(0x51) ; // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x8D) ;

LCD_ILI9806E_CMD(0x52) ; // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ; // Flicker LSB
LCD_ILI9806E_INDEX(0x68) ;

LCD_ILI9806E_CMD(0x60) ; // SDTI
LCD_ILI9806E_INDEX(0x14) ;

LCD_ILI9806E_CMD(0x61) ; // CRTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ; // EQTI
LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0x63) ; // PCTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0xA0) ; // Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xA1) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0xA2) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xA3) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0xA4) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xA5) ;
LCD_ILI9806E_INDEX(0x17) ;

```

LCD_ILI9806E_CMD(0xA6) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xA7) ;
LCD_ILI9806E_INDEX(0x04) ;

LCD_ILI9806E_CMD(0xA8) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0xA9) ;
LCD_ILI9806E_INDEX(0x0E) ;
LCD_ILI9806E_CMD(0xAA) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0xAB) ;
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xAC) ;
LCD_ILI9806E_INDEX(0x1F) ;
LCD_ILI9806E_CMD(0xAD) ;
LCD_ILI9806E_INDEX(0x38) ;
LCD_ILI9806E_CMD(0xAE) ;
LCD_ILI9806E_INDEX(0x3C) ;
LCD_ILI9806E_CMD(0xAF) ;
LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0xC0) ; // Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xC1) ;
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0xC2) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0xC3) ;
LCD_ILI9806E_INDEX(0x15) ;
LCD_ILI9806E_CMD(0xC4) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0xC5) ;
LCD_ILI9806E_INDEX(0x1D) ;
LCD_ILI9806E_CMD(0xC6) ;
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0xC7) ;
LCD_ILI9806E_INDEX(0x0C) ;

LCD_ILI9806E_CMD(0xC8) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0xC9) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0xCA) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xCB) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0xCC) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0xCD) ;
LCD_ILI9806E_INDEX(0x1A) ;
LCD_ILI9806E_CMD(0xCE) ;
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0xCF) ;
LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0xFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

//Change to page6 for GIP timing

LCD_ILI9806E_CMD(0x00) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x01) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x03) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x05) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x06) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0x07) ;

LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x08) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0x09) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0C) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x0D) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x0E) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x10) ;
LCD_ILI9806E_INDEX(0x7E) ;
LCD_ILI9806E_CMD(0x11) ;
LCD_ILI9806E_INDEX(0xF3) ;
LCD_ILI9806E_CMD(0x12) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0x13) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x14) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x15) ;
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0x16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0x17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1A) ;

LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0x20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0x26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0x27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0x30) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0x31) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x32) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x33) ;
LCD_ILI9806E_INDEX(0x86) ;
LCD_ILI9806E_CMD(0x34) ;
LCD_ILI9806E_INDEX(0xBA) ;
LCD_ILI9806E_CMD(0x35) ;
LCD_ILI9806E_INDEX(0xAB) ;
LCD_ILI9806E_CMD(0x36) ;
LCD_ILI9806E_INDEX(0xDC) ;
LCD_ILI9806E_CMD(0x37) ;
LCD_ILI9806E_INDEX(0xCD) ;


```

LCD_ILI9806E_CMD(0x38) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x39) ;
LCD_ILI9806E_INDEX(0xEE) ;
LCD_ILI9806E_CMD(0x3A) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_CMD(0x3B) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3C) ;
LCD_ILI9806E_INDEX(0x68) ;
LCD_ILI9806E_CMD(0x3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x3F) ;
LCD_ILI9806E_INDEX(0x99) ;
LCD_ILI9806E_CMD(0x40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0xFF) ; ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ;
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0xE1) ;
LCD_ILI9806E_INDEX(0x79) ;

```

```
LCD_ILI9806E_CMD(0x26) ;  
LCD_ILI9806E_INDEX(0xB2) ;
```

```
LCD_ILI9806E_CMD(0xFF) ;  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;
```

```
//Change to page0
```

```
LCD_ILI9806E_CMD(0x11) ; //Exit Sleep  
Delaysms(120) ;  
LCD_ILI9806E_CMD(0x29) ; // Display On  
Delaysms(10) ;  
LCD_ILI9806E_CMD(0x35) ; // TE On  
Delaysms(10) ;  
}
```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1) ;
LCD_ILI9806E_CMD(0x28) ;           //Display Off
Delaysms(10) ;
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ;           // Display On
Delaysms(10) ;
}
```

