

SHENZHEN BRILLIANT CRYSTAL TECHNOLOGIC CO.,LTD.

**深 圳 市 彩 晶 科 技 有 限 公 司**

The specification for the following models :

CM240160-1BLWAA-5

CM240160-1FLWAA-5

CM240160-1GLWAA-5

| <b>PROPOSED BY</b> |          | <b>APPROVED</b> |
|--------------------|----------|-----------------|
| Design             | Approved |                 |
|                    |          |                 |

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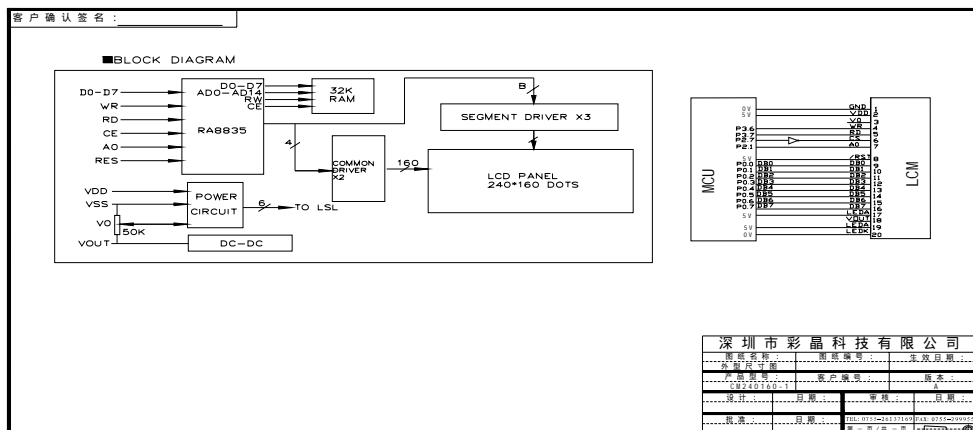
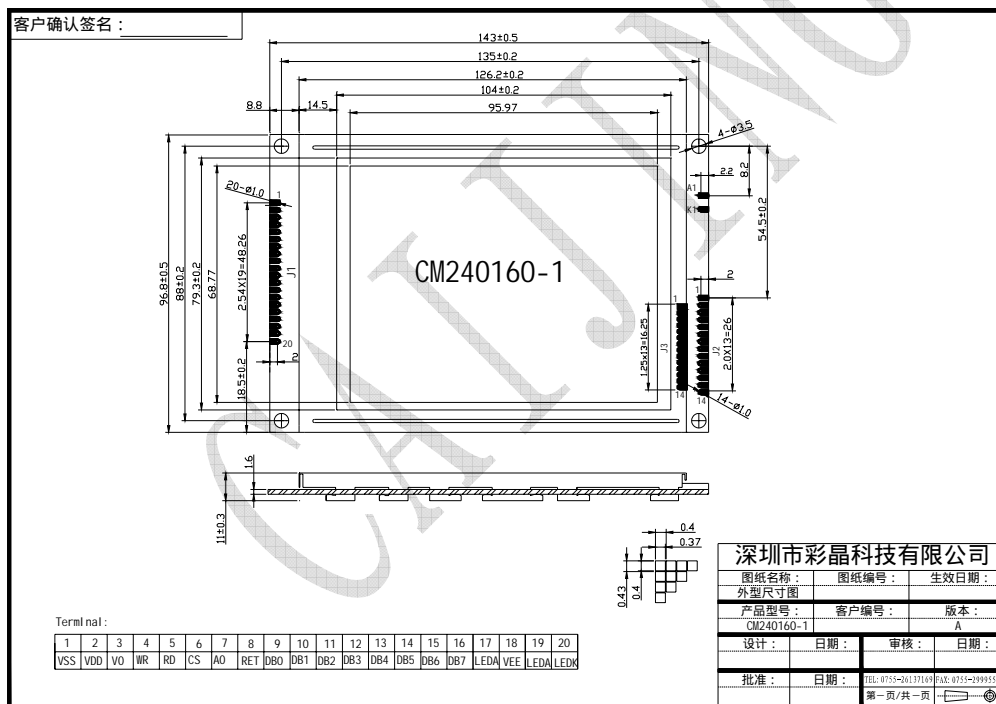
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1. Mechanical Specification

