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# PRODUCT SPECIFICATION

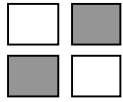
MONOCHROME LCD MODULE

PART NUMBER : FDA1602F

DESCRIPTION : 2x16 character

REVISION : Rev A

|                                 |          |                              |
|---------------------------------|----------|------------------------------|
| Approval for Specification only |          | Approval for Sample Only     |
| Approval for Pre-production     | <b>x</b> | Approval for Mass Production |



# FDA1602F ( 16 CHARACTERS x 2 LINES )

## FEATURES

- ◆ 5 x 7 DOTS WITH CURSOR
- ◆ BUILT-IN CONTROLLER (KS0066 OR EQUIVALENT)
- ◆ 5 V POWER SUPPLY
- ◆ 1/16 DUTY CYCLE
- ◆ 4.2 V LED FORWARD VOLTAGE

## MECHANICAL DATA

| ITEM                      | DIMENSIONS                     | UNIT |
|---------------------------|--------------------------------|------|
| Module Size ( W x H x T ) | 85.0 x 32.6 x 8.8 ( 12.7 LED ) | mm   |
| Viewing Area ( W x H )    | 65.0 x 16.0                    | mm   |
| Character Size ( W x H )  | 2.96 x 5.56                    | mm   |
| Character Pitch ( W x H ) | 3.55 x 5.94                    | mm   |
| Dot Size ( W x H )        | 0.56 x 0.66                    | mm   |
| Dot Pitch ( W x H )       | 0.60 x 0.70                    | mm   |

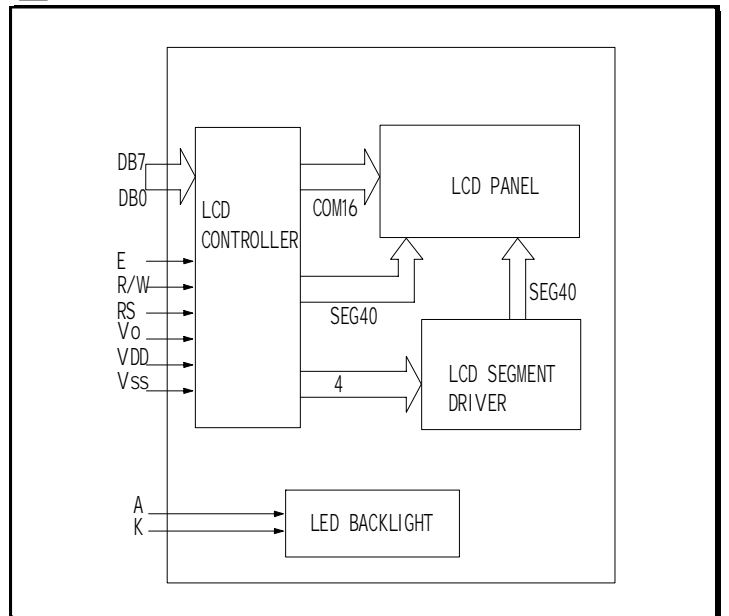
## INTERFACE PIN CONNECTIONS

| NO. | SYMBOL | FUNCTION        | NO. | SYMBOL | FUNCTION   |
|-----|--------|-----------------|-----|--------|------------|
| 1   | VSS    | Supply Ground   | 9   | DB2    | Data Bit 2 |
| 2   | VDD    | Supply Voltage  | 10  | DB3    | Data Bit 3 |
| 3   | Vo     | Contrast Adj.   | 11  | DB4    | Data Bit 4 |
| 4   | RS     | Register Select | 12  | DB5    | Data Bit 5 |
| 5   | R/W    | Read/Write      | 13  | DB6    | Data Bit 6 |
| 6   | E      | Enable Signal   | 14  | DB7    | Data Bit 7 |
| 7   | DB0    | Data Bit 0      |     |        |            |
| 8   | DB1    | Data Bit 1      |     |        |            |

