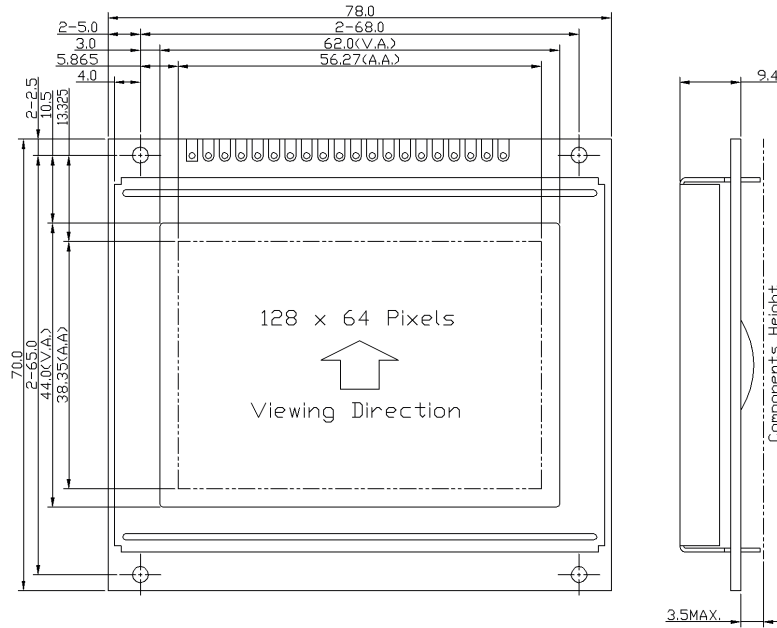


## OUTLINE DRAWING



## TERMINAL FUNCTIONS

| Pin | Name | Descriptions   |
|-----|------|--|
| 1   | /CS1 | Chip Selection<br>When CS1=0(*1), enable access to the left side (64 column) of the LCD Module   |
| 2   | /CS2 | Chip Selection<br>When CS2=0(*1), enable access to the right side (64 column) of the LCD Module  |
| 3   | VSS  | 0V Power Supply, Ground  |
| 4   | VDD  | Positive Power Supply  |
| 5   | V0   | LCD Contrast Reference   |
| 6   | RS   | Register Select<br>RS=HIGH: DB0-DB7=Display RAM data<br>RS=LOW: DB0-DB7= Instruction Data  |
| 7   | R/W  | In Read Mode, R/W = H;<br>Data read from the LCD Module data appears at DB0-DB7 and can be read by the host while E = H and the device is being selected.      |
| 8   | E    | In Write Mode, R/W = L;<br>data write to the LCD Module, data appears at DB0-DB7 will be written into the LCD module at E = H->L and device is being selected. |
| 9   | DB0  | Data Bus   |
| :   | :    | Three state I/O terminal for display data or instruction data  |
| 16  | DB7  |  |
| 17  | BLA  | LED Backlight Positive Power Supply  |
| 18  | BLK  | LED Backlight Negative Power   |
| 19  | NC   | No connection (leave open)   |
| 20  | VEE  | Negative Power Supply for LCD driving  |

## DISPLAY CHARACTERISTICS

| Item              | Value                           |
|-------------------|---------------------------------|
| LCD Display Mode* | STN-YG, Positive, Transflective |
| Viewing Angle     | 6:00                            |
| Driving Method    | 1/64 duty, 1/9 bias             |
| Backlight#        | Yellow Green LED Backlight      |

## MECHANICAL DATA

| Item              | Value                 |
|-------------------|-----------------------|
| Outline (mm)      | 78.0 x 70.0 x 12.9MAX |
| Viewing Area (mm) | 62.0 x 44.0           |
| Active Area (mm)  | 56.27 x 38.35         |
| Dot Pitch (mm)    | 0.6 x 0.44            |
| Dot Size (mm)     | 0.55 x 0.39           |

## ABSOLUTE MAXIMUM

| Item                       | Symbol          | Min | Max |
|----------------------------|-----------------|-----|-----|
| Operating Voltage (V)      | V <sub>DD</sub> | 0   | 7.0 |
| Operating Temperature (°C) | T <sub>OP</sub> | -20 | +70 |
| Storage Temperature (°C)   | T <sub>ST</sub> | -30 | +80 |

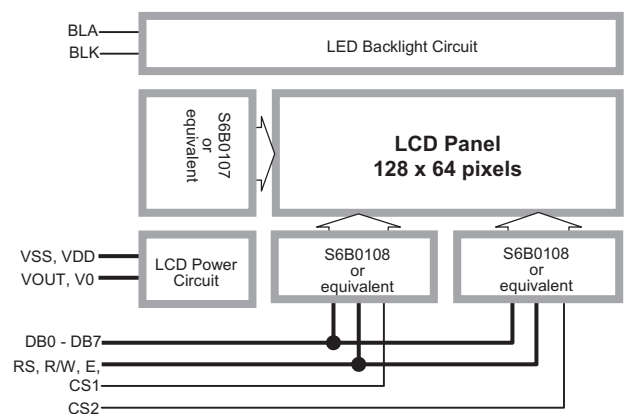
## ELECTRICAL CHARACTERISTICS

| Item                   | Symbol          | Min | Typ | Max             |
|------------------------|-----------------|-----|-----|-----------------|
| Operating Voltage (V)  | V <sub>DD</sub> | 4.8 | 5.0 | 5.2             |
| Input High Voltage (V) | V <sub>IH</sub> | 3.5 | -   | V <sub>DD</sub> |
| Input Low Voltage (V)  | V <sub>IL</sub> | 0   | -   | 0.4             |
| Operating Current (mA) | I <sub>DD</sub> | -   | 6.5 | 15              |

## BACKLIGHT CHARACTERISTICS

| Item                 | Symbol          | Min | Typ | Max |
|----------------------|-----------------|-----|-----|-----|
| Forward Voltage (V)  | V <sub>fA</sub> | -   | 5.0 | -   |
| Forward Current (mA) | I <sub>fA</sub> | -   | 270 | 390 |

## BLOCK DIAGRAM



## LM12864F series

|               | Highlight |             |          |
|---------------|-----------|-------------|----------|
|               | LCD Mode  | # Backlight |          |
| LM12864FBC    | STN-YG    | YG LED      | Nil      |
| LM12864FBC-1* | STN-YG    | YG LED      | Built-In |
| LM12864FFC-1  | STN-Blue  | White LED   | Built-In |

For similar product or (semi) custom made LCD module, please visit our web site or contact us.

\*The above product information is based on this model.