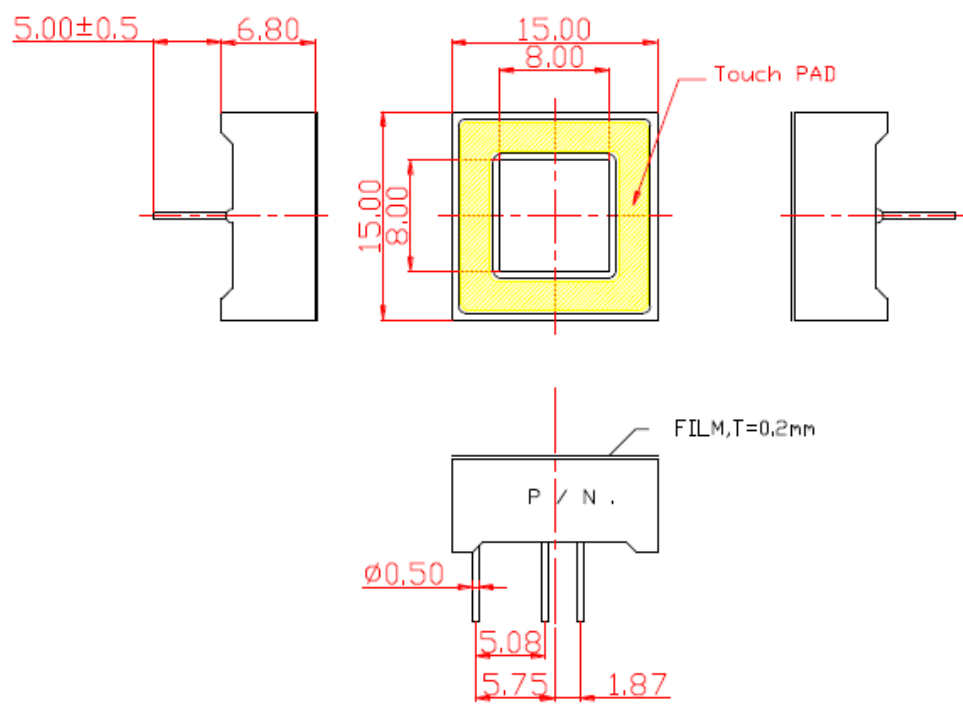


**SPECIFICATIONS** **CTD5959B2WB**

### OUTLINES DIMENSIONS



The technical drawings show the following dimensions:

- Top view: Overall width 15.00mm, inner width 8.00mm, overall height 15.00mm, inner height 8.00mm. A yellow shaded area is labeled "Touch PAD".
- Side view (left): Total height 5.00±0.5mm, top width 6.80mm.
- Bottom view: Lead diameter  $\varnothing 0.50$ mm, lead height 5.08mm, total height 5.75mm, and lead spacing 1.87mm. A top layer is labeled "FILM, T=0.2nm" and "P / N .".

**Notes:**

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

Part Number	Chip Material	Color of Emission	Lens Type	Description
CTD5959B2WB	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			

