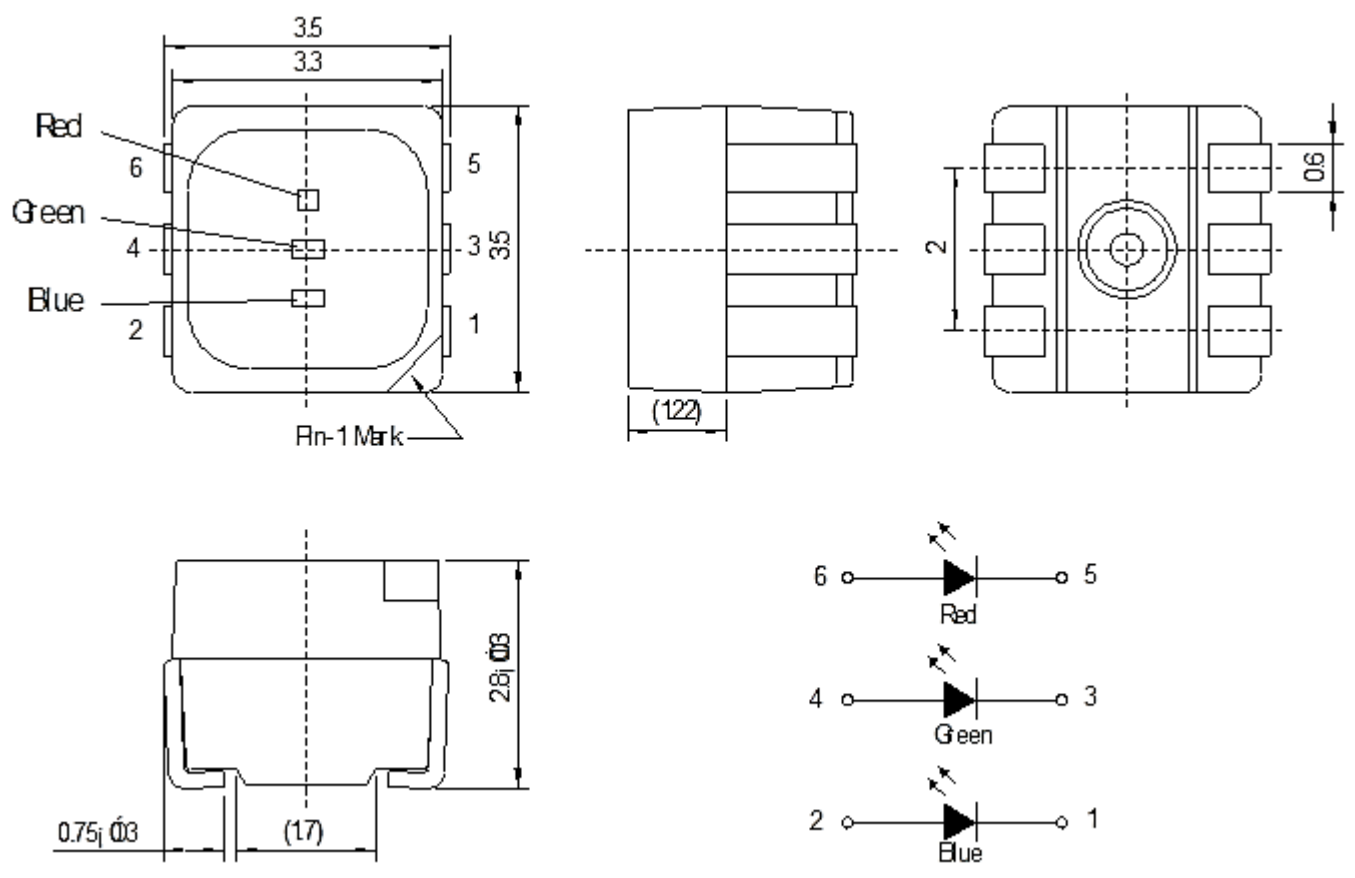


**SPECIFICATION CSPT1313R3GT3B3C-6**
**PACKAGE OUTLINES**


- 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	Viewing Angle
CSPT1313R3GT3B3C-6	InGaAlP	Red	Water Clear	120°
	InGaN	True Green	Water Clear	120°
	InGaN	Blue	Water Clear	120°



