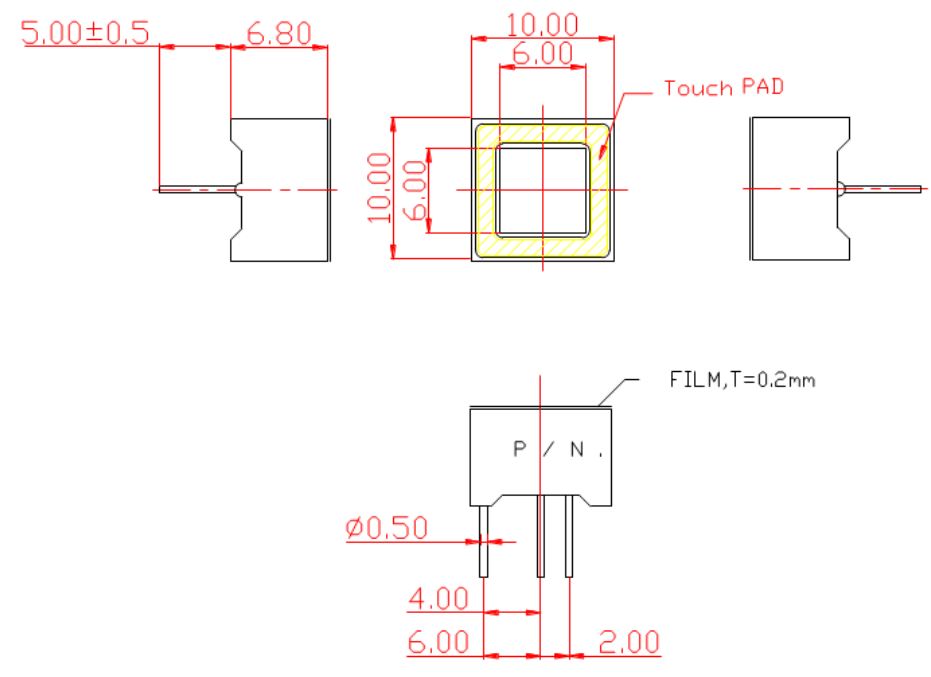


SPECIFICATIONS **CTD3939R2WB**

OUTLINES DIMENSIONS



The technical drawings show the following dimensions:

- Top View:** Overall width is 6.80 mm. The central square area has a side length of 6.00 mm. The outer square frame has a side length of 10.00 mm. A yellow hatched area labeled "Touch PAD" is located within the 6.00 mm square.
- Side View (Left):** Shows a total height of 5.00 ± 0.5 mm.
- Side View (Right):** Shows the chip profile with a central protrusion.
- Bottom View:** Shows a central square area labeled "P / N" with a side length of 4.00 mm. The distance from the center to the edge of the chip is 6.00 mm. The distance from the center to the edge of the lead is 2.00 mm. The lead diameter is $\phi 0.50$ mm. A label "FILM, T=0.2mm" points to the top surface.

Notes:

1. All Dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 mm (0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Description
CTD3939R2WB	InGaAlP	Red	White	Touch Display



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ABSOLUTE MAXIMUM RATINGS
(TA=25°C)

Parameter	Symbol	Max Rating	Unit
Power Dissipation	PD	70	mW
Continuous Forward Current (Per Dice)	IF	25	mA
Peak Current (Per Dice)	IFP	90	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			

