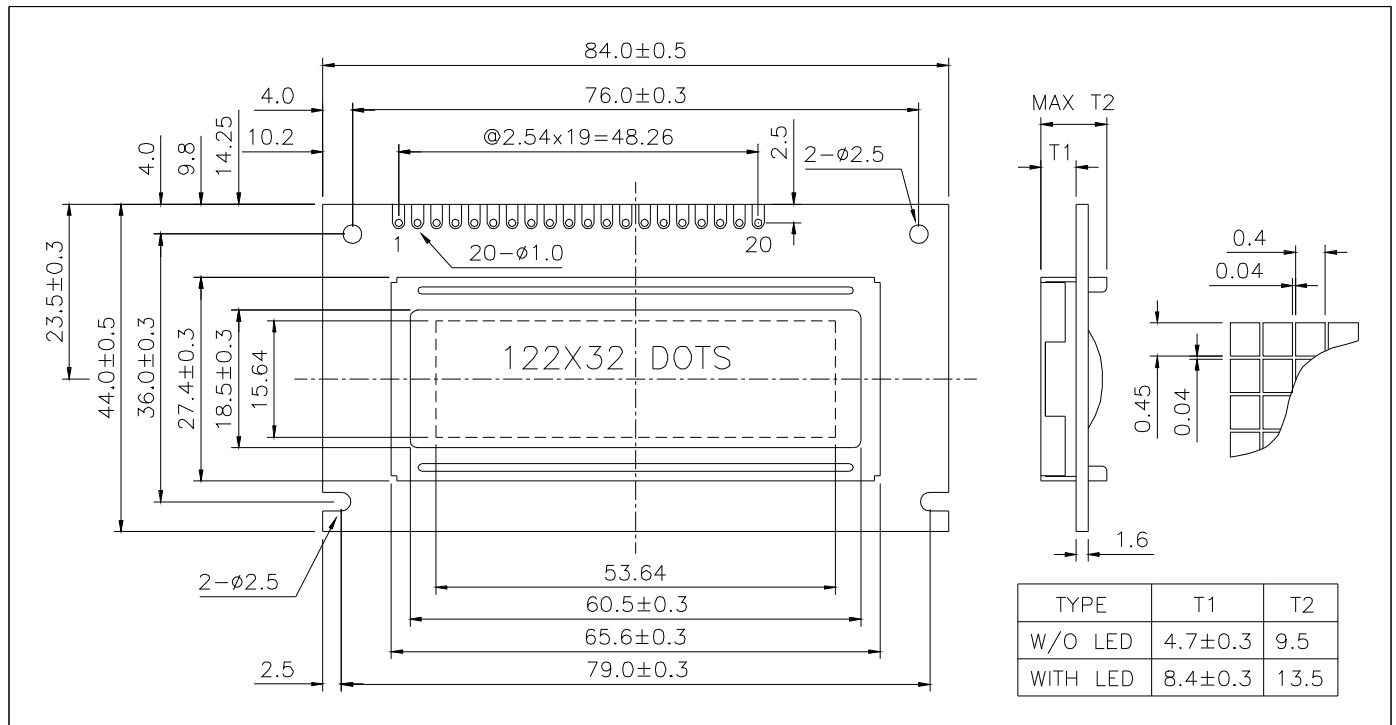


# LG122321-LY 122 x 32 dots + yellow green led backlight



## ABSOLUTE MAXIMUM RATINGS

| Item                  | Symbol                            | Min. | Max.                  | Unit |
|-----------------------|-----------------------------------|------|-----------------------|------|
| Supply Voltage(Logic) | V <sub>DD</sub> - V <sub>SS</sub> | -0.3 | 7.0                   | V    |
| Supply Voltage(LCD)   | V <sub>DD</sub> - V <sub>O</sub>  | -0.3 | 13.5                  | V    |
| Input Voltage         | V <sub>I</sub>                    | -0.3 | V <sub>DD</sub> + 0.3 | V    |
| Operating Temp.       | T <sub>opr</sub>                  | -20  | 70                    | °C   |
| Storage Temp.         | T <sub>stg</sub>                  | -20  | 80                    | °C   |

## MECHANICAL DATA

| Item                      | Nominal Dimensions     | Unit |
|---------------------------|------------------------|------|
| Module Size ( W x H x T ) | 84.0 x 44.0 x 9.5/13.5 | mm   |
| Viewing Area ( W x H )    | 60.5 x 18.5            | mm   |
| Dot Pitch ( W x H )       | 0.44 x 0.49            | mm   |
| Dot Size ( W x H )        | 0.40 x 0.45            | mm   |
| Weight (Reflective/LED)   | Approx. 30 / 40        | g    |

