



# AMG016002D ( 16 CHARACTERS x 2 LINES )

## FEATURES

- ◆ 5 x 7 DOTS WITH CURSOR
- ◆ BUILT-IN CONTROLLER (ST7032I)
- ◆ +3.3V POWER SUPPLY
- ◆ 1/16 DUTY CYCLE
- ◆ SI4 / I2C SERIAL INTERFACE

## INTERFACE PIN CONNECTIONS

| NO. | SYMBOL   | LEVEL | FUNCTION  |       |           |
|-----|----------|-------|---|-------|-----------|
| 1   | RST      | L     | Reset Input Pin   |       |           |
| 2   | RS       | H/L   | Register Select Input Pin   |       |           |
| 3   | CSB      | L     | Chip Select In Parallel Mode And Serial Interface   |       |           |
| 4   | DB6(SCL) | H/L   | In Serial Interface Data Bit6 (SCL) Serial Clock<br>In I2C Interface Data Bit6 (SCL) is Clock Input |       |           |
| 5   | DB7(SDA) | H/L   | In Serial Interface Data Bit7 (SCL) Serial Clock<br>In I2C Interface Data Bit7 (SCL) is Clock Input |       |           |
| 6   | VSS      | 0V    | Power Supply Ground   |       |           |
| 7   | VDD      | 3.3V  | Power Supply Voltage  |       |           |
| 8   | PSB      | H/L   | Interface Selection<br>0 : Serial Mode / 1 : I2C Mode   |       |           |
| 9   | PSI2B    | H/L   | PSB   | PSI2B | Interface |
|     |          |       | 0   | 1     | SI4       |
|     |          |       | 1   | 0     | SI2(I2C)  |
| 10  | CAPIP    | P     | For voltage booster circuit (VDD-VSS)   |       |           |
| 11  | CAPIN    | P     | External Capacitor about 0.1u-4.7uF   |       |           |
| 12  | VOUT     | P     | DC/DC Voltage Converter.  |       |           |

## MECHANICAL DATA

| ITEM                    | DIMENSIONS        | UNIT |
|-------------------------|-------------------|------|
| Module Size (W x H x T) | 67.0 x 29.7 x 5.2 | mm   |
| Viewing Area ( W x H )  | 61.0 x 15.7       | mm   |
| Active Area ( W x H )   | 56.2 x 11.04      | mm   |
| Dot Size ( W x H )      | 0.55 x 0.60       | mm   |
| Dot Pitch ( W x H )     | 0.60 x 0.66       | mm   |

## ABSOLUTE MAXIMUM RATINGS

| ITEM                         | SYMBOL                           | MIN.            | TYP. | MAX.            | UNIT |
|------------------------------|----------------------------------|-----------------|------|-----------------|------|
| Supply Voltage For Logic     | V <sub>DD</sub> -V <sub>SS</sub> | -0.3            | -    | 7               | V    |
| Supply Voltage For LCD Drive | V <sub>DD</sub> -V <sub>o</sub>  | 0               | -    | 7               | V    |
| Input Voltage                | V <sub>I</sub>                   | V <sub>SS</sub> | -    | V <sub>DD</sub> | V    |

## ELECTRICAL CHARACTERISTICS

| ITEM                     | SYMBOL                           | CONDITION                   | MIN. | TYP.                 | MAX. | UNIT                 |
|--------------------------|----------------------------------|-----------------------------|------|----------------------|------|----------------------|
| Supply Voltage For Logic | V <sub>DD</sub> -V <sub>SS</sub> | -                           | 2.8  | 3.3                  | 5.5  | V                    |
| Supply Voltage For LCD   | V <sub>DD</sub> -V <sub>o</sub>  | V <sub>DD</sub> =5V Ta=25°C | 4.3  | 4.5                  | 4.7  | V                    |
| Supply Current           | I <sub>DD</sub>                  | V <sub>DD</sub> =5V         | -    | 1.2                  | 3    | mA                   |
| Input Voltage            | "HIGH" Level                     | V <sub>IH</sub>             | -    | 0.8V <sub>DD</sub>   | -    | V <sub>DD</sub>      |
|                          | "LOW" Level                      | V <sub>IL</sub>             | -    | -0.3                 | -    | 0.2V <sub>DD</sub>   |
| Output Voltage           | "HIGH" Level                     | V <sub>OH</sub>             | -    | V <sub>DD</sub> -0.6 | -    | V                    |
|                          | "LOW" Level                      | V <sub>OL</sub>             | -    | -                    | -    | V <sub>SS</sub> +0.6 |

## EXTERNAL DIMENSIONS