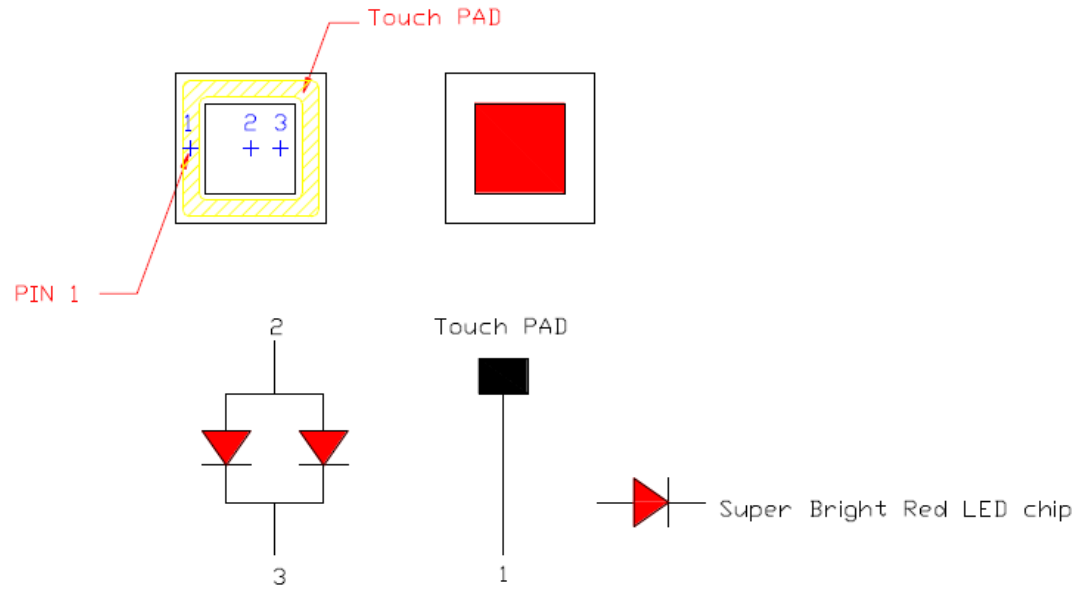
OPTICAL-ELECTRICAL CHARACTERISTICS
(TA=25°C)

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	IV	IF = 20mA	-	40	-	mcd
Forward Voltage	VF	IF = 20mA	-	2.0	2.6	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	µA
Peak Wavelength	λP	IF = 20mA	-	632	-	nm
Dominant Wavelength	λD	IF = 20mA	-	624	-	nm
Spectral Radiation Bandwidth	Δλ	IF = 20mA	-	20	-	nm



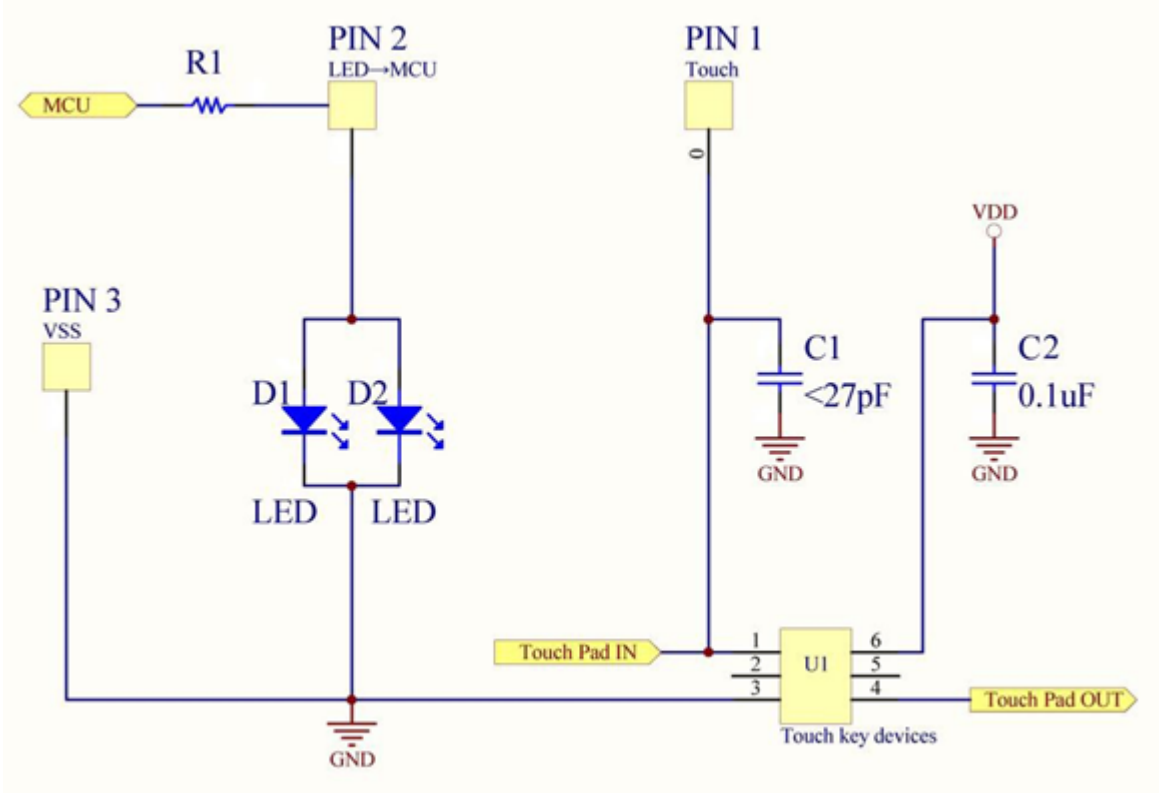
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INTERNAL CIRCUIT DIAGRAMS



