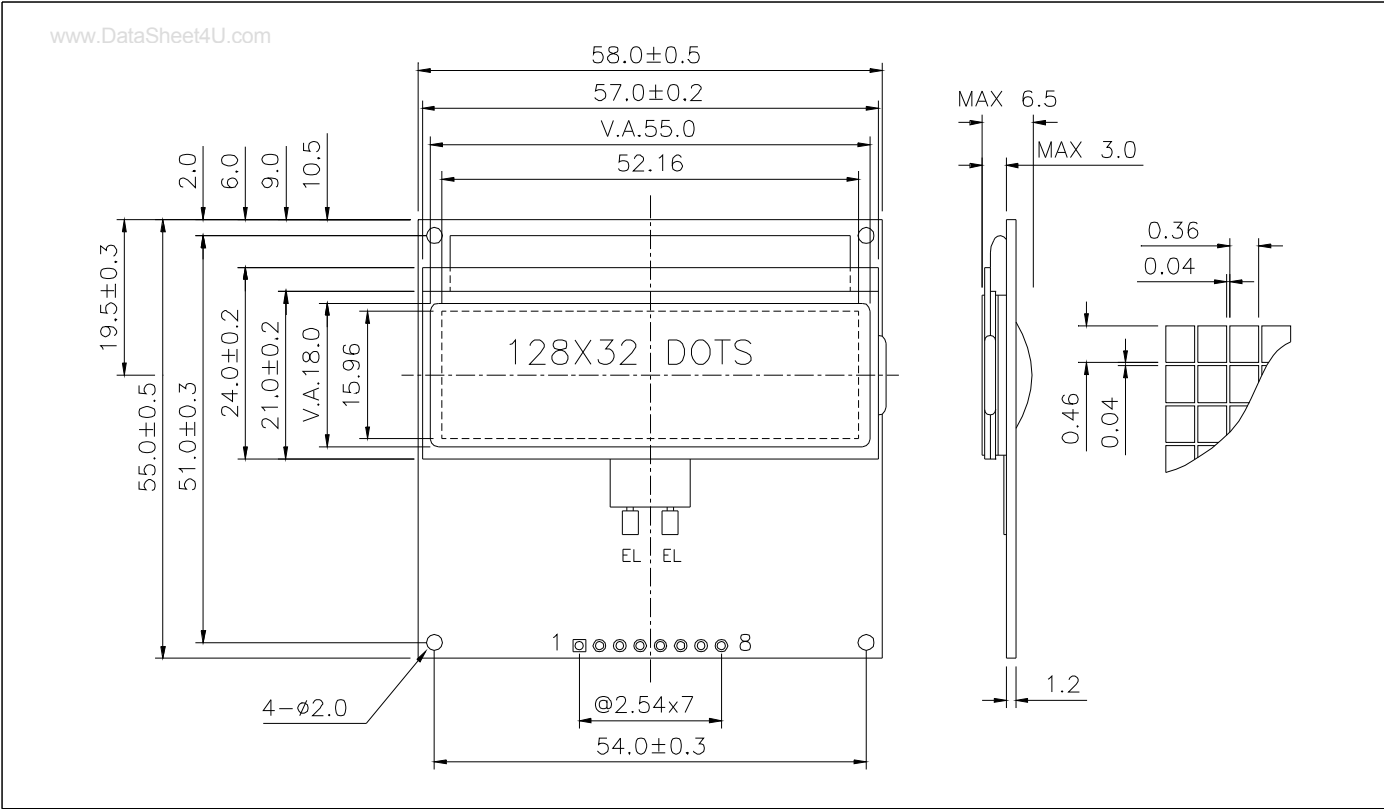




ABSOLUTE MAXIMUM RATINGS

| Item                  | Symbol                            | Min. | Max.                  | Unit |
|-----------------------|-----------------------------------|------|-----------------------|------|
| Supply Voltage(Logic) | V <sub>DD</sub> - V <sub>SS</sub> | -0.3 | 7.0                   | V    |
| Supply Voltage(LCD)   | V <sub>O</sub> - V <sub>SS</sub>  | -0.3 | 7.0                   | V    |
| Input Voltage         | V <sub>I</sub>                    | -0.3 | V <sub>DD</sub> + 0.3 | V    |
| Operating Temp.       | T <sub>opr</sub>                  | 0    | 50                    | °C   |
| Storage Temp.         | T <sub>stg</sub>                  | -20  | 70                    | °C   |

