

AL2004A (20 CHARACTERS x 4 LINES)

FEATURES

- 5 x 7 DOTS WITH CURSOR
- BUILT-IN CONTROLLER (KS0066 OR EQUIVALENT)
- 3.3 V POWER SUPPLY
- 1/16 DUTY CYCLE
- INTERFACE PARALLEL / SPI / I2C

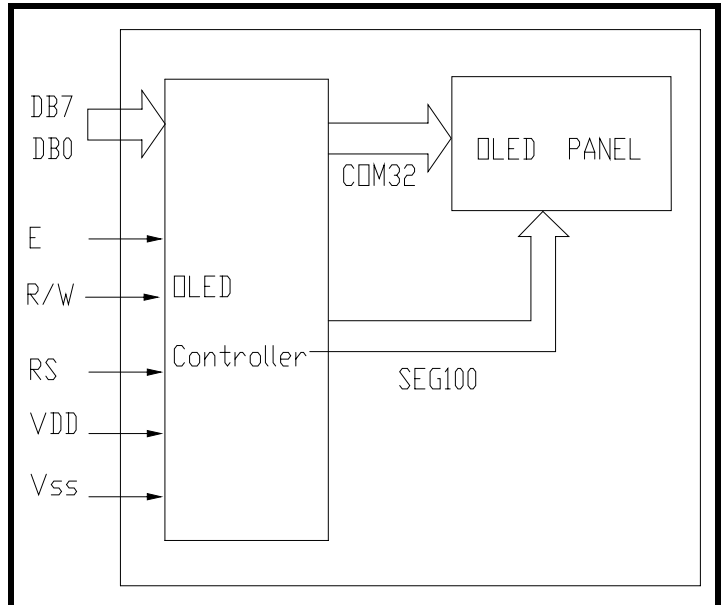
ELECTRICAL CHARACTERISTICS

| ITEM | SYMBOL | CONDITION | MIN. | TYP. | MAX. | UNIT |
|----------------|----------------------------------|-----------------|--------------------|------|--------------------|------|
| Supply Voltage | V _{DD} -V _{SS} | - | 2.4 | 3.3 | 3.6 | V |
| Supply Current | I _{DD} | - | - | 50 | 80 | mA |
| Input Voltage | "HIGH" Level | V _{IH} | 0.7V _{DD} | - | V _{DD} | V |
| | "LOW" Level | V _{IL} | 0 | - | 0.3V _{DD} | V |
| Output Voltage | "HIGH" Level | V _{OH} | 0.7V _{DD} | - | V _{DD} | V |
| | "LOW" Level | V _{OL} | 0 | - | 0.3V _{DD} | V |

MECHANICAL DATA

| ITEM | DIMENSIONS | UNIT |
|---------------------------|-------------------|------|
| Module Size (W x H x T) | 98.0 x 60.0 x 9.7 | mm |
| Viewing Area (W x H) | 72.42 x 22.82 | mm |
| Character Size (W x H) | 2.97 x 4.77 | mm |
| Dot Size (W x H) | 0.578 x 0.57 | mm |
| Dot Pitch (W x H) | 0.598 x 0.60 | mm |

BLOCK DIAGRAM



INTERFACE PIN CONNECTIONS

| NO. | SYMBOL | FUNCTION | NO. | SYMBOL | FUNCTION |
|-----|-----------------|-----------------|-----|--------|--------------|
| 1 | V _{SS} | Supply Ground | 9 | DB2 | Data Bit 2 |
| 2 | V _{DD} | Supply Voltage | 10 | DB3 | Data Bit 3 |
| 3 | NC | No Connector | 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 | 15 | NC | No Connector |
| 8 | DB1 | Data Bit 1 | 16 | NC | No Connector |

EXTERNAL DIMENSIONS

