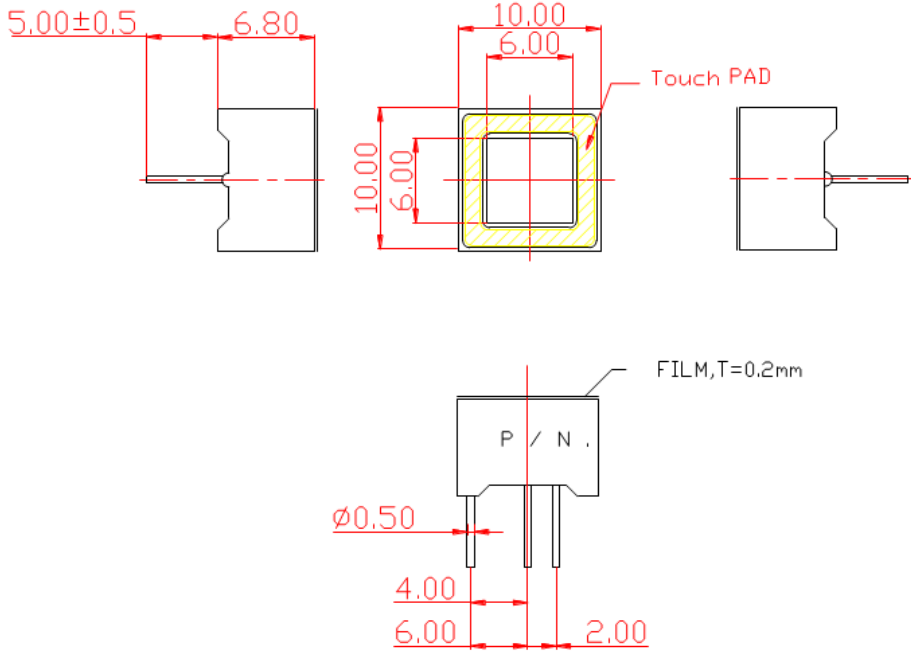


SPECIFICATIONS **CTD3939B2WB**
OUTLINES DIMENSIONS


- Notes:
1. All Dimensions are in millimeters (inches).
 2. Tolerance is $\pm 0.25\text{mm}$ (0.01") unless otherwise noted.
 3. Specifications are subject to change without notice.

| Part Number | Chip Material | Color of Emission | Lens Type | Description |
|-------------|---------------|-------------------|-----------|---------------|
| CTD3939B2WB | InGaN | Blue | White | Touch Display |



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ABSOLUTE MAXIMUM RATINGS
(TA=25°C)

| Parameter | Symbol | Max Rating | Unit |
|----------------------------------------|--------|------------|------|
| Power Dissipation | PD | 120 | mW |
| Continuous Forward Current (Per Dice) | IF | 30 | mA |
| Peak Current (Per Dice) | IFP | 100 | mA |
| Reverse Voltage (Per Dice) | VR | 5 | V |
| Operating Temperature Range | TOPR | -25~+85 | °C |
| Storage Temperature Range | TSTG | -25~+85 | °C |
| Hand Soldering Condition: 360 °C/ 3sec | | | |

