

PRODUCT CHANGE DESCRIPTION & RECORD

PRODUCT P/N

| P/N | BEFORE | AFTHER |
|-----|---------------------------------|---------------------------------|
| | EPC-INBN0BV1287UD(2022-02-23) | EPC-INBN0BV1294UD(2023-04-28) |

PRODUCT HARDWARE DIFFERENCE

| EPC-INBN0BV1287UD(2022-02-23) | EPC-INBN0BV1294UD(2023-04-28) |
|--|---------------------------------------|
| POWER CONSUMPTION | |
| 5.5W (+5.0V INPUT,1024 DIMMING LEVEL) | 3.1W (+5.0V INPUT,1024 DIMMING LEVEL) |
| ILLUMINATION | |
| 1200lux (1024 DIMMING LEVEL) | 720lux (1024 DIMMING LEVEL) |
| GRAM SIZE | |
| 256x80 | 256x128 |
| PATTERN AREA PIXEL | |
| 256x50 | 256x48 |
| DC POWER SOCKET MODEL | |
| DC-012A-25A | DC044 |
| VFD DISPLAY MODEL | |
| GP1287BI | GP1294AI |

PRODUCT FUNCTION DIFFERENCE

| EPC-INBN0BV1287UD(2022-02-23) | | | EPC-INBN0BV1294UD(2023-04-28) | | |
|---------------------------------|------|---------------|---------------------------------|------|---------------|
| DIMMING ADJUST REGISTER | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| DIMMCTR(10bit) | | | DIMMCTR(10bit) | | |
| 1 ST BYTE | COMM | 0xA0 | 1 ST BYTE | COMM | 0xA0 |
| 2 ND BYTE | MSB | DIMMCTR [9:8] | 2 ND BYTE | LSB | DIMMCTR [7:0] |
| 3 RD BYTE | LSB | DIMMCTR [7:0] | 3 RD BYTE | MSB | DIMMCTR [9:8] |

PRODUCT FUNCTION DIFFERENCE

| EPC-INBN0BV1287UD(2022-02-23) | EPC-INBN0BV1294UD(2023-04-28) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|------|--|----------------------|------|------|--|--------|--|--|----------------------|------|------|----------------------|------|------|----------------------|------|------|----------------------|--------|------|----------------------|-------|------|-----|-----|-----|--------|----------|------|
| CLEAR GRAM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table><tr><th colspan="3">GRAMCLR</th></tr><tr><td>1ST BYTE</td><td>COMM</td><td>0x55</td></tr></table> | GRAMCLR | | | 1 ST BYTE | COMM | 0x55 | <table><tr><th colspan="3">GRAMWR</th></tr><tr><td>1ST BYTE</td><td>COMM</td><td>0xF0</td></tr><tr><td>2ND BYTE</td><td>XPOS</td><td>0x00</td></tr><tr><td>3RD BYTE</td><td>YPOS</td><td>0x00</td></tr><tr><td>4TH BYTE</td><td>RETURN</td><td>0x7F</td></tr><tr><td>5TH BYTE</td><td>DATA1</td><td>0xFF</td></tr><tr><td>---</td><td>---</td><td>---</td></tr><tr><td>N BYTE</td><td>DATA4096</td><td>0xFF</td></tr></table> | GRAMWR | | | 1 ST BYTE | COMM | 0xF0 | 2 ND BYTE | XPOS | 0x00 | 3 RD BYTE | YPOS | 0x00 | 4 TH BYTE | RETURN | 0x7F | 5 TH BYTE | DATA1 | 0xFF | --- | --- | --- | N BYTE | DATA4096 | 0xFF |
| GRAMCLR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 ST BYTE | COMM | 0x55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRAMWR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 ST BYTE | COMM | 0xF0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 ND BYTE | XPOS | 0x00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 RD BYTE | YPOS | 0x00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 TH BYTE | RETURN | 0x7F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 TH BYTE | DATA1 | 0xFF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| --- | --- | --- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N BYTE | DATA4096 | 0xFF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DISPLAY INITIALIZATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div>电源启动 Power-ON</div><div>↓</div><div>软件复位 Software Reset</div><div>→ WriteCommand(0xAA)</div><div>↓</div><div>VFD模式设定 VFD Mode Setting</div><div>→ WriteCommand(0xCC) WriteData(0x01) WriteData(0x00)</div><div>↓</div><div>显示区域设定 Display Area Setting</div><div>→ WriteCommand(0xE0) WriteData(0xFF) WriteData(0x7F) WriteData(0x00) WriteData(0x00) WriteData(0x20) WriteData(0x00) WriteData(0x80)</div><div>↓</div><div>内部速度设定 Internal Speed Setting</div><div>→ WriteCommand(0xB1) WriteData(0x20) WriteData(0x3F) WriteData(0x00) WriteData(0x01)</div><div>↓</div><div>亮度设定 Dimming Level Setting</div><div>→ WriteCommand(0xA0) WriteData(0x00) WriteData(0x28)</div><div>↓</div><div>清除显存数据 Clear GRAM</div><div>→ WriteCommand(0x55)</div><div>↓</div><div>延时20毫秒 Delay 20ms</div><div>↓</div><div>显示位置偏移 Display Position Offset</div><div>→ WriteCommand(0xC0) WriteData(0x00) WriteData(0x00)</div><div>↓</div><div>显示模式设定 Display Mode Setting</div><div>→ WriteCommand(0x80) WriteData(0x00)</div></div> | <div><div>电源启动 Power-ON</div><div>↓</div><div>软件复位 Software Reset</div><div>→ WriteCommand(0xAA)</div><div>↓</div><div>VFD控制器初始化 VFD Controller Init</div><div>→ WriteCommand(0xCC) WriteData(0x01) WriteData(0x1F) WriteData(0x00) WriteData(0xFF) WriteData(0x2F) WriteData(0x00) WriteData(0x20)</div><div>↓</div><div>亮度设定 Dimming Level Setting</div><div>→ WriteCommand(0xA0) WriteData(0x28) WriteData(0x00)</div><div>↓</div><div>清除显存数据 Clear GRAM</div><div>→ ClearGRAM()</div><div>↓</div><div>延时20毫秒 Delay 20ms</div><div>↓</div><div>显示位置偏移 Display Position Offset</div><div>→ WriteCommand(0xC0) WriteData(0x00) WriteData(0x00)</div><div>↓</div><div>显示模式设定 Display Mode Setting</div><div>→ WriteCommand(0x80) WriteData(0x00)</div><div>↓</div><div>振荡器初始化 Oscillator Init</div><div>→ WriteCommand(0x78) WriteData(0x08)</div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |