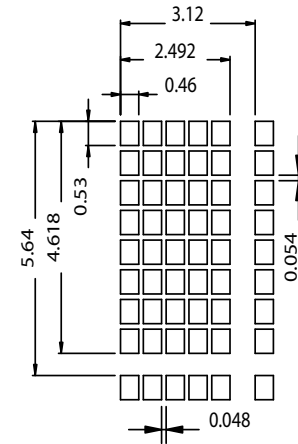


DOTS DETAIL

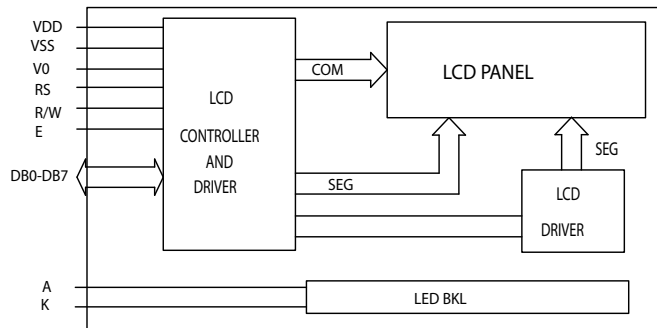


| PIN NO | Symbol |
|--------|--------|
| 1 | VSS |
| 2 | VDD |
| 3 | V0 |
| 4 | RS |
| 5 | R/W |
| 6 | E |
| 7 | DB0 |
| 8 | DB1 |
| 9 | DB2 |
| 10 | DB3 |
| 11 | DB4 |
| 12 | DB5 |
| 13 | DB6 |
| 14 | DB7 |
| 15 | A |
| 16 | K |

Feature

- 2-line x20 characters display; 5x8 dots with cursor
- Built-in controller (KS0066U or Equivalent)
- +5V power supply(Also available for +3.3V)
- 1/16 duty cycle;1/5bias;
- TN, HTN, STN or FSTN mode
- BKL to be driven by pin1,pin2,or pin15,pin16,or A,K

Block diagram:



Display character address code

Display position

| | 1 | 2 | 3 | 4 | 5 | --- | --- | --- | --- | 14 | 15 | 16 |
|---------------|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| DDRAM address | 00 | 01 | 02 | --- | --- | --- | --- | --- | --- | 12H | 13H | |
| DDRAM address | 40 | 41 | 42 | --- | --- | --- | --- | --- | --- | 52H | 53H | |

Mechanical thickness

| LCD module thickness | T1 | T2 | UNIT |
|---------------------------|-----|------|------|
| Without or EL backlight | 4.6 | 9.5 | mm |
| With edge LED backlight | 8.6 | 13.5 | mm |
| With LED bottom backlight | 8.6 | 13.5 | mm |

Mechanical data

| Item | Standard | Unit |
|------------------|-----------|------|
| Module dimension | 80.0x36.0 | mm |
| Viewing area | 64.5x16.4 | mm |
| Dot size | 0.46x0.53 | mm |
| Character size | 2.49x4.62 | mm |

Absolute Maximum Rating

| Item | Symbol | Standard | | | Unit |
|---------------|---------|----------|-------|-----|------|
| | | Min | Typ | Max | |
| Input voltage | VI | -0.3 | ----- | 5.5 | V |
| Power supply | VDD-VSS | -0.3 | ----- | VDD | |

Electronical characteristics

| Item | Symbol | Condition | Standard | | | Unit |
|--|--------|----------------------|----------|-------|-------|------|
| | | | Min | Typ | Max | |
| Input voltage | VDD | +5V | 4.7 | 5.0 | 5.5 | V |
| | | +3.3V | 2.7 | 3.3 | 5.3 | |
| Supply current | IDD | VDD=5V | ----- | 1.5 | 3 | mA |
| Recommended LCD driving voltage for normal temp version module | VDD-V0 | -20°C | 4.8 | 5.0 | 5.3 | |
| | | 0 °C | 4.6 | 4.8 | 5.0 | |
| | | 25°C | 4.3 | 4.5 | 4.7 | |
| | | 50°C | 4.2 | 4.3 | 4.5 | |
| | | 70°C | 4.1 | 4.2 | 4.3 | |
| LED forward voltage | VF | 25°C | ----- | 4.2 | 4.6 | V |
| LED forward current | IF | 25°C | ----- | 120 | ----- | mA |
| EL power supply current | IEL | VEL=110V AC 400Hz | ----- | ----- | ----- | mA |