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# SPECIFICATION

**CUSTOMER :** _____

**MODULE NO.: WG12864A-CFH-V#N**

| APPROVED BY: | |
|---|---|
| ( FOR CUSTOMER USE ONLY ) | PCB VERSION: DATA: |

| SALES BY | APPROVED BY | CHECKED BY | PREPARED BY |
|---|---|---|---|
| | | | |
| ISSUED DATE: | | | |

Represented by:
FIRST Components s.r.l.
www.first-components.com
technical@first-components.com
+39 0332 1888005

## 2.Precautions in use of LCD Modules

(1)Avoid applying excessive shocks to the module or making any alterations or modifications to it.
(2)Don’t make extra holes on the printed circuit board, modify its shape or change the components of LCD module.
(3)Don’t disassemble the LCM.
(4)Don’t operate it above the absolute maximum rating.
(5)Don’t drop, bend or twist LCM.
(6)Soldering: only to the I/O terminals.
(7)Storage: please storage in anti-static electricity container and clean environment.

## 3.General Specification

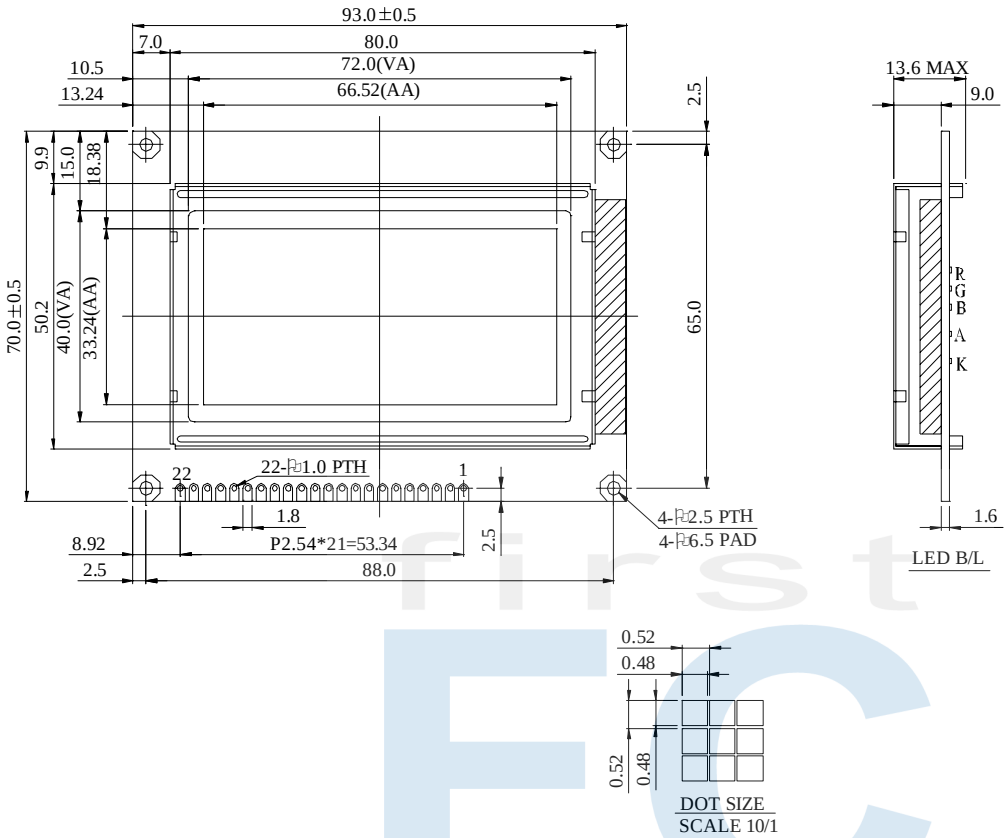
| Item | Dimension | Unit |
|---|---|---|
| Number of Characters | 128 x 64 dots | — |
| Module dimension | 93 x 70.0 x 13.6(MAX) | mm |
| View area | 72.0 x 40.0 | mm |
| Active area | 66.52 x 33.24 | mm |
| Dot size | 0.48 x 0.48 | mm |
| Dot pitch | 0.52 x 0.52 | mm |
| LCD type | FSTN, Positive, Transflective ,Black&White | |
| Duty | 1/64 | |
| View direction | 6 o’clock | |
| Backlight Type | LED, Triple color | |