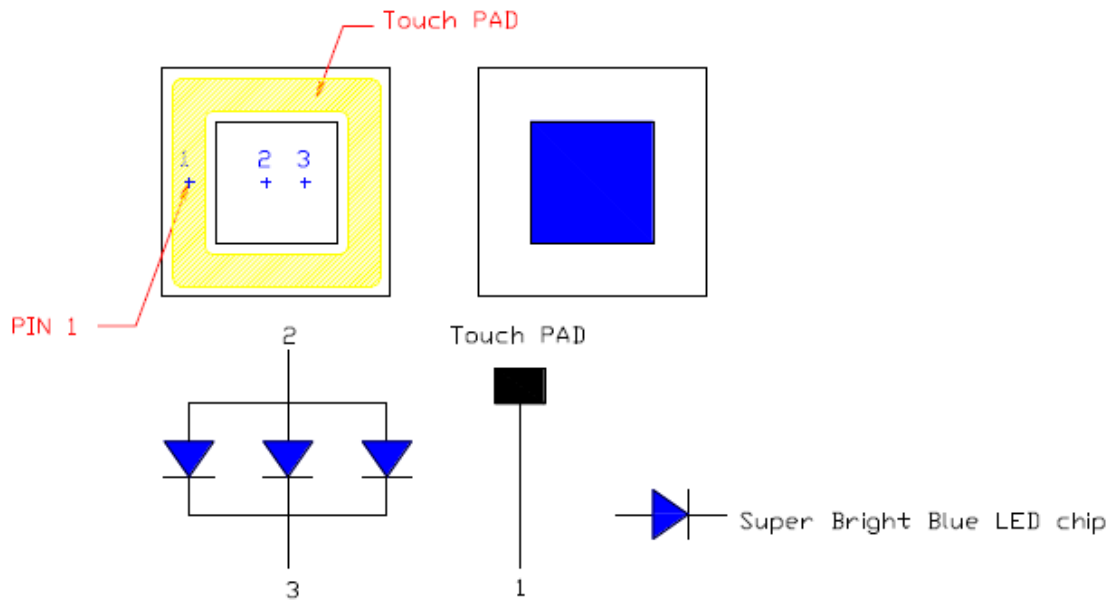

**OPTICAL-ELECTRICAL CHARACTERISTICS**
**(TA=25°C)**

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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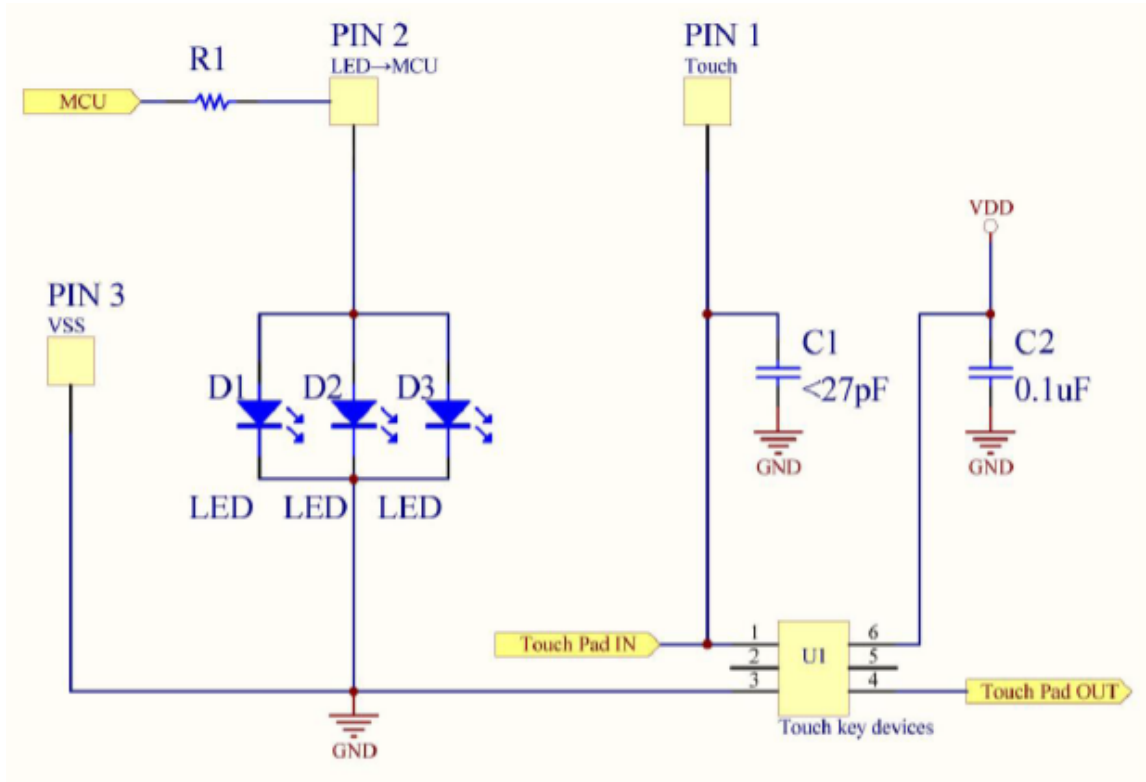
INTERNAL CIRCUIT DIAGRAMS

RoHS Compliant  
Lead Free

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## TYPICAL APPLICATION CIRCUITS



Internal Components are not customer accessible



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## OPTICAL CHARACTERISTIC CURVES

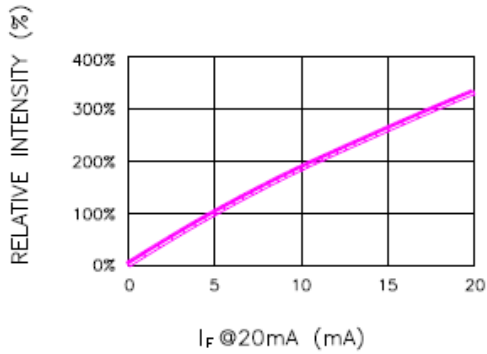


Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

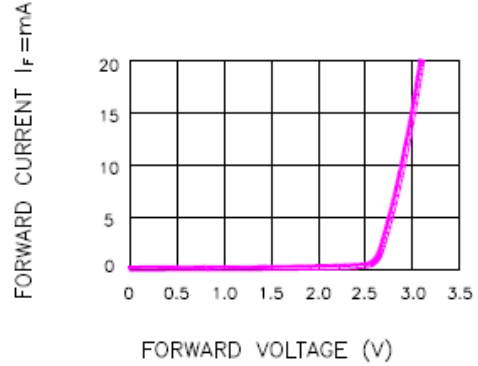


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

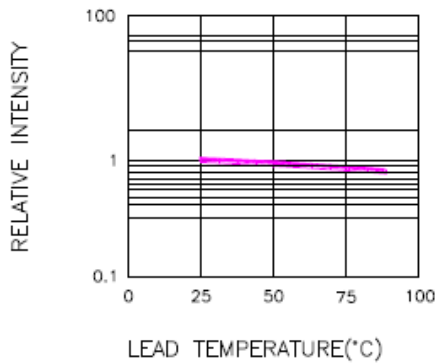


Fig.3 RELATIVE INTENSITY VS. LEAD TEMPERATURE  
(PULSED 20 mA; 300us PULSE, 10ms PERIOD)