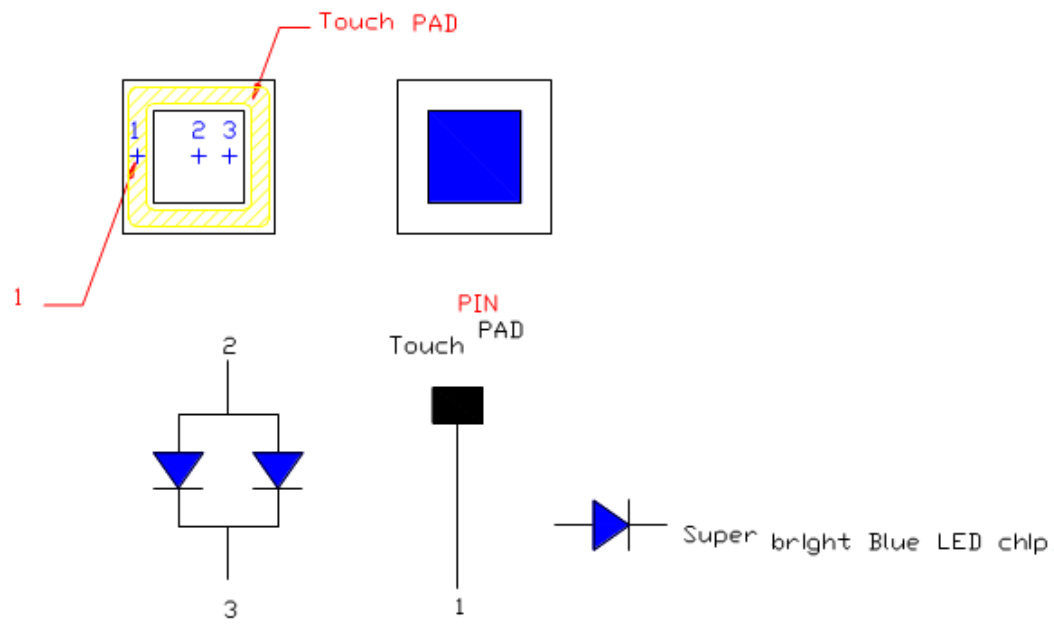
OPTICAL-ELECTRICAL CHARACTERISTICS
(TA=25°C)

| Parameter | Symbol | Test Condition | Value | | | Unit |
|------------------------------|--------|----------------|-------|-----|-----|------|
| | | | Min | Typ | Max | |
| Luminous Intensity | IV | IF = 20mA | - | 60 | - | mcd |
| Forward Voltage | VF | IF = 20mA | - | 3.2 | 4.0 | V |
| Reverse Leakage Current | IR | VR = 5V | - | - | 10 | µA |
| Dominant Wavelength | λD | IF = 20mA | 460 | 470 | 475 | nm |
| Spectral Radiation Bandwidth | Δλ | IF = 20mA | - | 30 | - | nm |



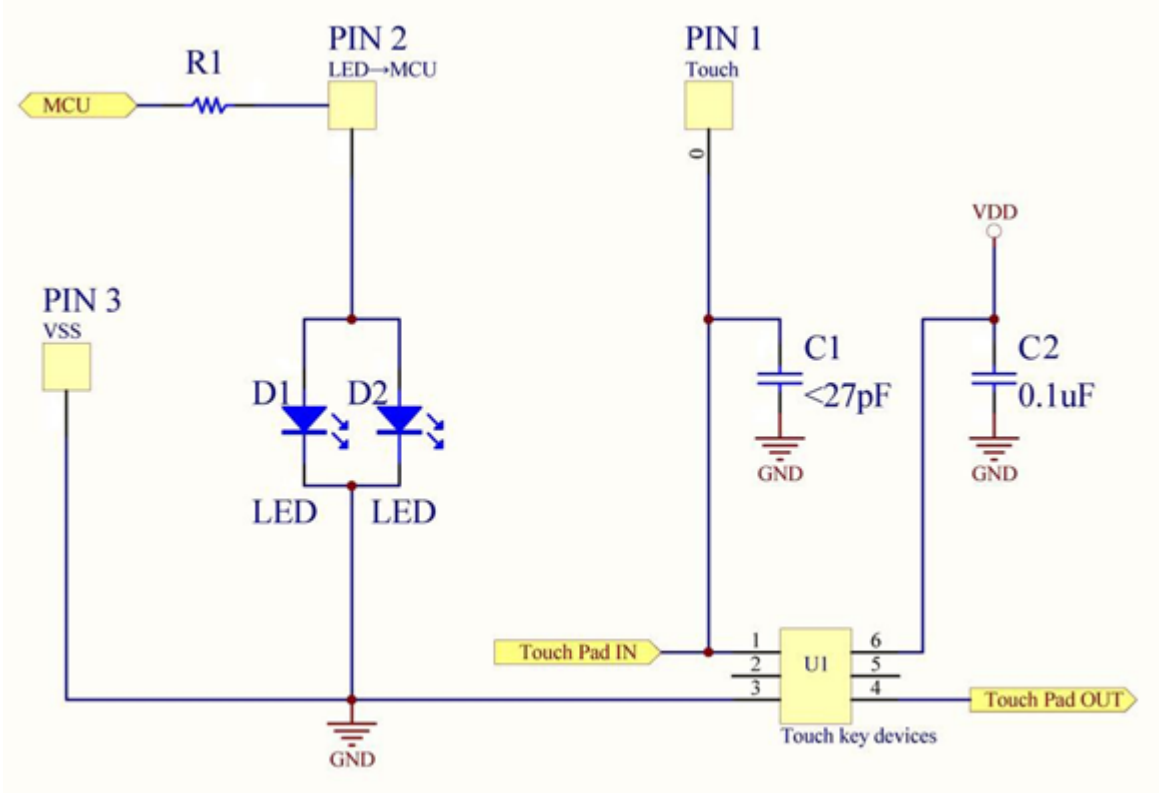
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INTERNAL CIRCUIT DIAGRAMS