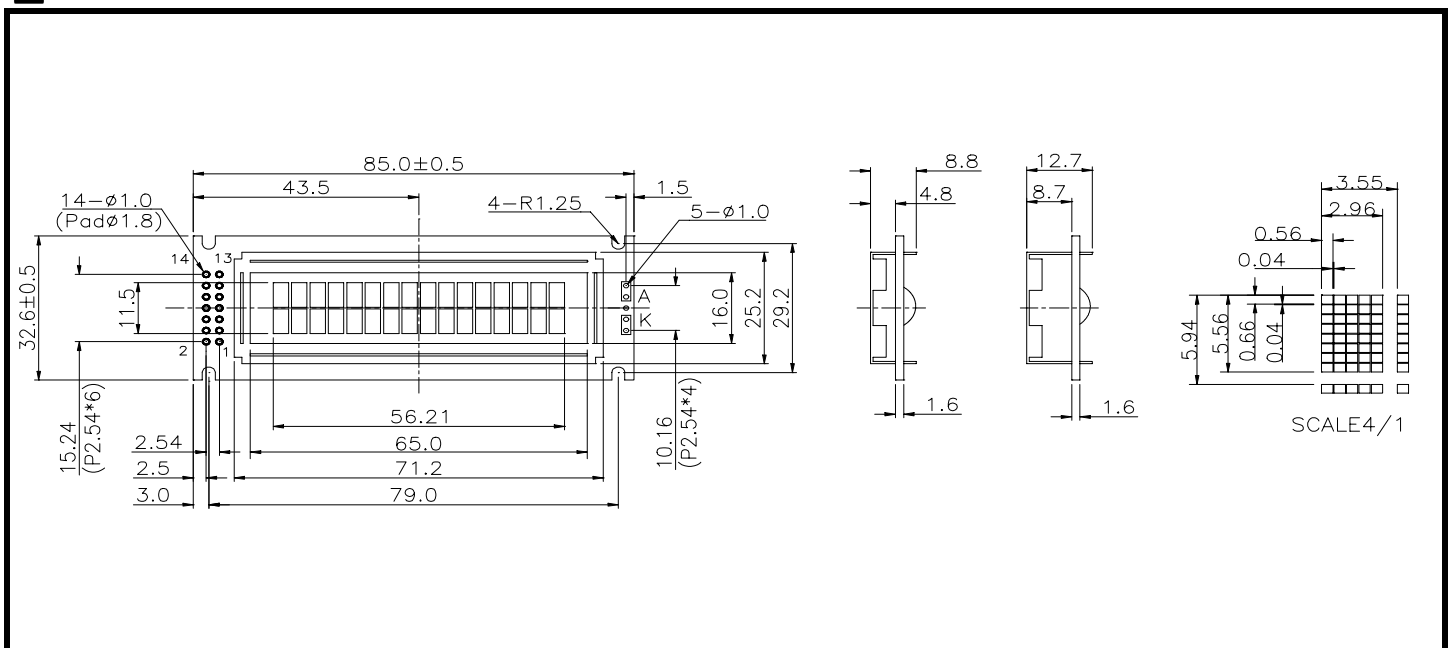
## ELECTRICAL CHARACTERISTICS

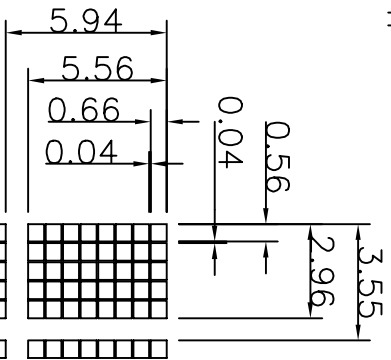
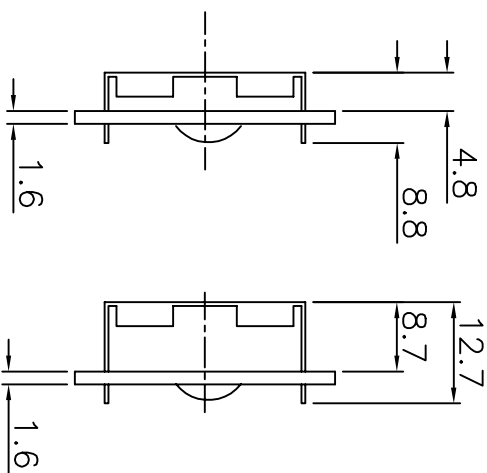
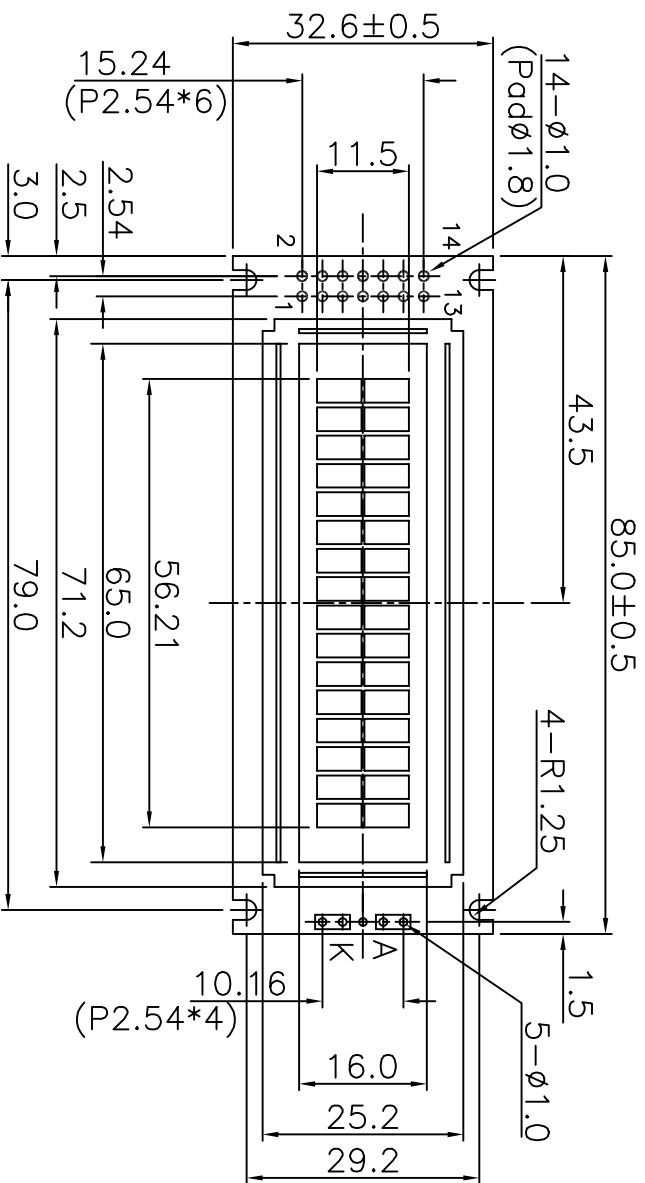
| ITEM                  | SYMBOL              | CONDITION       | MIN. | TYP. | MAX. | UNIT              |
|-----------------------|---------------------|-----------------|------|------|------|-------------------|
| LCD Operating Voltage | V <sub>DD-Vo</sub>  | T=0°C           | -    | 4.8  | -    | V                 |
|                       |                     | T=25°C          | -    | 4.5  | -    | V                 |
|                       |                     | T=50°C          | -    | 4.2  | -    | V                 |
| Supply Voltage        | V <sub>DD-VSS</sub> | -               | 4.7  | 5    | 5.3  | V                 |
| Supply Current        | I <sub>DD</sub>     | -               | -    | 2    | 4    | mA                |
| Input Voltage         | "HIGH" Level        | V <sub>IH</sub> | -    | 2.2  | -    | V <sub>DD</sub> V |
|                       | "LOW" Level         | V <sub>IL</sub> | -    | 0    | -    | 0.6 V             |
| Output Voltage        | "HIGH" Level        | V <sub>OH</sub> | -    | 2.4  | -    | V                 |
