

ABSOLUTE MAXIMUM RATINGS

| Item | Symbol | Min. | Max. | Unit |
|-----------------------|-----------------------------------|------|-----------------------|------|
| Supply Voltage(Logic) | V _{DD} - V _{SS} | -0.3 | 5.25 | V |
| Supply Voltage(LCD) | V _O - V _{SS} | -0.3 | 7.0 | V |
| Input Voltage | V _I | -0.3 | V _{DD} + 0.3 | V |
| Operating Temp. | T _{opr} | -20 | 70 | °C |
| Storage Temp. | T _{stg} | -30 | 80 | °C |

MECHANICAL DATA

| Item | Nominal Dimensions | Unit |
|---------------------------|------------------------|------|
| Module Size (W x H x T) | 74.0 x 35.0 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. 28/32 | g |

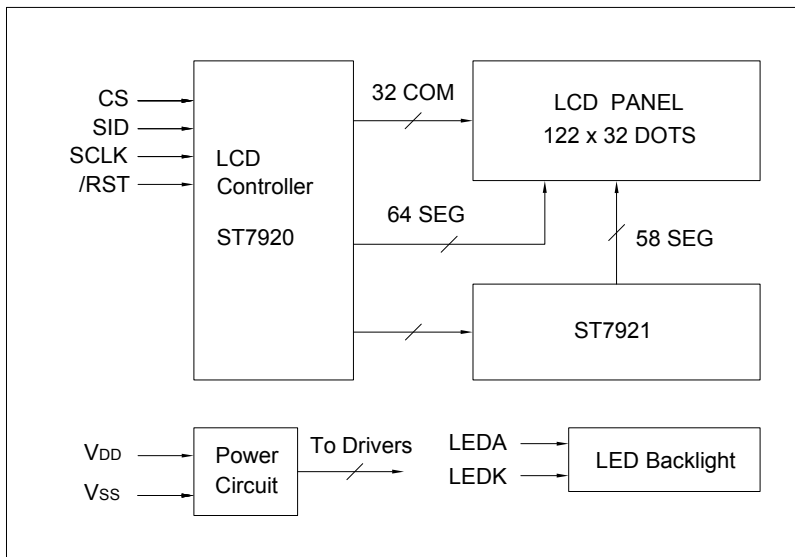
ELECTRICAL CHARACTERISTICS (V_{DD}=5V±0.25V)

| Item | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---------------------|----------------------------------|--------------------------|--------------------|------|--------------------|------|
| Input High Voltage | V _{IH} | -- | 0.7V _{DD} | -- | V _{DD} | V |
| Input Low Voltage | V _{IL} | -- | -0.3 | -- | 0.6 | V |
| Output High Voltage | V _{OH} | I _{OH} = -0.1mA | 0.8V _{DD} | -- | V _{DD} | V |
| Output Low Voltage | V _{OL} | I _{OL} = 0.1mA | -- | -- | 0.1V _{DD} | V |
| Supply Current | I _{DD} | V _{DD} = 5.0V | -- | 3.0 | 5.0 | mA |
| LCD Driving Voltage | V _O - V _{SS} | T _a =25°C | -- | 6.5 | -- | V |

PIN CONNECTIONS (CN1/CN2)

| Pin | Symbol | Level | Function |
|-----|-----------------|-------|---------------------------------|
| 1 | V _{SS} | 0V | GND |
| 2 | V _{DD} | +5V | Power supply for logic |
| 3 | CS | H/L | Chip enable signal. Active "H". |
| 4 | SID | H/L | Serial data input |
| 5 | SCLK | H/L | Serial clock input |
| 6 | /RST | H/L | Reset signal. Active "L" |
| 7 | LEDA | +5V | Power supply for LED backlight |
| 8 | LEDK | 0V | |

BLOCK DIAGRAM



LED BACKLIGHT SPECIFICATIONS (T_a=25°C)

| Item | Symbol | Typ. | Max. | Unit |
|----------------------|----------------|------|------|------|
| Forward Voltage | V _f | 4.1 | 4.3 | V |
| Forward Current | I _f | 120 | -- | mA |
| Emission Wave Length | λ _p | 568 | -- | nm |