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TYPICAL APPLICATION CIRCUITS



Internal Components are not customer accessible



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OPTICAL CHARACTERISTIC CURVES

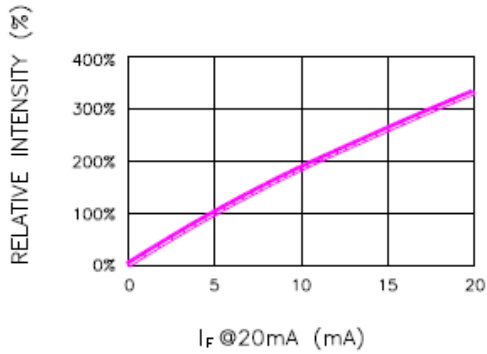


Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

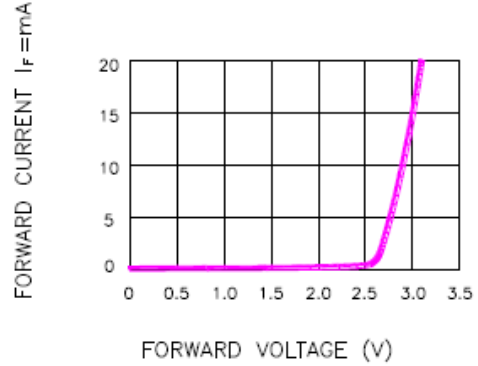


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

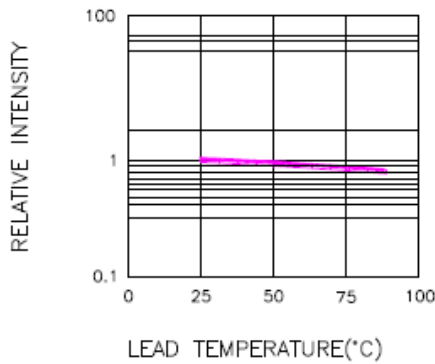


Fig.3 RELATIVE INTENSITY VS. LEAD TEMPERATURE
(PULSED 20 mA; 300us PULSE, 10ms PERIOD)

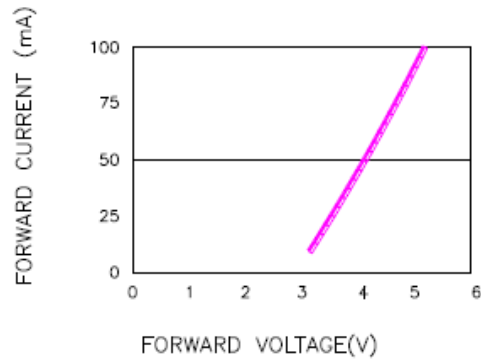


Fig.4 PEAK FORWARD VOLTAGE VS. FORWARD CURRENT (100us TEST PULSE, 1% DUTY CYCLE)

