

Mechanical Data

| Item | Standard Value | Unit |
|------------------|----------------|------|
| Module Dimension | 78.0x70.0x14.3 | mm |
| Viewing Area | 62.0x44.0 | mm |
| Mounting hole | 68.0x 64.92 | mm |
| Dot Pitch | 0.44x0.6 | mm |

Absolute Maximum Rating

| Item | Symbol | Standard Value | | | Unit |
|---------------|---------|----------------|------|------|------|
| | | min. | typ. | max. | |
| Power Supply | VDD-VSS | 4.5 | 5.0 | 5.5 | V |
| Input Voltage | VI | -0.3 | --- | VDD | V |

Note : VSS=0 Volt, VDD=5.0 Volt.

Electronical Characteristics

| Item | Symbol | Condition | Standard Value | | | Unit |
|--|--------|------------------|--------------------|------|--------------------|------|
| | | | min. | typ. | max. | |
| Input Voltage | VDD | L level | 0.7V _{DD} | --- | V _{DD} | V |
| | VIO | H level | 0 | --- | 0.3V _{DD} | V |
| Supply Current | IDD | VDD=5V | --- | 11.2 | 11.8 | mA |
| Recommended LC Driving Voltage for Normal Temp. Version module | VDD-V0 | -20°C | 9.6 | 10.1 | 10.6 | V |
| | | 0°C | 9.4 | 9.9 | 10.4 | |
| | | 25°C | 9.4 | 9.6 | 10.4 | |
| | | 50°C | 8.7 | 9.2 | 9.7 | |
| | | 70°C | 8.5 | 9.0 | 9.5 | |
| LED Forward Voltage | VF | 25°C | --- | 4.2 | --- | V |
| LED Forward Current | IF | 25°C Array | --- | 480 | 960 | mA |
| | | High Low | --- | 350 | 700 | mA |
| EL Power Supply Current | IEL | Vel=110VAC;400Hz | --- | --- | 5.0 | mA |

Feature

1. Built-in controller TOSHIBA- (T6963C)
2. +5V power supply
3. 1/64 duty cycle
4. N.V Built-in

| Pin No. | Symbol | Function |
|---------|--------|---------------------------------------|
| 1 | FG/Vee | Frame Ground/ N/V |
| 2 | Vss | Power Supply(0V) |
| 3 | Vdd | Power supply (+5V) |
| 4 | Vo | Power supply for LCD driver |
| 5 | WR | Data write |
| 6 | RD | Data read |
| 7 | CE | Chip enable |
| 8 | CD | Command/data read/write |
| 9 | RST | Controller reset |
| 10 | DB0 | Data bus line |
| 11 | DB1 | Data bus line |
| 12 | DB2 | Data bus line |
| 13 | DB3 | Data bus line |
| 14 | DB4 | Data bus line |
| 15 | DB5 | Data bus line |
| 16 | DB6 | Data bus line |
| 17 | DB7 | Data bus line |
| 18 | FS | Font select |
| 19 | K | Power supply for LED B/L (0V) |
| 20 | A | Power supply for LED B/L (+4.2V)RA=OΩ |

Graphic type

RG12864C1 Graphic 128x64 dots

Dimension drawing

