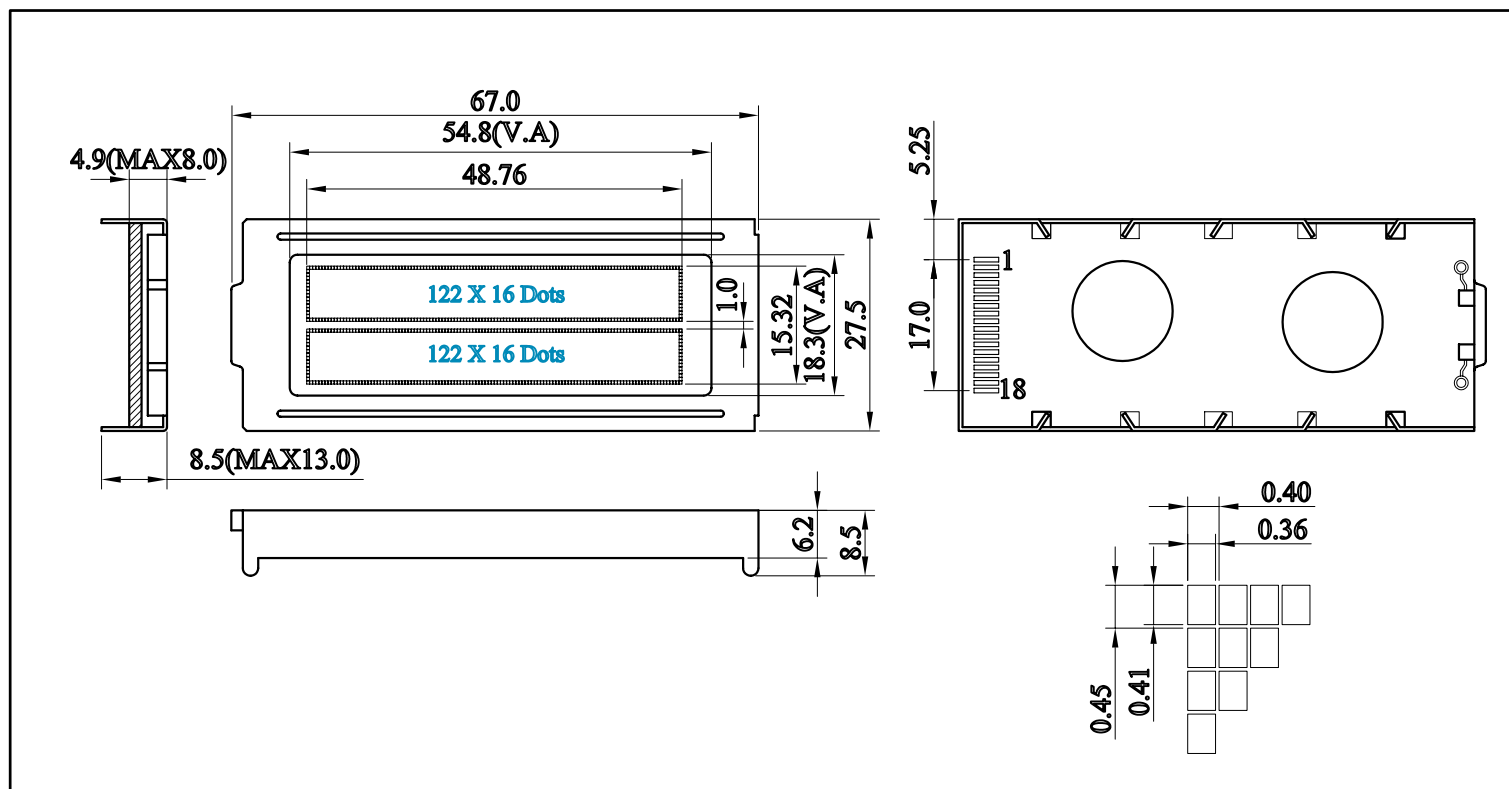


DM12232A

*122x32DOTS 1/32Duty 1/6Bias

Yellow-Green mode STN Transflective



ABSOLUTE MAXIMUM RATINGS

| Item | Symbol | Min. | Max. | Unit |
|-----------------------|-----------|------|-----------|------|
| Supply Voltage(Logic) | Vdd - Vss | -0.3 | 7.0 | V |
| Supply Voltage(LCD) | Vdd - V0 | -0.3 | +5.0 | V |
| Input Voltage | Vi | -0.3 | Vdd + 0.3 | V |
| Operating Temp. | Topr | -15 | 60 | °C |
| Storage Temp. | Tstg | -20 | 70 | °C |