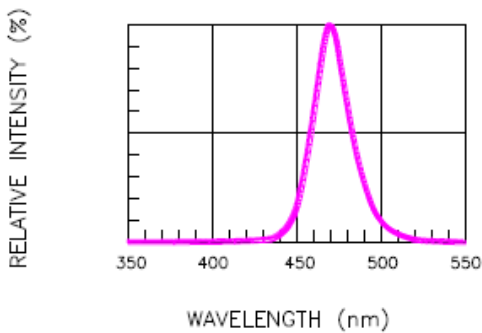


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

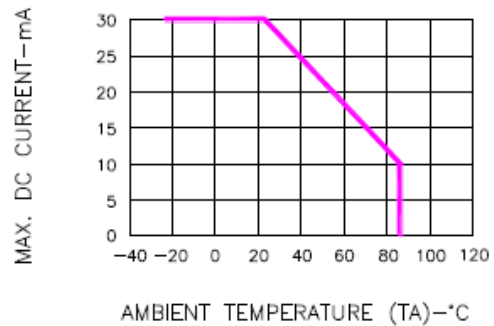
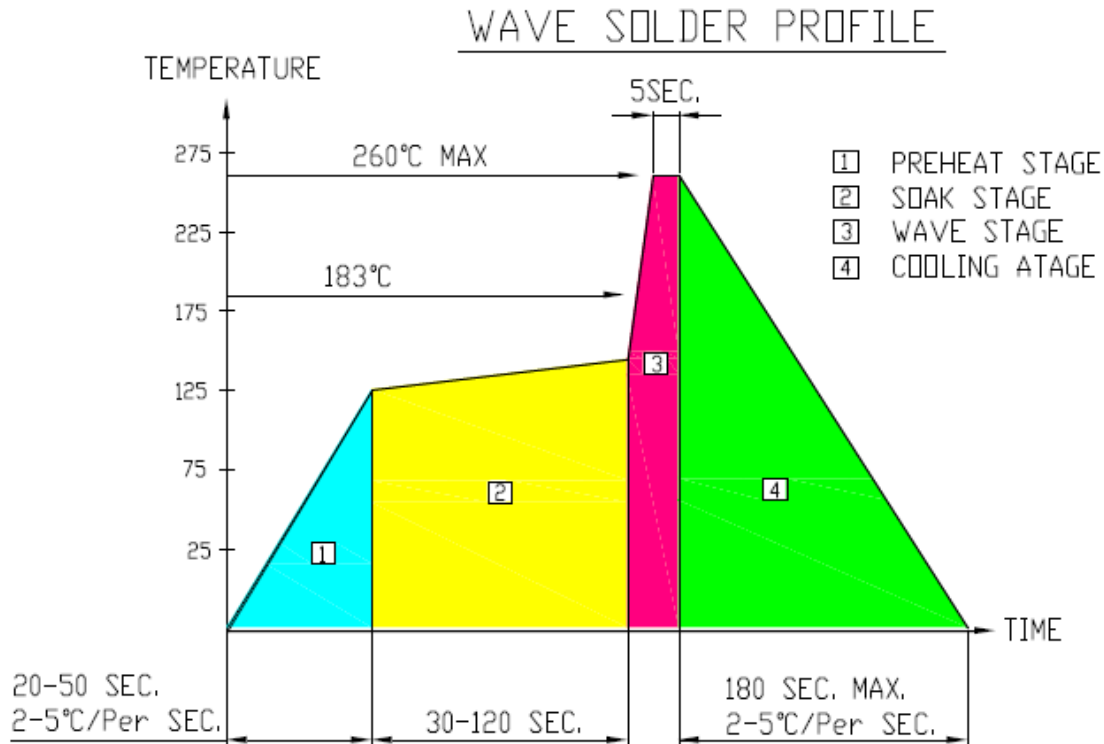


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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SOLDERING CHARACTERISTICS

NOTES

1. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
2. Peak wave soldering temperature between 245°C ~ 225°C for 3 sec (5 sec max)
3. No more than one wave soldering pass

SOLDERING IRON

- Basic spec is ≤ 4 sec when 260°C. If temperature is higher, time should be shorter (+10°C → 1 sec). Power dissipation of Iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C

REWORK

1. Customer must finish rework within 3 sec under 350°C
2. The head of soldering iron cannot touch copper foil



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