| ITEM                     | STANDARD VALUE                  |   | UNIT |
|--------------------------|---------------------------------|---|------|
| Dot Matrix               | 240 X 160 DOTS                  |   | --   |
| MODULE DIMENSION         | 143.0 (W) X 96.8 (H) X 11.0 (T) |   | mm   |
| VIEWING DISPLAY AREA     | 104.0 (W) X 79.3 (H)            |   | mm   |
| ACTIVE DISPLAY AREA      | 95.97 (W) X 68.77 (H)           |   | mm   |
| DOT SIZE                 | 0.37 (W) X 0.4 (H)              |   | mm   |
| DOT PITCH                | 0.03 (W) X 0.03 (H)             |   | mm   |
| DRIVE METHOD             | 1/160 Duty , 1/13 BIAS          |   |      |
| VIEWING DIRECTION        | 6 O'clock                       |   |      |
| LED Backlight Color      | White                           |   |      |
| Backlight Input          | DC +5.0V                        | V | mA   |
| LED backlight current    | 50                              |   | mA   |
| Backlight Half-Lift Time | 35,000                          |   | HR.  |
| INPUT VOLAGE             | DC +5.0V                        | V | mA   |
| LCD DRIVER               | RA8835                          |   |      |
| Weight                   | 181g                            |   |      |

2. Mechanical Diagram



## 3. Interface Pin Connections

J1 (RA8835 Controller)

| NO | SYMBOL | LEVEL | FUNCTION   |
|----|--------|-------|--|
| 1  | VSS    | 0V    | GND  |
| 2  | VDD    | 5.0V  | Supply voltage for logic(+5V)                    |
| 3  | V0     | -20V  | Supply voltage for LCD Contrast adjustment(-19V) |
| 4  | /WR    | --    | Write signal                                     |
| 5  | /RD    | --    | Read Signal                                      |
| 6  | /CS    | --    | Chip select singnal                              |
| 7  | A0     | H/L   | Data Type Selection                              |
| 8  | /RES   | H/L   | Reset Signal                                     |
| 9  | DB0    | H/L   | Data BUS   |
| 10 | DB1    | H/L   | Data BUS   |
| 11 | DB2    | H/L   | Data BUS   |
| 12 | DB3    | H/L   | Data BUS   |
| 13 | DB4    | H/L   | Data BUS   |
| 14 | DB5    | H/L   | Data BUS   |
| 15 | DB6    | H/L   | Data BUS   |
| 16 | DB7    | H/L   | Data BUS   |
| 17 | LEDA   | --    | LED+5V   |
| 18 | VOUT   | --    | Power out(-23V),LCD Power supply                 |
| 19 | LEDA   | --    | LED Back light Power+5V                          |
| 20 | LEDK   | --    | LED Back lingt Power0V                           |

## J2/J3 NO Controller

| NO | SYMBOL  | LEVEL | FUNCTION                              |
|----|---------|-------|---------------------------------------|
| 1  | Fram    | --    | Frame signal                          |
| 2  | M       | --    | Alternater for LCD driver             |
| 3  | Load    | --    | Data latch signal                     |
| 4  | Cp      | --    | Clock signal for shifting serial data |
| 5  | Dispoff | --    | H:Display ON.L:Display Off            |
| 6  | D0      | H/L   | Data BUS                              |
| 7  | D1      | H/L   | Data BUS                              |
| 8  | D2      | H/L   | Data BUS                              |
| 9  | D3      | H/L   | Data BUS                              |
| 10 | VDD     | --    | Power supply for logic(+5V)           |
| 11 | Vss     | --    | GND                                   |
| 12 | Vee     | --    | Power supply for LCD(-23V)            |
| 13 | V0      | --    | Variable voltage for LCD(-19V)        |
| 14 | FG      | --    | GND for LED+5V                        |

## 4. Absolute Maximum Ratings

| ITEM                            | SYMBOL  | MIN.    | TYPE | MAX.    | UNIT |
|---------------------------------|---|---------|------|---------|------|
| <b>OPERATING TEMPERATURE</b>    | TOP   | 0/-20   | --   | +50/+70 |      |
| <b>STORAGE TEMPERATURE</b>      | TST   | -10/-30 | --   | +60/+80 |      |
| <b>INPUT VOLTAGE</b>            | VI  | 4.75    | 5.0  | 5.25    | V    |
| <b>SUPPLY VOLTAGE FOR LOGIC</b> | VDD-VSS   | --      | 5.0  | 5.5     | V    |
| <b>SUPPLY VOLTAGE FOR LCD</b>   | VDD-V0  | --      | --   | 19.5    | V    |
| <b>STATIC ELECTRICITY</b>       | Be sure that you are grounded when handing LCM. |         |      |         |      |