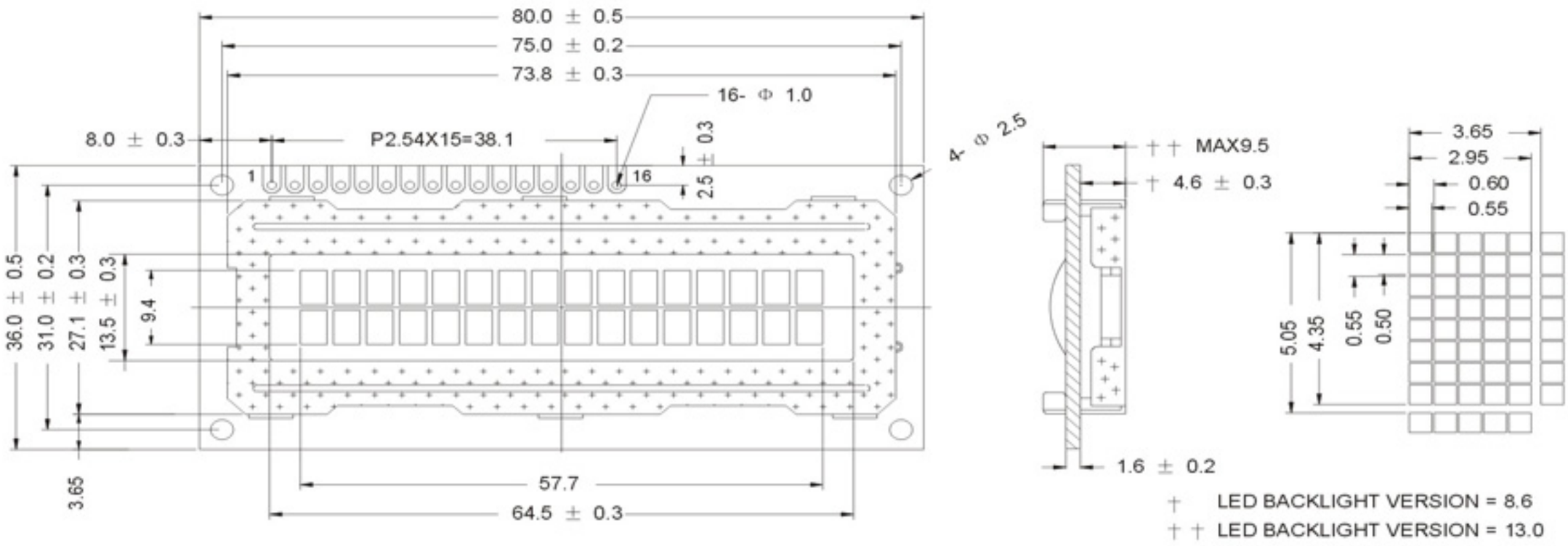
# YMS162-01

16CHAR x 2LINE
1/16DUTY, 1/5BIAS

## 1 EXTERNAL DIMENSION AND DISPLAY PATTERN



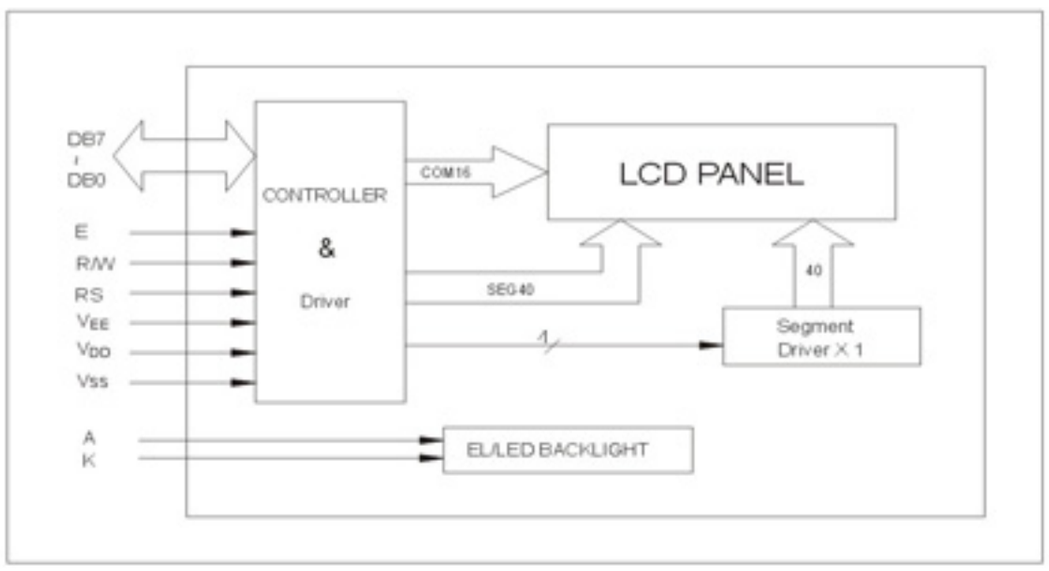

## 2 MECHANICAL DATA

| ITEM | SPECIFICATION | UNIT |
|---|---|---|
| Module Size(WXHXT) | 80.0 x 36.0 x 9.5(LED:13.0) | mm |
| Viewing Area(WXH) | 64.5 x 13.5 | mm |
| Character Font(WXH) | 5 x 7 with Cursor | dots |
| Character Size(WXH) | 2.95 x 4.35 | mm |
| Character Pitch(WXH) | 3.65 x 5.05 | mm |
| Dot Size(WXH) | 0.55 x 0.5 | mm |

## 3 PIN CONFIGURATION

| PIN | SYMBOL | SIGNAL DESCRIPTION |
|---|---|---|
| 1 | $V_{SS}$ | GND(0V) |
| 2 | $V_{DD}$ | Power Supply(5V) |
| 3 | $V_{EE}$ | Supply Voltage LCD Driver |
| 4 | RS | Register Select-LOW=Instruction,HIGH=Data |
| 5 | R/W | Read/Write<br>LOW=MPU to LCM,HIGH=LCM to MPU |
| 6 | E | Eable<br>R/W=LOW:Data are talking over at falling edge<br>R/W=HIGH:Data can be read at E=1 |
| 7 to14 | $DB_0$ 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 | $V_{DD}$-$V_{EE}$ | -0.3 | 13.5 | V |
