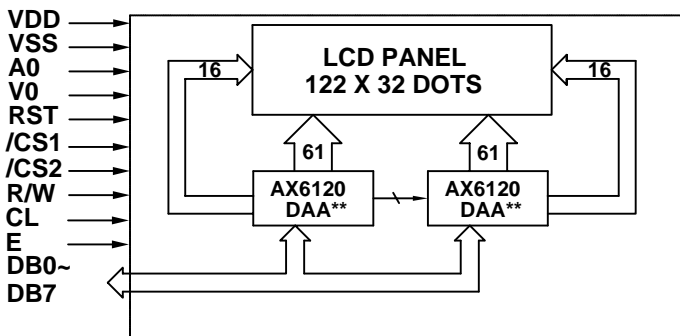
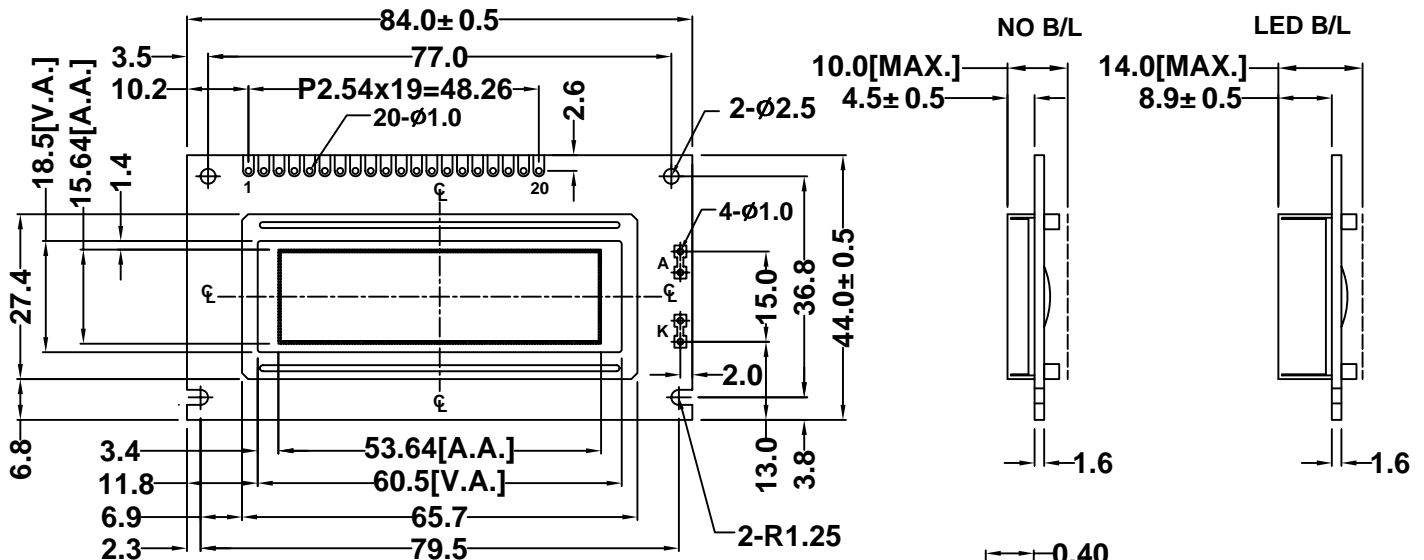




AMG12232E

CONTOUR DRAWING & BLOCK DIAGRAM



** OR EQUIVALENT

| MECHANICAL SPECIFICATION | | |
|--------------------------|---------------------|------|
| ITEM | SPECIFICATION | UNIT |
| Module Size | 84.0X44.0X10.0/14.0 | mm |
| Viewing Area | 60.5X18.5 | mm |
| Number of dots | 122X32 | dots |
| Dot Pitch | 0.44X0.49 | mm |
| Dot Size | 0.40X0.45 | mm |

| ABSOLUTE MAXIMUM RATINGS | | | | |
|--------------------------|--------------|---------|---------|------|
| PARAMETER | SYMBOL | MIN. | MAX. | UNIT |
| Supply Voltage | Vdd | -0.3 | 7.0 | V |
| LCD Supply Voltage | Vlcd(Vdd-V0) | 0 | 12 | V |
| Input Voltage | Vin | -0.3 | Vdd+0.3 | V |
| Operating Temperature* | Top | 0/-20 | 50/70 | ° C |
| Storage Temperature* | Tstr | -10/-30 | 60/80 | ° C |

| PIN CONNECTIONS | | |
|-----------------|---------|---------------------------|
| PIN | SYMBOL | DESCRIPTION |
| 1 | VSS | Ground |
| 2 | VDD | Supply voltage for LCD(+) |
| 3 | V0 | Supply voltage for LCD(-) |
| 4 | A0 | Register Select |
| 5 | /CS1 | Chip Select 1 |
| 6 | /CS2 | Chip Select 2 |
| 7 | CL | Clock |
| 8 | E | Enable |
| 9 | R/W | Read/Write |
| 10-17 | DB0-DB7 | DATA Bus |
| 18 | RST | Reset signal |
| 19 | A | Anode for backlight |
| 20 | K | Cathode for backlight |

| ELECTRICAL CHARACTERISTICS(Ta=25° C) | | | | | | |
|--------------------------------------|--------|-----------|------|------|------|------|
| ITEM | SYMBOL | CONDITION | MIN. | TYP. | MAX. | UNIT |
| Supply Voltage(logic) | Vdd | - | 4.5 | 5.0 | 5.5 | V |
| Supply Current(logic) | Idd | Vdd=5.0 | - | 1.0 | 3.0 | mA |
| Driving Voltage(LCD) | Vlcd | - | - | 6.5 | - | V |
| Driving Current(LCD) | Ilcd | - | - | 0.3 | 0.6 | mA |

| BACKLIGHT CHARACTERISTICS (Ta=25° C) | | | | | | |
|--------------------------------------|--------|-----------|------|------|------|------|
| PARAMETER | SYMBOL | CONDITION | MIN. | TYP. | MAX. | UNIT |
| Supply Voltage | Vf | If=190mA | 3.8 | 4.2 | 4.3 | V |
| LED Forward Current | If | - | - | 190 | - | mA |
| LED Dissipation | Pd | - | - | 798 | - | mW |

*T1/T2: T1for standard temperature LCM, T2 for wide temperature LCM