MECHANICAL DATA

| Item                      | Nominal Dimensions | Unit |
|---------------------------|--------------------|------|
| Module Size ( W x H x T ) | 58.0 x 55.0 x 6.5  | mm   |
| Viewing Area ( W x H )    | 55.0 x 18.0        | mm   |
| Dot Pitch ( W x H )       | 0.40 x 0.50        | mm   |
| Dot Size ( W x H )        | 0.36 x 0.46        | mm   |
| Weight (Reflective/EL)    | Approx. 15         | g    |

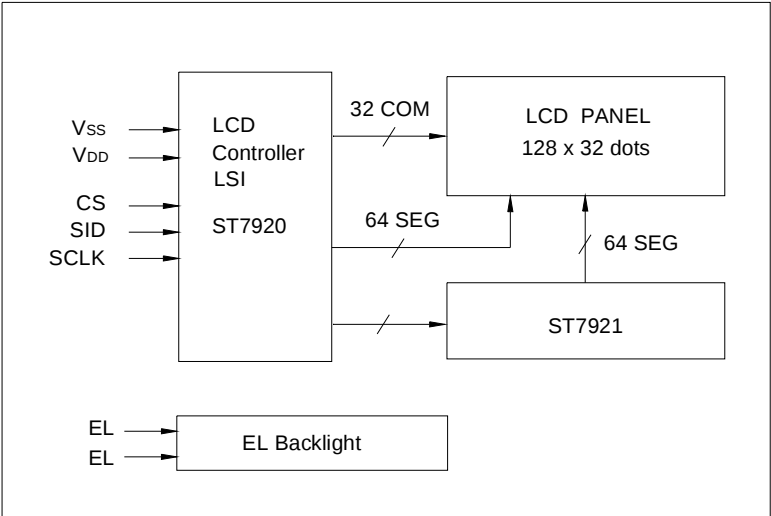
ELECTRICAL CHARACTERISTICS ( V<sub>DD</sub>=5V±0.25V )

| Item                | Symbol                           | Test Condition         | Min.               | Typ. | Max.            | Unit |
|---------------------|----------------------------------|------------------------|--------------------|------|-----------------|------|
| Input High Voltage  | V <sub>IH</sub>                  | --                     | 0.7V <sub>DD</sub> | --   | V <sub>DD</sub> | V    |
| Input Low Voltage   | V <sub>IL</sub>                  | --                     | - 0.3              | --   | 0.6             | V    |
| Supply Current      | I <sub>DD</sub>                  | V <sub>DD</sub> = 5.0V | --                 | 1.5  | 2.0             | mA   |
| LCD Driving Voltage | V <sub>O</sub> - V <sub>SS</sub> | T <sub>a</sub> =25°C   | --                 | 4.6  | --              | V    |

PIN CONNECTIONS

| Pin | Symbol          | Level | Function                       |
|-----|-----------------|-------|--------------------------------|
| 1   | V <sub>SS</sub> | 0V    | GND                            |
| 2   | V <sub>DD</sub> | +5V   | Power supply for logic         |
| 3   | NC              | --    | No connection                  |
| 4   | CS              | H     | Chip enable signal, active "H" |
| 5   | SCLK            | H/L   | Serial clock                   |
| 6   | SID             | H/L   | Serial data                    |
| 7   | EL              | --    | EL backlight drive voltage     |
| 8   | EL              | --    |                                |

BLOCK DIAGRAM



EL BACKLIGHT SPECIFICATIONS (T<sub>a</sub>=25°C)

| Item            | Symbol          | Typ. | Max. | Unit             |
|-----------------|-----------------|------|------|------------------|
| Input Voltage   | V <sub>EL</sub> | 100  | --   | V <sub>rms</sub> |
| Input Frequency | f <sub>EL</sub> | 400  | --   | Hz               |
| Current         | I <sub>EL</sub> | 3.0  | --   | mA               |