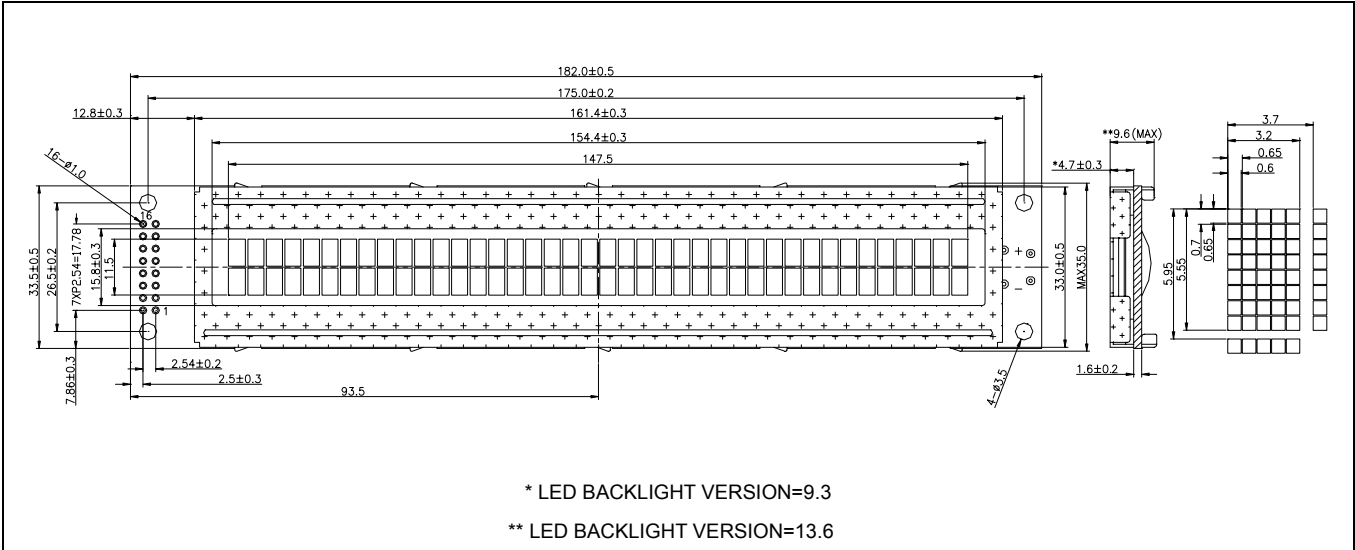


HY402XX01

40 CHAR X 2 LINE

1. EXTERNAL DIMENSION AND DISPLAY PATTERN



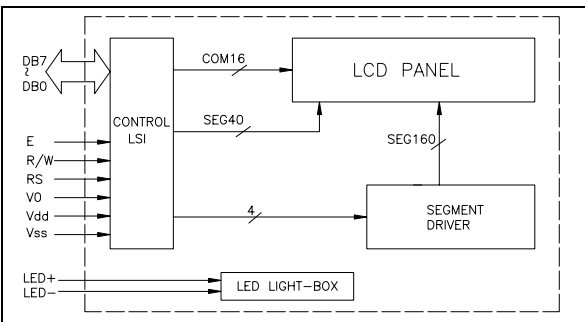
2. MECHANICAL DATA

| ITEM | SPECIFICATION | UNIT |
|-----------------------|---------------------------|------|
| Module Size (W×H×T) | 182.0×35.0×9.6 (LED:13.6) | mm |
| Viewing Area (W×H) | 154.4×15.8 | mm |
| Character Font (W×H) | 5×7 with Cursor | dots |
| Character Size (W×H) | 3.2×5.55 | mm |
| Character Pitch (W×H) | 3.7×5.95 | mm |
| Dot Size (W×H) | 0.6×0.65 | mm |

3. PIN CONFIGURATION

| PIN | SYMBOL | SIGNAL DESCRIPTION |
|--------|------------------------------------|--|
| 1 | V _{SS} | GND (0V) |
| 2 | V _{DD} | Power Supply |
| 3 | V _o | Supply Voltage LCD Driving |
| 4 | RS | Register Select Low = Instruction, High = Data |
| 5 | R/W | Read/Write Low = MPU to LCM, High = LCM to MPU |
| 6 | E | Enable R/W= Low : Data are talking over at falling edge R/W=High : Data can be read at E=1 |
| 7 ~ 14 | DB ₀ to DB ₇ | Data Bus-Software Selectable 4 or 8bit Mode |
| 15 | A | Anode of LED Unit |
| 16 | K | Cathode of LED Unit |

4. BLOCK DIAGRAM



5. ABSOLUTE MAXIMUM RATINGS

| PARAMETER | SYMBOL | MIN. | MAX. | UNIT |
|-------------------------|-----------------------------------|----------------------|-----------------------|------|
| Supply Voltage (Logic) | V _{DD} - V _{SS} | -0.3 | 7.0 | V |
| Supply Voltage (Driver) | V _o | V _{DD} - 12 | V _{DD} + 0.3 | V |
| Input Voltage | V _{IN} | -0.3 | V _{DD} + 0.3 | V |

6. ELECTRICAL CHARACTERISTICS (Ta=25 °C)

| ITEM | SYMBOL | CONDITION | SPEC. VALUE | | | UNIT |
|--------------------------|-----------------------------------|-------------------------------|-------------------------|-----------|------|-----------------|
| | | | MIN. | TYP. | MAX. | |
| Supply Voltage (Logic) | V _{DD} - V _{SS} | | 4.5 | 5.0 | 5.5 | V |
| Supply Current (Logic) | I _{DD} | V _{DD} =5V | - | 0.8 | 2.0 | mA |
| Input Voltage | "HIGH" | V _{IH} | - | 2.2 | - | V _{DD} |
| | "LOW" | V _{IL} | - | -0.3 | - | 0.6 |
| Output Voltage | "HIGH" | V _{OH} | -I _{OH} =0.2mA | 2.4 | - | - |
| | "LOW" | V _{OL} | I _{OL} =1.2mA | - | - | 0.4 |
| LCD Operating Voltage | V _{DD} - V _o | V _{DD} =5V, Ta=25 °C | 4.2 | 4.4 (7.8) | 4.6 | V |
| Supply Voltage LCD Drive | V _o | | - | 1.0 | 1.5 | mA |

Note : () Value is high Reliability type

7. BACKLIGHTING CHARACTERISTICS (Ta=25 °C) LED

| ITEM | SYMBOL | CONDITION | MIN. | TYP. | MAX. | UNIT |
|-------------------|------------------|-----------------------|------|------|------|-------------------|
| Supply Voltage | V _{LED} | - | - | 4.05 | 4.25 | V |
| Power Consumption | P _{LED} | I _F =260mA | - | 1053 | - | mW |
| Luminous | I _v | I _F =260mA | - | - | - | cd/m ² |