5.2 INL 4.5” (4503)Initial Code

```

Void ILI9806E_Initial_Code_BOE(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; // Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; // DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; // Resolution setting 480 X 854
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for Column
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x40) ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x11) ;

LCD_ILI9806E_CMD(0x41) ; // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x33) ;

```

```

LCD_ILI9806E_CMD(0x42) ;           // VGH/VGL
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x43) ;
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x44) ;
LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0x50) ;           // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x51) ;           // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x52) ;           // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ;           // Flicker LSB
LCD_ILI9806E_INDEX(0x57) ;

LCD_ILI9806E_CMD(0x57) ;           //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ;           // SDTI
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x61) ;           // CRTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ;           // EQTI
LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0x63) ;           // PCTI
LCD_ILI9806E_INDEX(0x00) ;

```

LCD_ILI9806E_CMD(0XA0) ; // Positive Gamma

LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0XA1) ;

LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0XA2) ;

LCD_ILI9806E_INDEX(0x0D) ;

LCD_ILI9806E_CMD(0XA3) ;

LCD_ILI9806E_INDEX(0x0C) ;

LCD_ILI9806E_CMD(0XA4) ;

LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0XA5) ;

LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0XA6) ;

LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0XA7) ;

LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0XA8) ;

LCD_ILI9806E_INDEX(0x06) ;

LCD_ILI9806E_CMD(0XA9) ;

LCD_ILI9806E_INDEX(0x0A) ;

LCD_ILI9806E_CMD(0XAA) ;

LCD_ILI9806E_INDEX(0x11) ;

LCD_ILI9806E_CMD(0XAB) ;

LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0XAC) ;

LCD_ILI9806E_INDEX(0x0E) ;

LCD_ILI9806E_CMD(0XAD) ;

LCD_ILI9806E_INDEX(0x1A)

LCD_ILI9806E_CMD(0XAE) ;

LCD_ILI9806E_INDEX(0x11)

LCD_ILI9806E_CMD(0XAF) ;

LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0XC0) ; // Negative Gamma

LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0XC1) ;

LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0XC2) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0XC3) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0XC4) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0XC5) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0XC6) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0XC7) ;
LCD_ILI9806E_INDEX(0x05) ;

LCD_ILI9806E_CMD(0XC8) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0XC9) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0XCA) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0XCB) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0XCC) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0XCD) ;
LCD_ILI9806E_INDEX(0x19) ;
LCD_ILI9806E_CMD(0XCE) ;
LCD_ILI9806E_INDEX(0x11) ;
LCD_ILI9806E_CMD(0XCF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0XFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

//Change to page6 for GIP timing

LCD_ILI9806E_CMD(0X00) ;
LCD_ILI9806E_INDEX(0x20) ;

LCD_ILI9806E_CMD(0X01) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0X02) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X03) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0X04) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0X05) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0X06) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_CMD(0X07) ;
LCD_ILI9806E_INDEX(0x02) ;
LCD_ILI9806E_CMD(0X08) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0X09) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0X0A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X0C) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0X0D) ;
LCD_ILI9806E_INDEX(0x09) ;
LCD_ILI9806E_CMD(0X0E) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X10) ;
LCD_ILI9806E_INDEX(0x77) ;
LCD_ILI9806E_CMD(0X11) ;
LCD_ILI9806E_INDEX(0xF0) ;
LCD_ILI9806E_CMD(0X12) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X13) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0X14) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X15) ;
LCD_ILI9806E_INDEX(0X43) ;
LCD_ILI9806E_CMD(0X16) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0X17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1C) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0X22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0X23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0X24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0X26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0X27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0X30) ;
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0X31) ;

```

LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X32) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X33) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X34) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X35) ;
LCD_ILI9806E_INDEX(0xBB) ;
LCD_ILI9806E_CMD(0X36) ;
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0X37) ;
LCD_ILI9806E_INDEX(0xDD) ;
LCD_ILI9806E_CMD(0X38) ;
LCD_ILI9806E_INDEX(0xCC) ;
LCD_ILI9806E_CMD(0X39) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3A) ;
LCD_ILI9806E_INDEX(0x66) ;
LCD_ILI9806E_CMD(0X3B) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3C) ;
LCD_ILI9806E_INDEX(0x88) ;
LCD_ILI9806E_CMD(0X3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;