|                       | "LOW" Level         | V <sub>OL</sub> | -    | -    | -    | 0.4 V             |

## BLOCK DIAGRAM



## EXTERNAL DIMENSIONS





SCALE:4:1

| PIN NO | SIGNAL |
|--------|--------|
| 1      | VSS    |
| 2      | VDD    |
| 3      | VO     |
| 4      | RS     |
| 5      | R/W    |
| 6      | E      |
| 7      | DB0    |
| 8      | DB1    |
| 9      | DB2    |
| 10     | DB3    |
| 11     | DB4    |
| 12     | DB5    |
| 13     | DB6    |
| 14     | DB7    |

| NOTE                   | ITEM | CONTENT       | DATA       | REV | TOLERANCE                       | SCALE | UNIT | DWYN  | CUSTOMER   | APVL | TITLE  | MODEL   | DWG NO    | PAGE |
|------------------------|------|---------------|------------|-----|---------------------------------|-------|------|-------|------------|------|--------|---------|-----------|------|
|                        |      | CHANGE NUMBER | 2004.03.01 | 0   | X. ±0.30<br>X ±0.20<br>.XX±0.05 | 1/1   | mm   | Gilli | 2004.03.01 |      | MODULE | SC1602F | A-A1-0013 | 1/1  |
| <b>SUNLIKE DISPLAY</b> |      |               |            |     |                                 |       |      |       |            |      |        |         |           |      |