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**ABSOLUTE MAXIMUM RATINGS**
**(TA=25°C)**

Parameter	Symbol	Max Rating		Unit
		Blue/ Green	Red	
Forward Current	IF	20	30	mA
Reverse Voltage	VR	5	5	V
Power Dissipation	Pd	72	96	mW
Operating Temperature Range	TOP	-30~+85		°C
Storage Temperature Range	TSTG	-40~+100		°C
Peak Pulsing Current (tp ≤ 10 μs, duty cycle = 0.005)	IFP	100		mA

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

Parameter	Symbol	Test Condition	Color	Value			Unit
				Min	Typ	Max	
Luminous Intensity	Iv	IF = 20mA	Red	610	800	-	mcd
			Green	1120	1500	-	
			Blue	250	360	-	
Forward Voltage	VF	IF = 20mA	Red	-	2.2	2.4	V
			Green	-	3.2	3.6	
			Blue	-	3.2	3.6	
Viewing Angle at 50% Iv	2θ1/2	IF = 20mA	-	-	120	-	Deg
Dominant Wavelength	λD	IF = 20mA	Red	619	-	624	nm
			Green	520	-	535	
			Blue	465	-	475	

\*Tolerance of viewing angle: -10 / +5 deg.

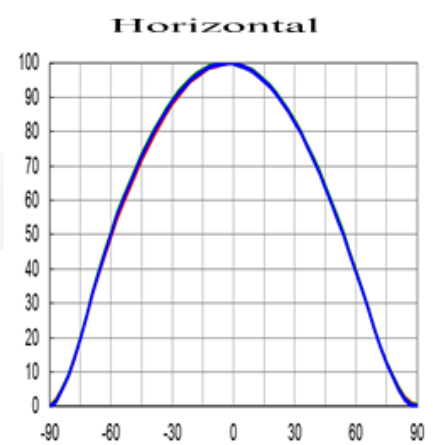
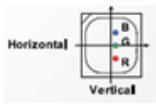
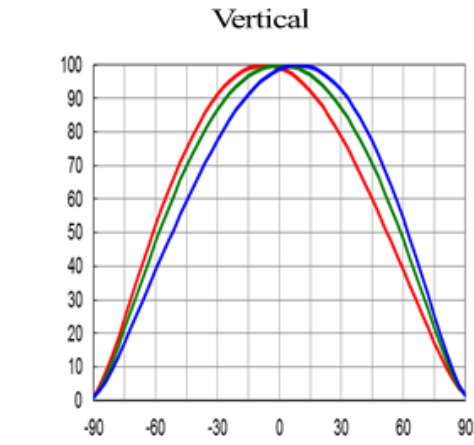
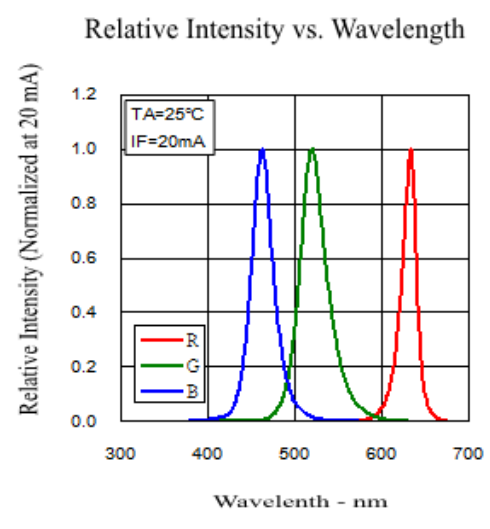
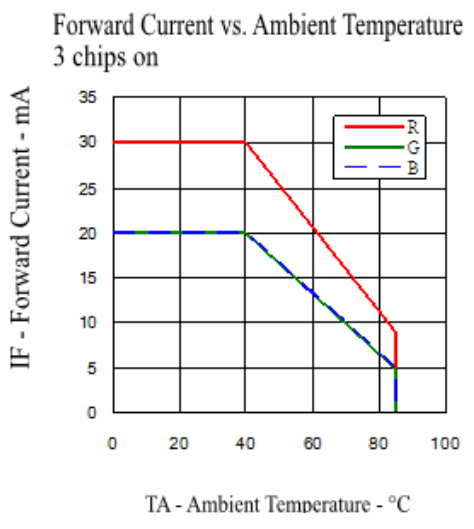
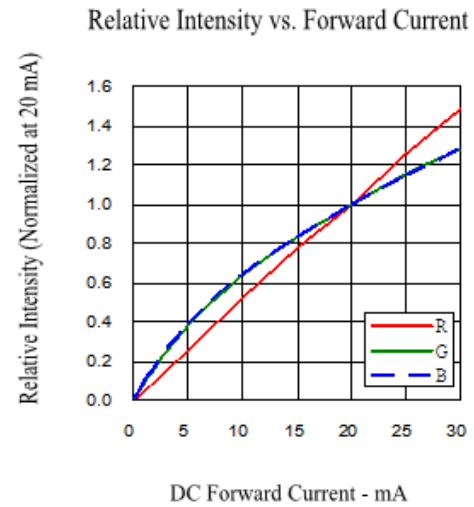
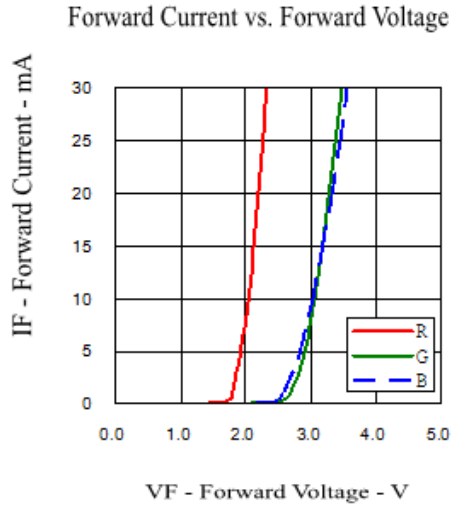
\*Tolerance of forward voltage is -/+ 0.05V