```

```

LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x77) ; //
LCD_ILI9806E_CMD(0XE1) ; //
LCD_ILI9806E_INDEX(0x79) ; //

LCD_ILI9806E_CMD(0XFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ; //Change to page0

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x35) ; // TE On
Delaysms(10) ;
}

```

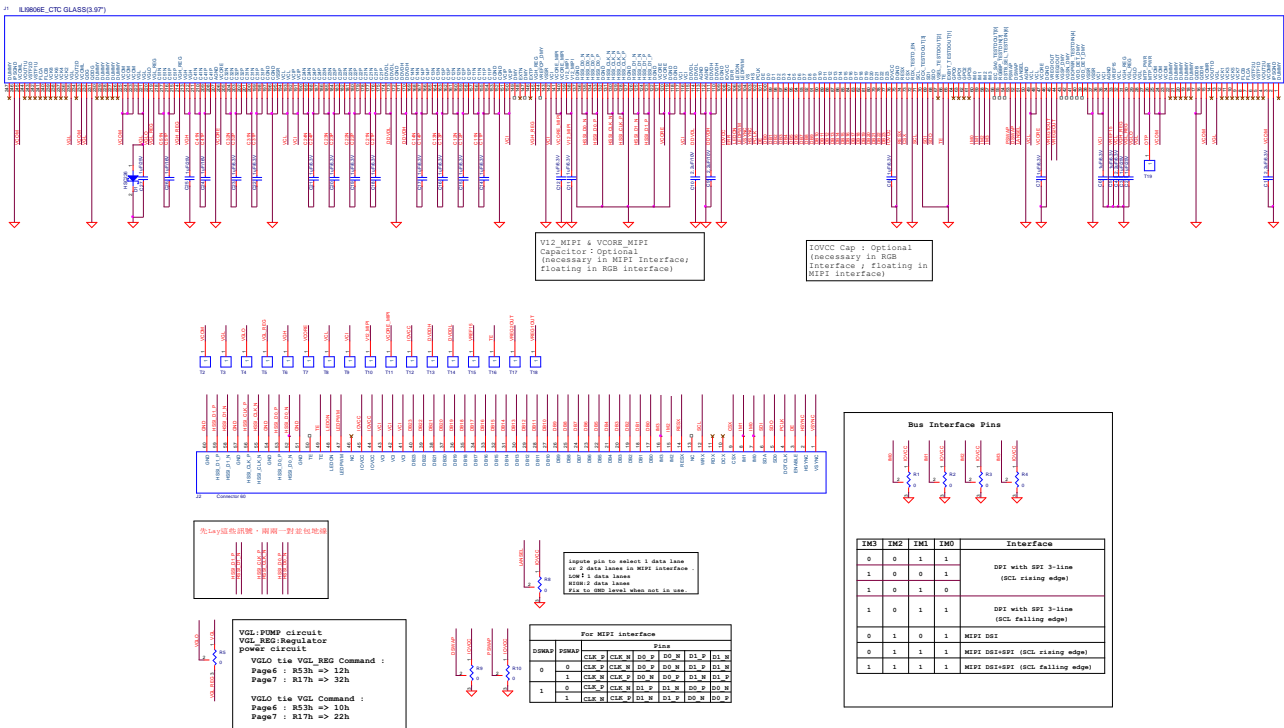
Void ILI9806E_EnterSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ; // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1) ;  
LCD_ILI9806E_CMD(0x28) ; //Display Off  
Delaysms(10) ;  
LCD_ILI9806E_CMD(0x10) ; //Sleep-In  
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{  
LCD_ILI9806E_CMD(0xFF) ; // Change to Page 0 CMD for Normal command  
LCD_ILI9806E_INDEX(0xFF) ;  
LCD_ILI9806E_INDEX(0x98) ;  
LCD_ILI9806E_INDEX(0x06) ;  
LCD_ILI9806E_INDEX(0x04) ;  
LCD_ILI9806E_INDEX(0x00) ;  
Delaysms(1)  
LCD_ILI9806E_CMD(0x11) ; // Sleep-Out  
Delaysms(120) ;  
LCD_ILI9806E_CMD(0x29) ; // Display On  
Delaysms(10) ;  
}
```

6. CTC panel



Note:

1. Please ensure the same naming pin is connected certainly.

6.1 CTC 3.97” Initial Code

