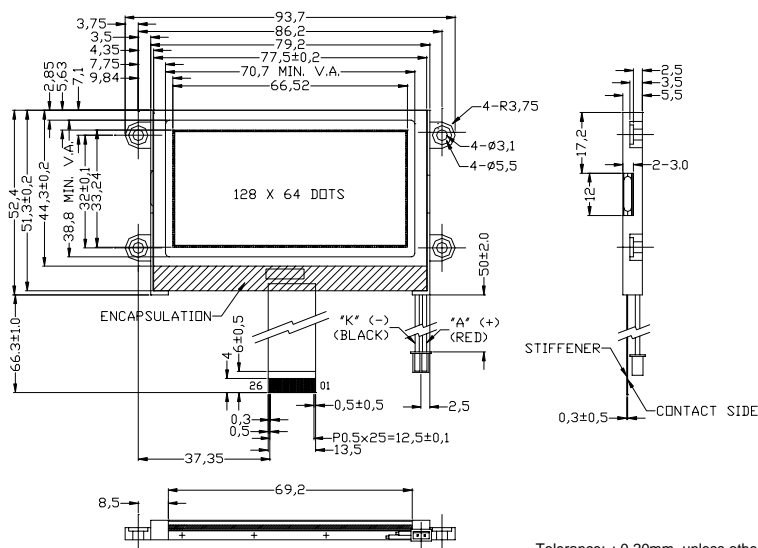
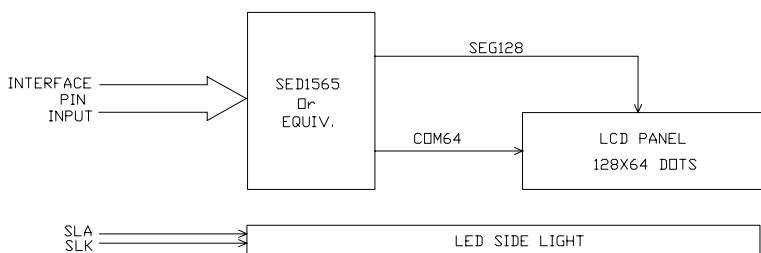


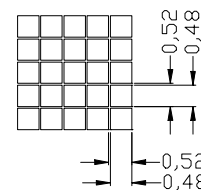
### OUTLINE DIMENSION


 Tolerance:  $\pm 0.20\text{mm}$ , unless otherwise specified.

### BLOCK DIAGRAM



### DISPLAY PATTERN



### MECHANICAL SPECIFICATION

| Item         | Dimensions(W)X(H) | Unit |
|--------------|-------------------|------|
| Overall Size | 93.7x52.4         | MM   |
| View Area    | 70.7x38.8         | MM   |
| Dot Size     | 0.48x0.48         | MM   |
| Dot Pitch    | 0.52x0.52         | MM   |

### PIN ASSIGNMENT

| Pin no | Symbol | Level | Description               |
|--------|--------|-------|---------------------------|
| 1      | /CS1   | H-L   | Chip select signal        |
| 2      | /RESET | H-L   | Reset                     |
| 3      | AO     | H/L   | Data / Instruction signal |
| 4      | /WR    | H-L   | Write signal (8080)       |
| 5      | /RD    | H-L   | Read signal (8080)        |
| 6-13   | D0-D7  | H/L   | Parallel data input       |
| 14     | VDD    | ---   | Power supply              |
| 15     | VSS    | ---   | Power supply              |
| 16     | VOUT   | ---   | DC/DC voltage converter   |
| 17     | CAP3-  | ---   | DC/DC voltage converter   |
| 18     | CAP1+  | ---   | DC/DC voltage converter   |
| 19     | CAP1-  | ---   | DC/DC voltage converter   |
| 20     | CAP2-  | ---   | DC/DC voltage converter   |
| 21     | CAP2+  | ---   | DC/DC voltage converter   |
| 22-26  | V1-V5  | ---   | LCD biasing voltages      |

### ABSOLUTE MAXIMUM RATING

| Item                       | Symbol           | Condition | Min  | Max                  | Unit |
|----------------------------|------------------|-----------|------|----------------------|------|
| Supply for logic voltage   | V <sub>DD</sub>  | 25°C      | -0.3 | 7.0                  | V    |
| LCD driving supply voltage | V <sub>LCD</sub> | 25°C      | -18  | 0.3                  | V    |
| Input voltage              | V <sub>I</sub>   | 25°C      | -0.3 | V <sub>DD</sub> +0.3 | V    |

### ELECTRICAL CHARACTERISTICS

| Item   | Symbol          | Condition           | Min                | Typical | Max                | Unit |
|--|-----------------|---------------------|--------------------|---------|--------------------|------|
| Supply voltage for logic and for converter voltage | V <sub>DD</sub> | 25°C                | ---                | 3.0±0.1 | ---                | V    |
| Current consumption                                | I <sub>DD</sub> | 25°C                | ---                | 96.0    | ---                | uA   |
| Input voltage " H " level                          | V <sub>IH</sub> | V <sub>DD</sub> =3V | 0.8V <sub>DD</sub> | ---     | V <sub>DD</sub>    | V    |
| Input voltage " L " level                          | V <sub>IL</sub> | V <sub>DD</sub> =3V | V <sub>SS</sub>    | ---     | 0.2V <sub>DD</sub> | V    |

#### REMARKS:

- LCD options: STN, FSTN.
- Back light type: LED Side light feature.