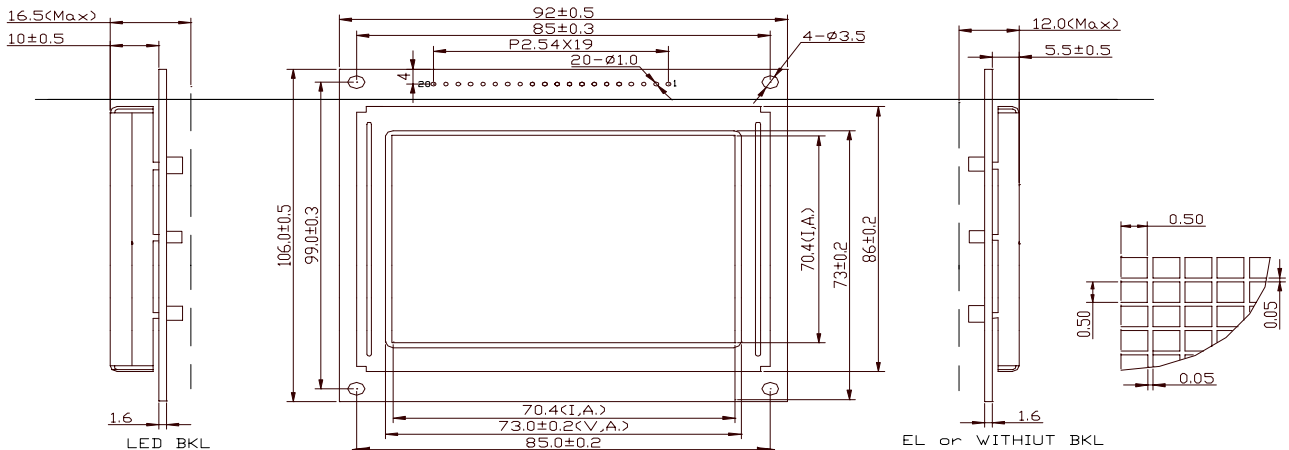
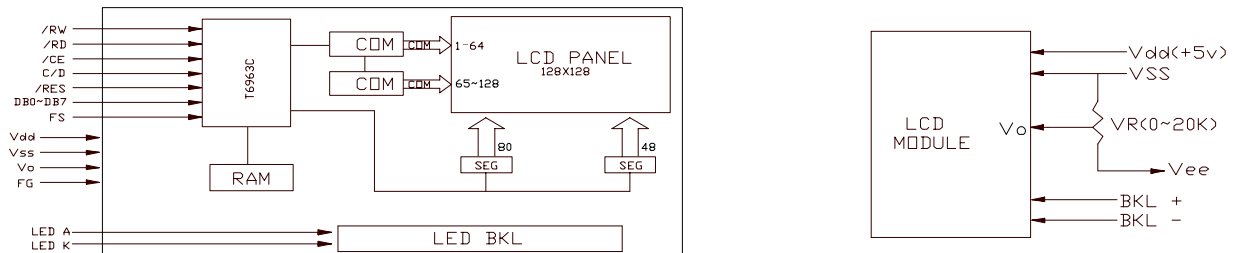


● OUTLINE DIMENSION



● BLOCK DIAGRAM & POWER SUPPLY



● MECHANICAL SPEC.&FEATURES

| Item | Dimension(mm) |
|--------------------|----------------------|
| Module Size(WxHxT) | 92.0x106.0x12.0/16.5 |
| Viewing Area(WxH) | 73.0x73.0 |
| Dot Size(WxH) | 0.50x0.50 |
| Dot Pitch(WxH) | 0.55x0.55 |
| DotsxDots | 128x128 |
| | |
| | |

| Features | |
|-----------------|---|
| LC Fluid | STN(Yellow-green, Gray, Blue), FSTN |
| Polarizer | Reflective, Transflective, Transmissive |
| View Angle | 6:00 o'clock or 12:00 o'clock |
| Display Type | Positive or Negative |
| Backlight | LED(Optional) |
| Operating Temp. | 0°C ~ 50°C or -20°C ~ 70°C |
| Controller | T6963C or Equivalent |

● INTERFACE PIN CONNECTIONS

| Pin No. | Symbol | Function |
|---------|--------|------------------------|
| 1 | FG | Frame ground |
| 2 | Vss | Ground for logic |
| 3 | Vdd | Power supply for logic |
| 4 | Vee | Power supply for LCD |
| 5 | /WR | Write enable |
| 6 | /RD | Read enable |
| 7 | /CE | Enable signal for IC |

| Pin No. | Symbol | Function |
|---------|---------|--|
| 8 | C/D | Register selection(H:Data,L:Instruction) |
| 9 | /RST | Reset signal |
| 10~17 | DB0~DB7 | Data bus lines |
| 18 | FS | Font selection |
| 19 | A | BKL+ |
| 20 | K | BKL- |

● ELECTRICAL CHARACTERISTICS

| Item | Symbol | Test Condition | Min | Typ. | Max. | Unit |
|---------------------------|--------|-------------------|-----|------|------|------|
| Operating Voltage | Vdd | Ta=25°C | ... | 5.0 | ... | V |
| Operating Voltage for LCD | Vlcd | Ta=25°C | ... | 4.5 | ... | V |
| Supply Current | Idd | Ta=25°C, Vdd=5.0V | ... | 2.5 | 3.0 | mA |
| Supply Voltage for LED | Vf | Ta=25°C | ... | 4.2 | ... | V |
| Supply Current for LED | If | Ta=25°C, Vf=4.2V | ... | ... | ... | mA |