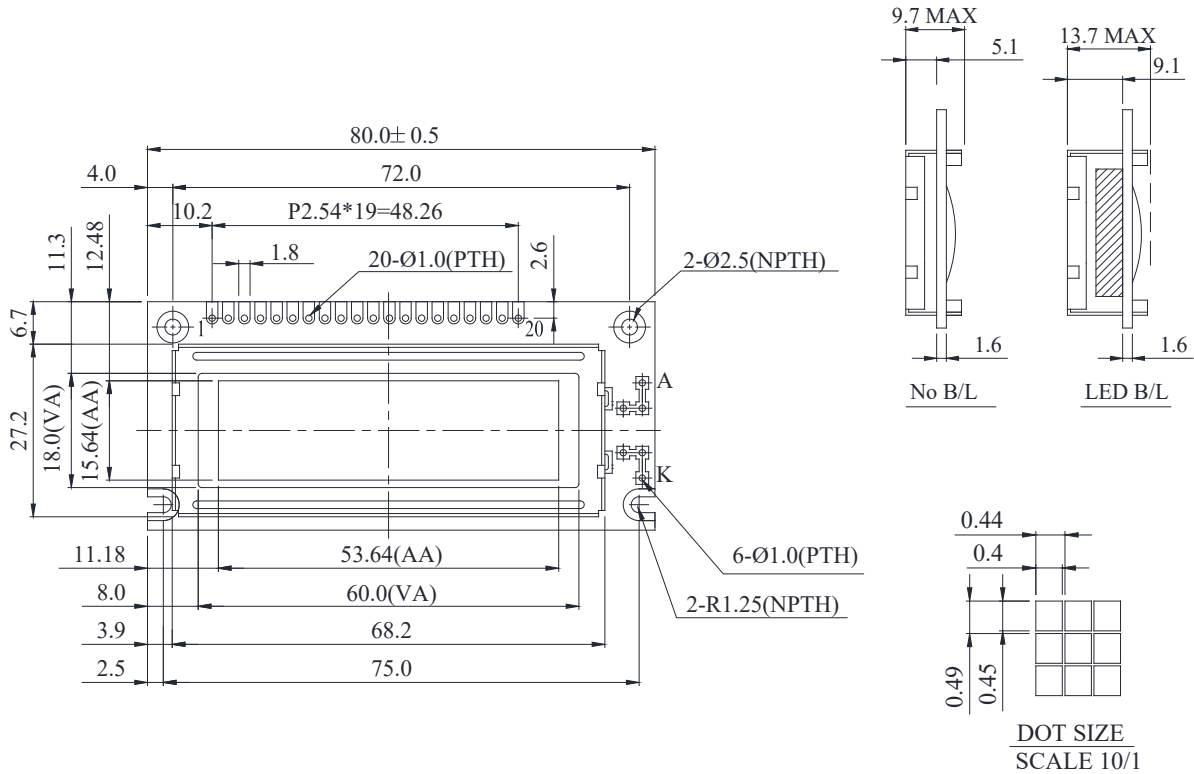


TG12232E/J Graphic 122x32 dots



Feature

1. Available for external oscillation (E Type), internal oscillation (J Type) 2KHz
2. Built-in controller Avant (SBN1661G or equivalent)
3. 1/32 duty cycle
4. Negative voltage optional for +3V power supply
5. Interface: 6800

| Pin No. | Symbol | Description |
|---------|-----------------|-------------------------------------|
| 1 | V _{SS} | Ground |
| 2 | V _{DD} | Power supply for logic |
| 3 | V _O | Contrast Adjustment |
| 4 | A0 | Data/ Instruction select signal |
| 5 | CS1 | Chip select signal for IC1 |
| 6 | CS2 | Chip select signal for IC2 |
| 7 | CL/NC | External clock 2KHZ |
| 8 | E/NC | Enable signal |
| 9 | R/ W | Read/Write select signal |
| 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 | /RES | Controller reset signal, Active Low |
| 19 | A | Power supply for B/L + |
| 20 | K | Power supply for B/L - |

Mechanical Data

| Item | Standard Value | Unit |
|------------------|----------------|------|
| Module Dimension | 80.0 x 27.2 | mm |
| Viewing Area | 60.0 x 18.0 | mm |
| Mounting Hole | 75.0 x 28.0 | mm |
| Dot Pitch | 0.44 x 0.49 | mm |
| Dot Size | 0.40 x 0.45 | mm |

Electrical Characteristics

| Item | Symbol | Standard Value | Unit |
|---|--------------------|----------------|------|
| | | typ. | |
| Input Voltage | V _{DD} | 3/5 | V |
| Recommended LCD Driving Voltage for Normal Temp. Version module @25°C | V _{DD-VO} | 4.35 | V |