```

Void ILI9806E_Initial_Code_BOE(void)
{
// VCI=2.8V
//***** Reset LCD Driver *****//
LCD_nRESET = 1 ;
delayms(5) ; // Delay 5ms // This delay time is necessary
LCD_nRESET = 0 ;
delayms(10) ; // Delay 10ms // This delay time is necessary
LCD_nRESET = 1 ;
delayms(120) ; // Delay 120 ms
//***** Start Initial Sequence *****//
LCD_ILI9806E_CMD(0xFF) ; //Change to page1 CMD
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x08) ; // Output SDA
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x21) ; // DE = 1 Active
LCD_ILI9806E_INDEX(0x01) ;

LCD_ILI9806E_CMD(0x30) ; // Resolution setting 480 X 800
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x31) ; // Inversion setting for for 2-dot
LCD_ILI9806E_INDEX(0x02) ;

LCD_ILI9806E_CMD(0x40) ; // Pump for DDVDH-L
LCD_ILI9806E_INDEX(0x10) ;

LCD_ILI9806E_CMD(0x41) ; // DDVDH/ DDVDL clamp
LCD_ILI9806E_INDEX(0x22) ;

```

```

LCD_ILI9806E_CMD(0x42) ;           // VGH/VGL
LCD_ILI9806E_INDEX(0x03) ;

LCD_ILI9806E_CMD(0x43) ;
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0x44) ;
LCD_ILI9806E_INDEX(0x82) ;

LCD_ILI9806E_CMD(0x50) ;           // VREG1OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x51) ;           // VREG2OUT VOLTAGE
LCD_ILI9806E_INDEX(0x78) ;

LCD_ILI9806E_CMD(0x52) ;           // Flicker MSB
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x53) ;           // Flicker LSB
LCD_ILI9806E_INDEX(0x79) ;

LCD_ILI9806E_CMD(0x57) ;           //Low voltage detection
LCD_ILI9806E_INDEX(0x50) ;

LCD_ILI9806E_CMD(0x60) ;           // SDTI
LCD_ILI9806E_INDEX(0x0D) ;

LCD_ILI9806E_CMD(0x61) ;           // CRTI
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0x62) ;           // EQTI
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x63) ;           // PCTI
LCD_ILI9806E_INDEX(0x00) ;

```

```
LCD_ILI9806E_CMD(0XA0) ;           // Positive Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0XA1) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0XA2) ;
LCD_ILI9806E_INDEX(0x0F) ;
LCD_ILI9806E_CMD(0XA3) ;
LCD_ILI9806E_INDEX(0x0E) ;
LCD_ILI9806E_CMD(0XA4) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0XA5) ;
LCD_ILI9806E_INDEX(0x1A) ;
LCD_ILI9806E_CMD(0XA6) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0XA7) ;
LCD_ILI9806E_INDEX(0x09) ;

