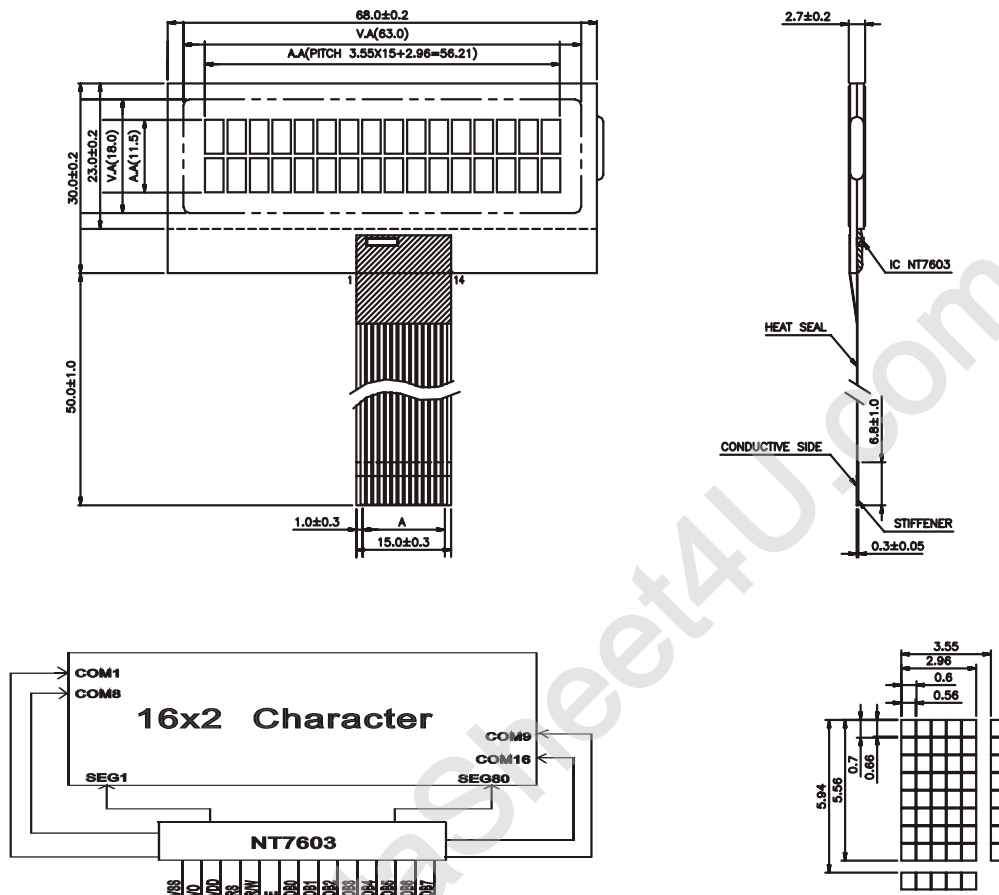


# OUTLINE DIMENSION & BLOCK DIAGRAM



## MECHANICAL SPECIFICATION

|                 |                |         |         |
|-----------------|----------------|---------|---------|
| Overall Size    | 68.0 x 30.0 mm | Module  | H2 / H1 |
| View Area       | 63.0 x 18.0 mm | W/O B/L | - / 2.7 |
| Character Size  | 2.96 x 5.56 mm | EL B/L  | - / -   |
| Character Pitch | 3.55 x 5.94 mm | LED B/L | - / -   |

## PIN ASSIGNMENT

| Pin No. | Symbol | Function               |
|---------|--------|------------------------|
| 1       | Vss    | Ground                 |
| 2       | Vo     | Contrast Adjustment    |
| 3       | VDD    | VCC                    |
| 4       | RS     | Register select signal |
| 5       | R/W    | Read/write selection   |
| 6       | E      | Enable signal          |
| 7       | DB0    | Data bus               |
| 8       | DB1    | Data bus               |
| 9       | DB2    | Data bus               |
| 10      | DB3    | Data bus               |
| 11      | DB4    | Data bus               |
| 12      | DB5    | Data bus               |
| 13      | DB6    | Data bus               |
| 14      | DB7    | Data bus               |

## ABSOLUTE MAXIMUM RATING

| Item                       | Symbol                           | Condition | Min. | Max.            | Units |
|----------------------------|----------------------------------|-----------|------|-----------------|-------|
| Supply for logic voltage   | V <sub>DD</sub> -V <sub>SS</sub> | 25°C      | -0.3 | 7.0             | V     |
| LCD driving supply voltage | V <sub>DD</sub> -V <sub>EE</sub> | 25°C      | 3.0  | V <sub>DD</sub> | V     |
| Input Voltage              | V <sub>IN</sub>                  | 25°C      | -0.3 | +0.3            | V     |

## ELECTRICAL CHARACTERISTICS

| Item                             | Symbol                           | Condition           | Min. | Typical | Max. | Units |
|----------------------------------|----------------------------------|---------------------|------|---------|------|-------|
| Power supply voltage             | V <sub>DD</sub> -V <sub>SS</sub> | 25°C                | 4.75 | 5.0     | 5.25 | V     |
| LCD operation voltage            | V <sub>OP</sub>                  | T <sub>OP</sub>     | N    | W       | N    | W     |
|                                  |                                  | -20°C               | -    | -       | -    | -     |
|                                  |                                  | 0°C                 | -    | -       | -    | -     |
|                                  |                                  | 25°C                | 4.3  | 4.5     | 4.7  | V     |
|                                  |                                  | 50°C                | -    | -       | -    | -     |
|                                  |                                  | 70°C                | -    | -       | -    | -     |
| LCM current consumption (No B/L) | I <sub>DD</sub>                  | V <sub>DD</sub> =5V | -    | 0.5     | 1.5  | mA    |
|                                  | -                                | -                   | -    | -       | -    | mA    |
| Backlight current consumption    | -                                | -                   | -    | -       | -    | mA    |

## REMARK

LCD option: TN, STN, FSTN

Backlight Option: under request.