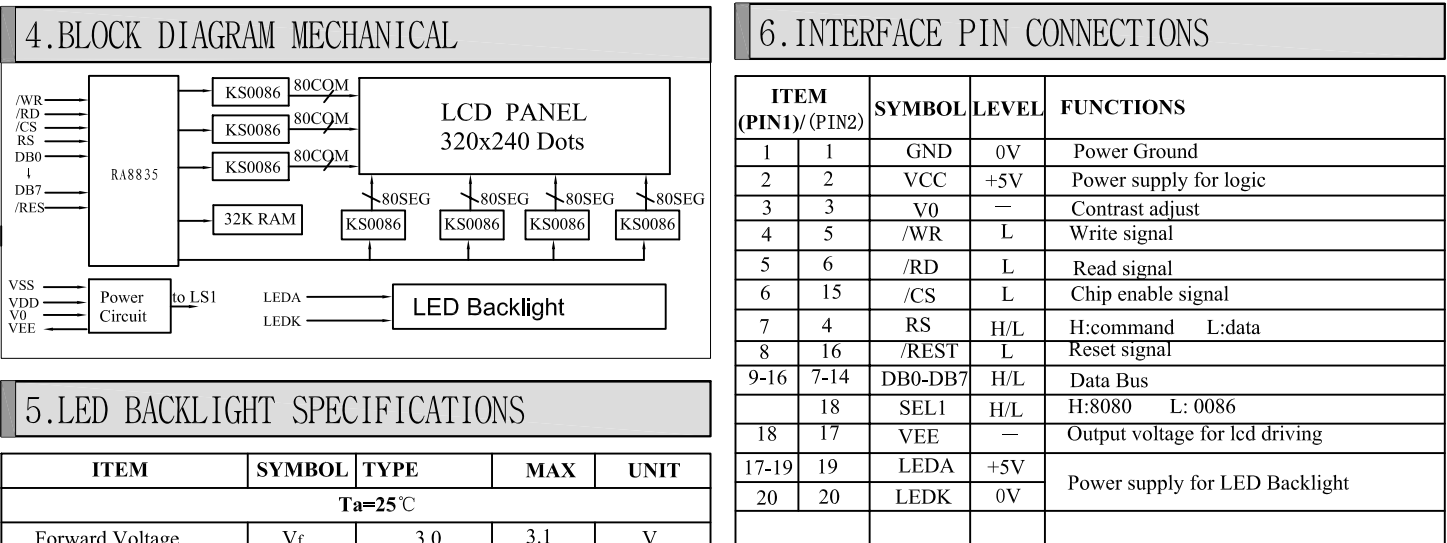


2.MECHANICAL SPECIFICATIONS

| ITEM | SPECIFICATIONS | ITEM | REMARK |
|----------------------|------------------|------|-------------------------------|
| Module Size(L×W×H) | 139.0×100.0×12.0 | mm | Reference Dimensional Outline |
| View Area(W×H) | 103.0×79.0 | mm | |
| Effective V/Area | 95.97×71.97 | mm | |
| Number of Characters | 320×240 | - | |
| Dot Pitch(W×H) | 0.3×0.3 | mm | |
| Dot Size(W×H) | 0.27×0.27 | mm | |

3.ABSOLUTE MAXIMUM RATINGS

| ITEM | SYMBOL | CONDITION | STANDARD | |
|-----------------------|------------------|-----------|----------|-----------------------|
| | | | MIN | MAX |
| Logic Voltage | V _{DD} | Ta=25℃ | -0.3V | 7V |
| LCD Voltage | V _{LCD} | | -0.3V | 20V |
| Input Voltage | V _I | | -0.3V | V _{DD} +0.3V |
| Operation Temperature | T _{OP} | — | -20℃ | 70℃ |
| Storage Temperature | T _{St} | — | -30℃ | 80℃ |



5.LED BACKLIGHT SPECIFICATIONS

| ITEM | SYMBOL | TYPE | MAX | UNIT |
|----------------------|----------------|-------|-----|------|
| Ta=25℃ | | | | |
| Forward Voltage | V _f | 3.0 | 3.1 | V |
| Forward Current | I _f | 150 | — | mA |
| Emission Wave Length | λ _P | White | — | nm |

6.INTERFACE PIN CONNECTIONS

| ITEM (PIN1)/(PIN2) | SYMBOL | LEVEL | FUNCTIONS | |
|--------------------|--------|---------|-----------|--------------------------------|
| 1 | 1 | GND | 0V | Power Ground |
| 2 | 2 | VCC | +5V | Power supply for logic |
| 3 | 3 | V0 | — | Contrast adjust |
| 4 | 5 | /WR | L | Write signal |
| 5 | 6 | /RD | L | Read signal |
| 6 | 15 | /CS | L | Chip enable signal |
| 7 | 4 | RS | H/L | H:command L:data |
| 8 | 16 | /REST | L | Reset signal |
| 9-16 | 7-14 | DB0-DB7 | H/L | Data Bus |
| | 18 | SEL1 | H/L | H:8080 L: 0086 |
| 18 | 17 | VEE | — | Output voltage for lcd driving |
| 17-19 | 19 | LEDA | +5V | Power supply for LED Backlight |
| 20 | 20 | LEDK | 0V | |

7.ELECTRICAL CHARACTERISTICS

| ITEM | SYMBOL | MIN | TYPE | MAX | UNIT |
|---------------------------|---------------------------------|----------------------|------|-----------------|------|
| Ta=25℃ | | | | | |
| Logic Power | V _{DD} | 4.5 | 5 | 5.5 | V |
| Input High Voltage | V _{IH} | V _{DD} -2.2 | — | V _{DD} | V |
| Input Low Voltage | V _{IL} | 0 | — | 0.8 | V |
| Output High Voltage | V _{OH} | V _{DD} -0.3 | — | V _{DD} | V |
| Output Low Voltage | V _{OL} | 0 | — | 0.3 | V |
| Logic Current | I _{DD} | — | — | 170 | mA |
| Operation Voltage For LCD | V _{DD} -V ₀ | — | 23 | — | V |

| ITEM (PIN3)/(PIN4) | SYMBOL | LEVEL | FUNCTIONS (external Controller) | |
|--------------------|--------|-------|---------------------------------|--------------------------------|
| 1-4 | 9-12 | D0-D3 | H/L | Display Data Bus |
| 5 | 13 | DIS.O | H/L | Display ON/OFF |
| 6 | 1 | FLM | H/L | Scan Start Line |
| 7 | 4 | M | H/L | Frame Signal |
| 8 | 2 | LP | H/L | Data Latch Clock |
| 9 | 3 | CP | H/L | Data Shift Clock |
| 10 | 6 | VDD | +5V | Power supply for logic |
| 11 | 7 | VSS | 0V | Power Ground |
| 12 | 8 | VEE | — | Output voltage for lcd driving |
| 13 | 5 | V0 | — | Contrast adjust |
| 14 | 14 | FG | — | Frame Ground |