LCD_ILI9806E_CMD(0XA8) ;
LCD_ILI9806E_INDEX(0x05) ;
LCD_ILI9806E_CMD(0XA9) ;
LCD_ILI9806E_INDEX(0x0A) ;
LCD_ILI9806E_CMD(0XAA) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0XAB) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0XAC) ;
LCD_ILI9806E_INDEX(0x0E) ;
LCD_ILI9806E_CMD(0XAD) ;
LCD_ILI9806E_INDEX(0x2E)
LCD_ILI9806E_CMD(0XAE) ;
LCD_ILI9806E_INDEX(0x28)
LCD_ILI9806E_CMD(0XAF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0XC0) ;           // Negative Gamma
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0XC1) ;
LCD_ILI9806E_INDEX(0x05) ;
```


LCD_ILI9806E_CMD(0XC2) ;
LCD_ILI9806E_INDEX(0x0E) ;
LCD_ILI9806E_CMD(0XC3) ;
LCD_ILI9806E_INDEX(0x12) ;
LCD_ILI9806E_CMD(0XC4) ;
LCD_ILI9806E_INDEX(0x0C) ;
LCD_ILI9806E_CMD(0XC5) ;
LCD_ILI9806E_INDEX(0x18) ;
LCD_ILI9806E_CMD(0XC6) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0XC7) ;
LCD_ILI9806E_INDEX(0x08) ;

LCD_ILI9806E_CMD(0XC8) ;
LCD_ILI9806E_INDEX(0x03) ;
LCD_ILI9806E_CMD(0XC9) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0XCA) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0XCB) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0XCC) ;
LCD_ILI9806E_INDEX(0x0B) ;
LCD_ILI9806E_CMD(0XCD) ;
LCD_ILI9806E_INDEX(0x2C) ;
LCD_ILI9806E_CMD(0XCE) ;
LCD_ILI9806E_INDEX(0x29) ;
LCD_ILI9806E_CMD(0XCF) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0XFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x06) ;

//Change to page6 for GIP timing

LCD_ILI9806E_CMD(0X00) ;
LCD_ILI9806E_INDEX(0x3C) ;

LCD_ILI9806E_CMD(0X01) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_CMD(0X02) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X03) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X04) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0X05) ;
LCD_ILI9806E_INDEX(0x0D) ;
LCD_ILI9806E_CMD(0X06) ;
LCD_ILI9806E_INDEX(0x80) ;
LCD_ILI9806E_CMD(0X07) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_CMD(0X08) ;
LCD_ILI9806E_INDEX(0x07) ;
LCD_ILI9806E_CMD(0X09) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X0A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X0B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X0C) ;
LCD_ILI9806E_INDEX(0x1F) ;
LCD_ILI9806E_CMD(0X0D) ;
LCD_ILI9806E_INDEX(0x1F) ;
LCD_ILI9806E_CMD(0X0E) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X0F) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X10) ;
LCD_ILI9806E_INDEX(0x50) ;
LCD_ILI9806E_CMD(0X11) ;
LCD_ILI9806E_INDEX(0xD0) ;
LCD_ILI9806E_CMD(0X12) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X13) ;
LCD_ILI9806E_INDEX(0x00) ;

LCD_ILI9806E_CMD(0X14) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X15) ;
LCD_ILI9806E_INDEX(0xC0) ;
LCD_ILI9806E_CMD(0X16) ;
LCD_ILI9806E_INDEX(0x08) ;
LCD_ILI9806E_CMD(0X17) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X18) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X19) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1A) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1B) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X1C) ;
LCD_ILI9806E_INDEX(0x40) ;
LCD_ILI9806E_CMD(0X1D) ;
LCD_ILI9806E_INDEX(0x00) ;
LCD_ILI9806E_CMD(0X20) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X21) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0X22) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0X23) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0X24) ;
LCD_ILI9806E_INDEX(0x01) ;
LCD_ILI9806E_CMD(0X25) ;
LCD_ILI9806E_INDEX(0x23) ;
LCD_ILI9806E_CMD(0X26) ;
LCD_ILI9806E_INDEX(0x45) ;
LCD_ILI9806E_CMD(0X27) ;
LCD_ILI9806E_INDEX(0x67) ;
LCD_ILI9806E_CMD(0X30) ;
LCD_ILI9806E_INDEX(0x13) ;
LCD_ILI9806E_CMD(0X31) ;

```

LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X32) ;
LCD_ILI9806E_INDEX(0xDD) ;
LCD_ILI9806E_CMD(0X33) ;
LCD_ILI9806E_INDEX(0xCC) ;
LCD_ILI9806E_CMD(0X34) ;
LCD_ILI9806E_INDEX(0xBB) ;
LCD_ILI9806E_CMD(0X35) ;
LCD_ILI9806E_INDEX(0xAA) ;
LCD_ILI9806E_CMD(0X36) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X37) ;
LCD_ILI9806E_INDEX(0x26) ;
LCD_ILI9806E_CMD(0X38) ;
LCD_ILI9806E_INDEX(0x72) ;
LCD_ILI9806E_CMD(0X39) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_CMD(0X3A) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3B) ;
LCD_ILI9806E_INDEX(0xEE) ;
LCD_ILI9806E_CMD(0X3C) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3D) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3E) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X3F) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0X40) ;
LCD_ILI9806E_INDEX(0x22) ;
LCD_ILI9806E_CMD(0x52) ; //
LCD_ILI9806E_INDEX(0x10) ; //
LCD_ILI9806E_CMD(0x53) ; //
LCD_ILI9806E_INDEX(0x10) ; //Default
//LCD_ILI9806E_INDEX(0x12) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0xFF) ; // Change to Page 7 CMD for user command
LCD_ILI9806E_INDEX(0xFF) ;

```