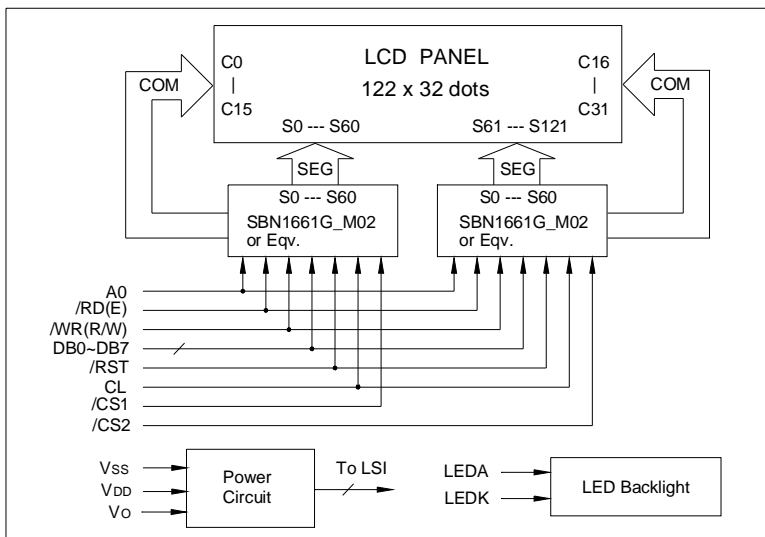
## ELECTRICAL CHARACTERISTICS ( V<sub>DD</sub> = 5V±0.25V )

| Item                | Symbol                           | Test Condition         | Min.                 | Typ. | Max.                | Unit |
|---------------------|----------------------------------|------------------------|----------------------|------|---------------------|------|
| Input High Voltage  | V <sub>IH</sub>                  | --                     | 0.7V <sub>DD</sub>   | --   | V <sub>DD</sub>     | V    |
| Input Low Voltage   | V <sub>IL</sub>                  | --                     | 0                    | --   | 0.25V <sub>DD</sub> | V    |
| Output High Voltage | V <sub>OH</sub>                  | --                     | V <sub>DD</sub> -0.3 | --   | V <sub>DD</sub>     | V    |
| Output Low Voltage  | V <sub>OL</sub>                  | --                     | 0                    | --   | 0.3                 | V    |
| Supply Current      | I <sub>DD</sub>                  | V <sub>DD</sub> = 5.0V | --                   | 0.4  | 0.8                 | mA   |
| LCD Driving Voltage | V <sub>DD</sub> - V <sub>O</sub> | T <sub>a</sub> =25°C   | --                   | 6.5  | --                  | V    |

## PIN CONNECTIONS

| Pin | Symbol          | Level | Function                           |
|-----|-----------------|-------|------------------------------------|
| 1   | V <sub>SS</sub> | 0V    | GND                                |
| 2   | V <sub>DD</sub> | +5V   | Power supply for logic             |
| 3   | V <sub>O</sub>  | --    | Operating voltage for LCD          |
| 4   | A0              | H/L   | H : Data, L : Instruction code     |
| 5   | /CS1            | L     | Chip selection for IC1, active "L" |
| 6   | /CS2            | L     | Chip selection for IC2, active "L" |
| 7   | CL              | --    | External clock input ( 2kHz )      |
| 8   | /RD(E)          | H/L   | /RD for 80 MPU, E for 68 MPU       |
| 9   | /WR(R/W)        | H/L   | /WR for 80 MPU, R/W for 68 MPU     |
| 10  | DB0             | H/L   | Data bus line                      |
| 11  | DB1             | H/L   |                                    |
| 12  | DB2             | H/L   |                                    |
| 13  | DB3             | H/L   |                                    |
| 14  | DB4             | H/L   |                                    |
| 15  | DB5             | H/L   |                                    |
| 16  | DB6             | H/L   |                                    |
| 17  | DB7             | H/L   |                                    |
| 18  | /RST            | H/L   | Reset, H>L:80 MPU, L>H:68 MPU      |
| 19  | LEDA            | +5V   | Power supply for LED backlight     |
| 20  | LEDK            | 0V    |                                    |

## BLOCK DIAGRAM



## LED BACKLIGHT SPECIFICATIONS (T<sub>a</sub>=25°C)

| Item                 | Symbol         | Typ. | Max. | Unit |
|----------------------|----------------|------|------|------|
| Forward Voltage      | V <sub>f</sub> | 4.1  | 4.3  | V    |
| Forward Current      | I <sub>f</sub> | 120  | --   | mA   |
| Emission Wave Length | λ <sub>p</sub> | 568  | --   | nm   |