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TYPICAL APPLICATION CIRCUITS



Internal Components are not customer accessible



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OPTICAL CHARACTERISTIC CURVES

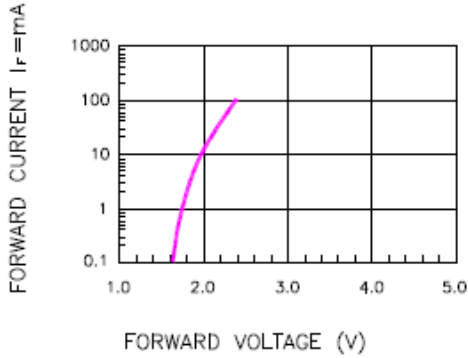


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

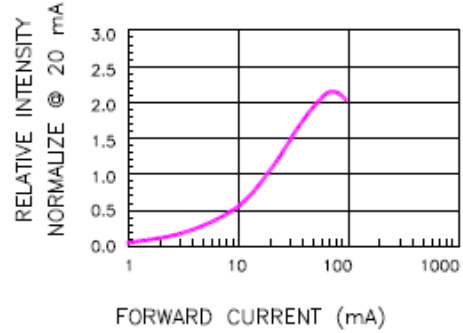


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

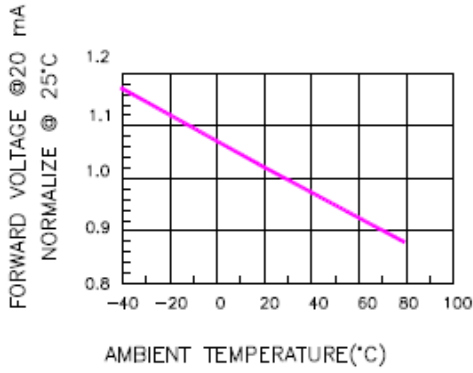


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