# 7.Interface Description

| Pin No. | Symbol | Level | Description |
|---|---|---|---|
| 1 | $V_{SS}$ | 0V | Ground |
| 2 | $V_{DD}$ | 5.0V | Supply voltage for logic |
| 3 | $V_O$ | (Variable) | Contrast Adjustment |
| 4 | D/I | H/L | H: Data , L : Instruction |
| 5 | $\overline{R/W}$ | H/L | H: Read (MPU←Module) , L: Write (MPU→Module) |
| 6 | E | H | Enable signal |
| 7 | DB0 | H/L | Data bus line |
| 8 | DB1 | H/L | Data bus line |
| 9 | DB2 | H/L | Data bus line |
| 10 | DB3 | H/L | Data bus line |
| 11 | DB4 | H/L | Data bus line |
| 12 | DB5 | H/L | Data bus line |
| 13 | DB6 | H/L | Data bus line |
| 14 | DB7 | H/L | Data bus line |
| 15 | CS1 | H | Select Column 1~ Column 64 |
| 16 | CS2 | H | Select Column 65~ Column 128 |
| 17 | /RST | L | Reset signal |
| 18 | Vout | — | Negative Voltage output |
| 19. | A | — | Power Supply for LED backlight ( + ) |
| 20. | R | — | Power Supply for LED backlight Red |
| 21. | G | — | Power Supply for LED backlight Green |
| 22. | B | — | Power Supply for LED backlight Blue |

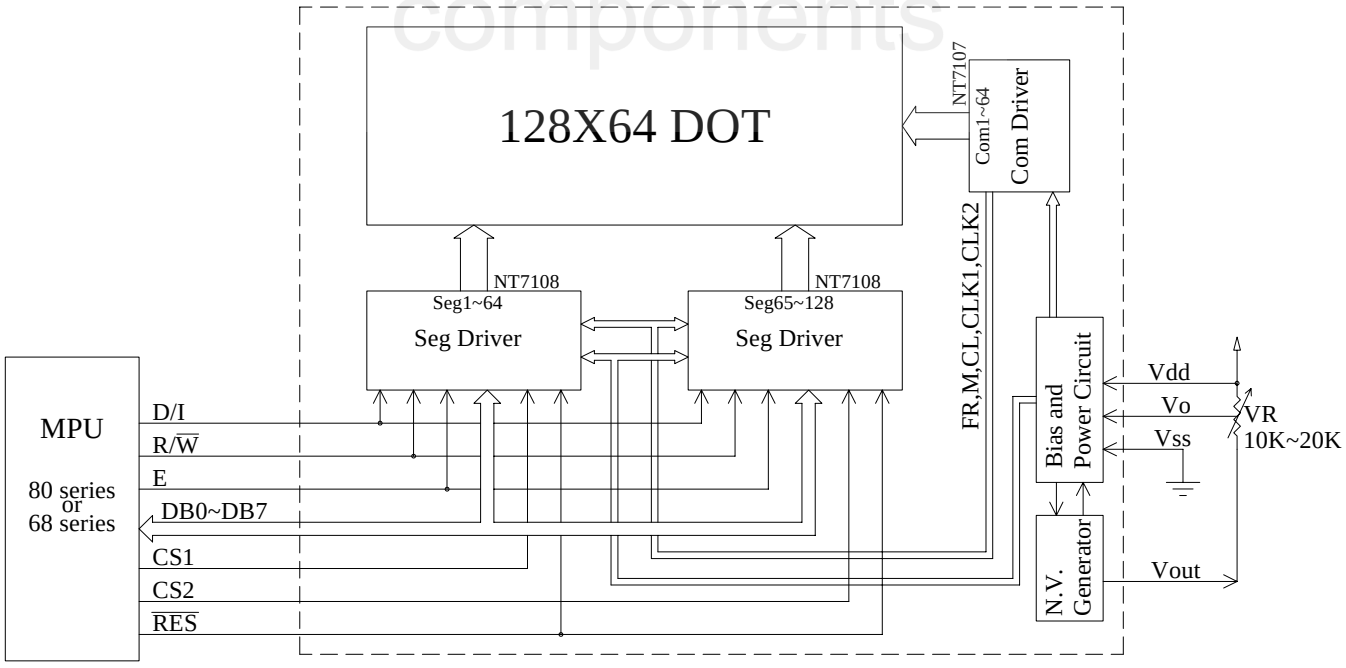
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# 8.Contour Drawing &Block Diagram




| PIN NO. | SYMBOL |
|---|---|
| 1 | Vss |
| 2 | Vdd |
| 3 | Vo |
| 4 | D/I |
| 5 | R/$\overline{W}$ |
| 6 | E |
| 7 | DB0 |
| 8 | DB1 |
| 9 | DB2 |
| 10 | DB3 |
| 11 | DB4 |
| 12 | DB5 |
| 13 | DB6 |
| 14 | DB7 |
| 15 | CS1 |
| 16 | CS2 |
| 17 | $\overline{RES}$ |
| 18 | Vout |
| 19 | A |
| 20 | K(R) |
| 21 | G |
| 22 | B |




External contrast adjustment.

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