

ABSOLUTE MAXIMUM RATINGS

| Item | Symbol | Min. | Max. | Unit |
|-----------------------|------------------------------------|------|-----------------------|------|
| Supply Voltage(Logic) | V _{DD} - V _{SS} | -0.3 | 4.0 | V |
| Supply Voltage(LCD) | V _{LCD} - V _{SS} | -0.3 | 19.8 | V |
| Input Voltage | V _I | -0.4 | V _{DD} + 0.5 | 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) | 87.0 x 50.0 x 8.0 | mm |
| Viewing Area (W x H) | 70.0 x 37.0 | mm |
| Dot Pitch (W x H) | 0.34 x 0.34 | mm |
| Dot Size (W x H) | 0.32 x 0.32 | mm |
| Weight | Approx. 28 | g |

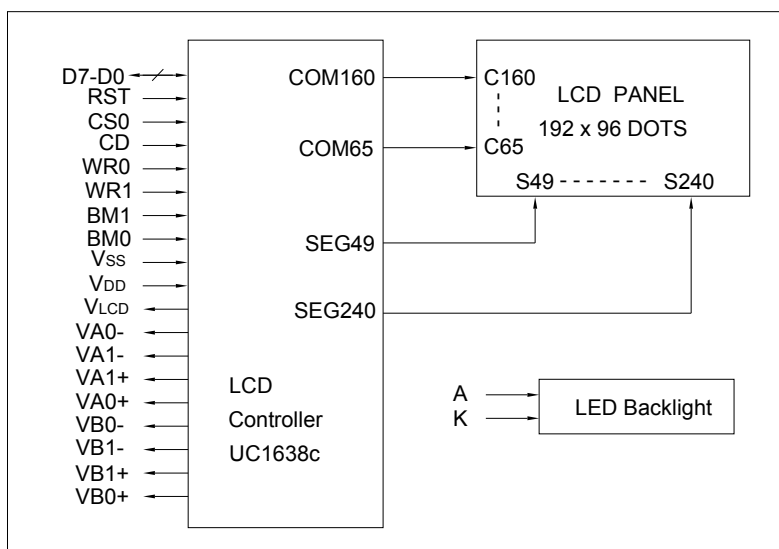
ELECTRICAL CHARACTERISTICS (V_{DD}=3.3V±0.3V)

| Item | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---------------------|-----------------------------------|------------------------|--------------------|------|--------------------|------|
| Input High Voltage | V _{IH} | -- | 0.8V _{DD} | -- | V _{DD} | V |
| Input Low Voltage | V _{IL} | -- | 0 | -- | 0.2V _{DD} | V |
| Output High Voltage | V _{OH} | -- | 0.8V _{DD} | -- | V _{DD} | V |
| Output Low Voltage | V _{OL} | -- | 0 | -- | 0.2V _{DD} | V |
| Supply Current | I _{DD} | V _{DD} = 3.3V | -- | 0.9 | 1.4 | mA |
| LCD Driving Voltage | V _{LCD} -V _{SS} | T _a =25°C | -- | 13.5 | -- | V |

PIN CONNECTIONS

| Pin | Symbol | Level | Function |
|-------|--------|-------|------------------------------------|
| 1 | VB0+ | -- | LCD bias voltage |
| 2 | VB1+ | -- | LCD bias voltage |
| 3 | VB1- | -- | LCD bias voltage |
| 4 | VB0- | -- | LCD bias voltage |
| 5 | VA0+ | -- | LCD bias voltage |
| 6 | VA1+ | -- | LCD bias voltage |
| 7 | VA1- | -- | LCD bias voltage |
| 8 | VA0- | -- | LCD bias voltage |
| 9 | VLCD | -- | LCD driving voltage |
| 10-11 | VDD | 3.3V | Power supply for logic and booster |
| 12-13 | VSS | 0V | GND |
| 14 | BM0 | H/L | Bus mode selection |
| 15 | BM1 | H/L | Bus mode selection |
| 16 | WR1 | H/L | /RD for 80 MPU, E for 68 MPU |
| 17 | WR0 | H/L | /WR for 80 MPU, R/W for 68 MPU |
| 18 | CD | H/L | H:Display data L:Instruction code |
| 19 | CS0 | L | Chip selection signal. Active "L". |
| 20 | RST | L | Reset signal. Active "L". |
| 21-28 | D0-D7 | H/L | Data bus |

BLOCK DIAGRAM



LED BACKLIGHT SPECIFICATIONS (T_a=25°C)

| Item | Symbol | Typ. | Max. | Unit |
|-----------------|----------------|-------|------|------|
| Forward Voltage | V _f | 3.0 | 3.2 | V |
| Forward Current | I _f | 40 | -- | mA |
| LED Color | | White | | |