| Input Voltage | $V_{IN}$ | -0.3 | $V_{DD}$+0.3 | V |

| | |
|---|---|
| Operating Temp. | See page 9 |
| Storage Temp. | |

## 6

| ITEM | | SYMBOL | CONDITION | SPEC.VALUE MIN. | SPEC.VALUE TYP. | SPEC.VALUE MAX. | UNIT |
|---|---|---|---|---|---|---|---|
| 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 | – | $V_{DD}$ | V |
| | "LOW" | $V_{IL}$ | – | -0.3 | – | 0.6 | V |
| Output Voltage | "HIGH" | $V_{OH}$ | $I_{OH}$=0.2mA | 2.4 | – | – | V |
| | "LOW" | $V_{OL}$ | $I_{OL}$=1.2mA | – | – | 0.4 | V |
| LCD Operating Voltage | | $V_{DD}$-$V_{EE}$ | $V_{DD}$=5V | 4.5 | 4.7 | 5.0 | V |
| Supply Voltage LCD Drive | | $I_{EE}$ | | – | 1.0 | 1.5 | mA |

Note(1) : ( )Value is high Reliability type
Note(2) : Electro-Optical Characteristics:See page 6.

## 7

LED

| ITEM | SYMBOL | CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| Supply Voltage | $V_{LED}$ | – | – | 4.2 | 4.6 | V |
| Power Consumption | $P_{LED}$ | $I_F$=90 mA | – | 380 | – | mW |
| Luminous | $I_V$ | $I_F$=90 mA | – | 200 | – | cd/m$^2$ |