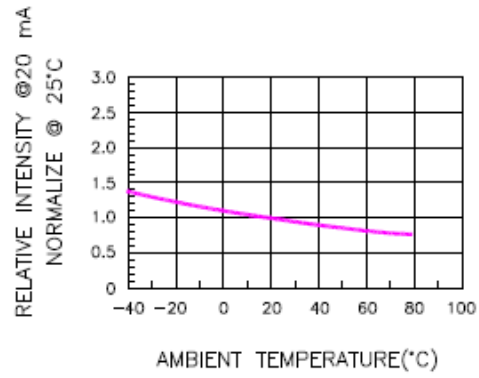


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

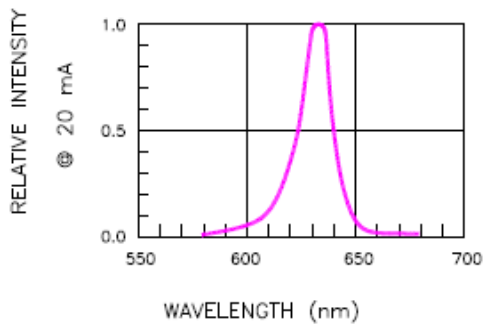


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

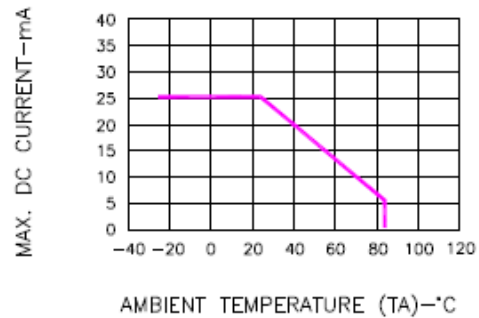
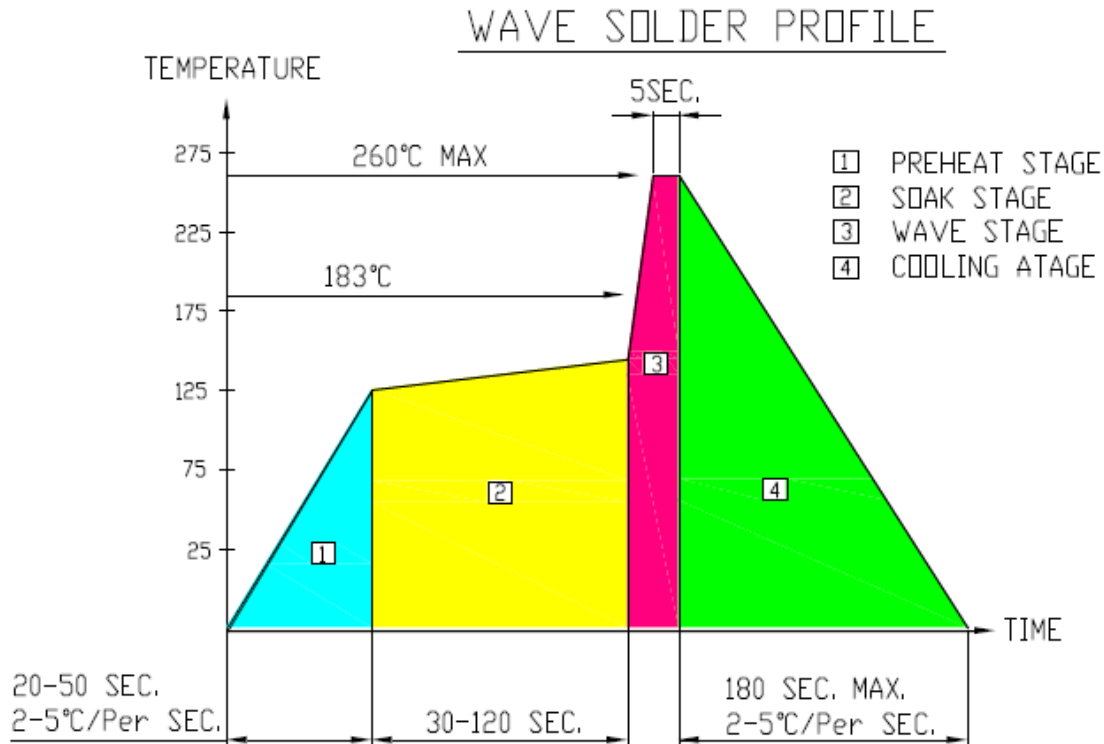


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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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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