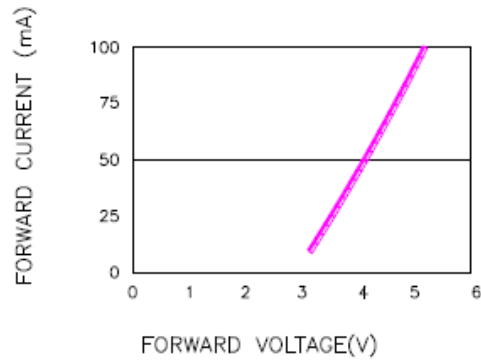


Fig.4 PEAK FORWARD VOLTAGE VS. FORWARD CURRENT (100us TEST PULSE, 1% DUTY CYCLE)

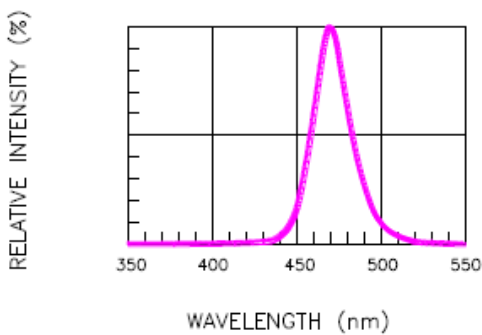


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

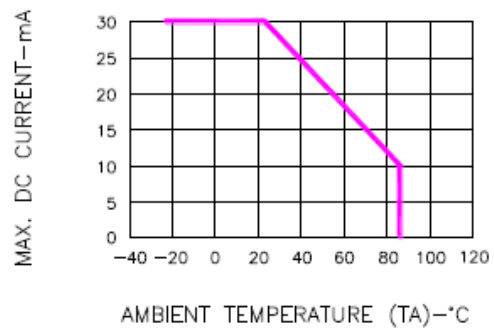
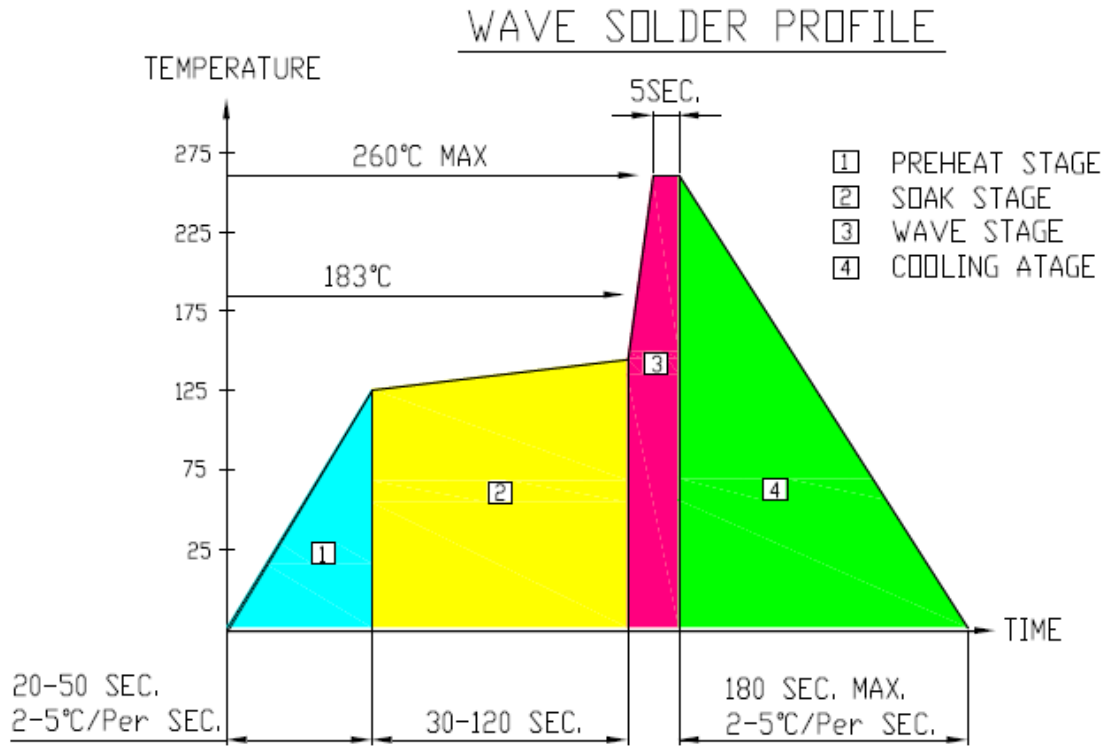


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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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  $\leq 4$  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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