MECHANICAL DATA

| Item | Max. | Unit |
|-------------------------|-------------------|------|
| Module Size (W X H X T) | 67.0 X 27.5 X 8.5 | mm |
| Viewing Area(W X H) | 54.8 X 18.3 | mm |
| Dot Pitch(W X H) | 0.40 X 0.45 | mm |
| Dot Size(W X H) | 0.36 X 0.41 | mm |
| View Angle | 6 or 12 O'Clock | |

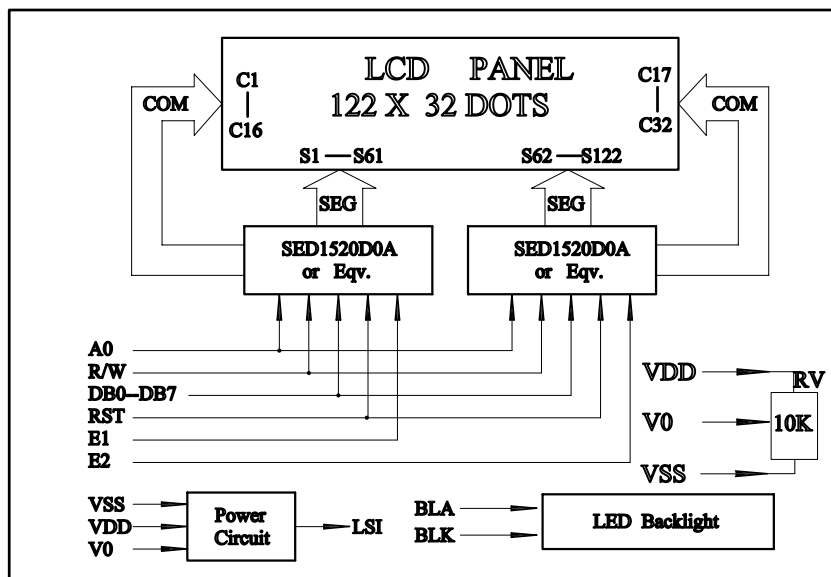
ELECTRICAL CHARACTERISTICS (Vdd=5V±0.25V)

| Item | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---------------------|----------|----------------|------|------|------|------|
| Input High Voltage | Vih | - | 2.0 | - | Vdd | V |
| Input Low Voltage | Vil | - | -0.3 | - | 0.8 | V |
| Output High Voltage | Voh | Ioh=-0.2mA | 2.4 | - | Vdd | V |
| Output Low Voltage | Vol | Iol=-1.6mA | 0 | - | 0.4 | V |
| Supply Current | Idd | Vdd=5.0V | - | 0.6 | 1.0 | mA |
| LCD Driving Voltage | Vdd - V0 | Ta=25 °C | - | 4.7 | - | V |

PIN CONNECTIONS

| Pin | Symbol | Level | Function |
|-----|--------|-------|--------------------------------|
| 1 | VDD | +5V | Power supply for logic |
| 2 | VSS | 0V | Power GND |
| 3 | V0 | - | Operation voltage for LCD |
| 4 | RST | L | Reset signal, active"L" |
| 5 | E1 | H/L | Enable signal 1 |
| 6 | E2 | H/L | Enable signal 2 |
| 7 | R/W | H/L | H:Read L:Write |
| 8 | A0 | H/L | H:Data L:Instruction code |
| 9 | DB0 | H/L | Data bus line |
| 10 | DB1 | H/L | |
| 11 | DB2 | H/L | |
| 12 | DB3 | H/L | |
| 13 | DB4 | H/L | |
| 14 | DB5 | H/L | |
| 15 | DB6 | H/L | |
| 16 | DB7 | H/L | |
| 17 | BLA | +5V | Power supply for LED backlight |
| 18 | BLK | 0V | |

BLOCK DIAGRAM



LCD Type

| LCD Color | Backlight |
|--------------|--------------------|
| Yellow Green | EL /100V /400Hz |
| Gray | EL /100V /400Hz |
| Yellow Green | LED /4.1V (<120mA) |