```

LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x07) ;

LCD_ILI9806E_CMD(0x17) ; //
LCD_ILI9806E_INDEX(0x22) ; //Default
//LCD_ILI9806E_INDEX(0x32) for VGLO tie VGL_REG ;

LCD_ILI9806E_CMD(0x02) ; //
LCD_ILI9806E_INDEX(0x77) ; //
LCD_ILI9806E_CMD(0XE1) ; //
LCD_ILI9806E_INDEX(0x79) ; //
LCD_ILI9806E_CMD(0X26) ; //
LCD_ILI9806E_INDEX(0XB2) ; //

LCD_ILI9806E_CMD(0XFF) ;
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ; //Change to page0

LCD_ILI9806E_CMD(0x11) ; //Exit Sleep
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ; // Display On
Delaysms(10) ;
LCD_ILI9806E_CMD(0x35) ; // TE On
Delaysms(10) ;
}

```

Void ILI9806E_EnterSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1) ;
LCD_ILI9806E_CMD(0x28) ;           //Display Off
Delaysms(10) ;
LCD_ILI9806E_CMD(0x10) ;           //Sleep-In
Delaysms(120) ;
```

Void ILI9806E_ExitSleep_Code(void)

```
{
LCD_ILI9806E_CMD(0xFF) ;           // Change to Page 0 CMD for Normal command
LCD_ILI9806E_INDEX(0xFF) ;
LCD_ILI9806E_INDEX(0x98) ;
LCD_ILI9806E_INDEX(0x06) ;
LCD_ILI9806E_INDEX(0x04) ;
LCD_ILI9806E_INDEX(0x00) ;
Delaysms(1)
LCD_ILI9806E_CMD(0x11) ;           // Sleep-Out
Delaysms(120) ;
LCD_ILI9806E_CMD(0x29) ;           // Display On
Delaysms(10) ;
}
```

7. Revision History

Version No.	Date	Page	Description
V090	20130715	all	New creation
V091	20130820	3,28~81	<ol style="list-style-type: none"> 1. FPC Hardware Description 2. Add CPT ,BOE and GP FPC schematic and initial code 3. Add Page7 command.
V092	20131119	All	<ol style="list-style-type: none"> 1. Add Page7 RE1h = 79 in each code. 2. Add Page0 R35h in each code for TE signal. 3. Add IVO FPC circuit and initial code.
V093	20140328	All	<ol style="list-style-type: none"> 1. Add void function delaytimes(1), 2. Add BOE 4.95" 4.5G and 6G initial code 3. IVO Page6 R00h
V094	20140612	All	<ol style="list-style-type: none"> 1. Modify LCD_nRESET = 1 delay time 2. Modify initial code Page1 Command R021 →R21 3. Add HSD C0504D initial code. 4. Modify HSD Page6 R0Ch = 01 to 0A Modify HSD Page6 R0Dh = 01 to 0A
V095	20140805	68 126 135	<ol style="list-style-type: none"> 1. Add BOE FPC schematic VCOM net 2. Add INL FPC schematic and initial code 3. Add CTC FPC schematic and initial code 4. Remove GP FPC schematic
V096	20151216	9 18 36 68	<ol style="list-style-type: none"> 1. Modify HSD GIP timing Page6 R20h = 01 Modify HSD GIP timing Page6 R21h = 23 2. Modify BOE FPC schematic net 3. Add INL initial code. 4. Add CPT initial code. 5. Add IVO initial code. 6. Add BOE initial code.
V97	20160107	25-28	<ol style="list-style-type: none"> 1. Modify HSD dual scan GIP timing