\*Tolerance of luminous intensity -/+ 1nm



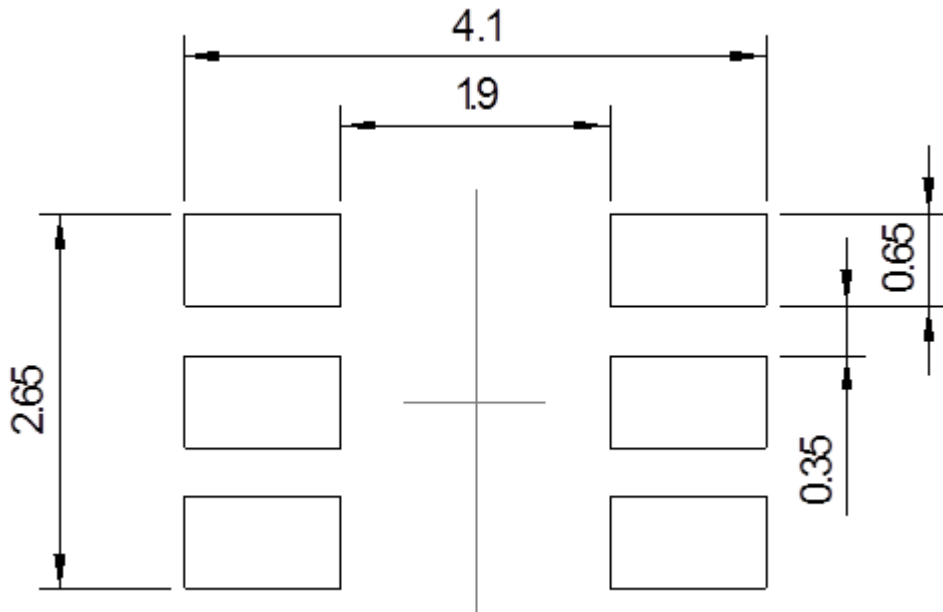
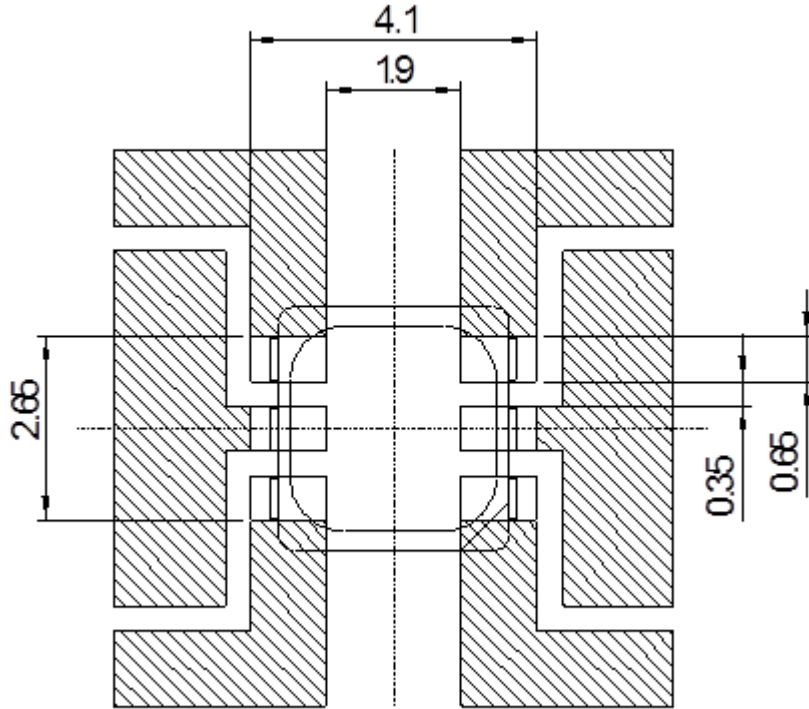
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## TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES



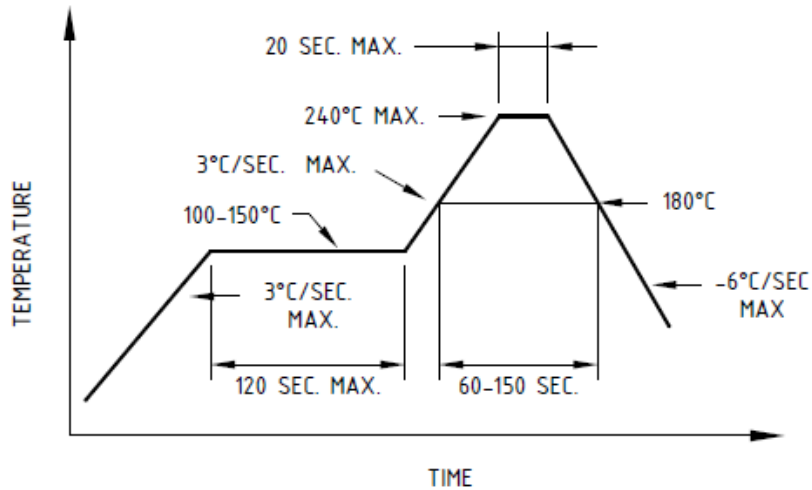
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RECOMMENDED SOLDERING PATTERN

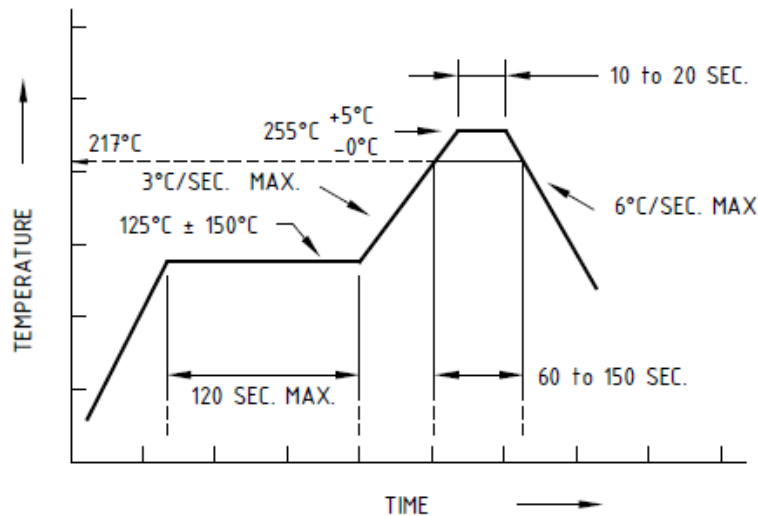


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# SOLDERING CONDITIONS



**Recommended reflow soldering profile**



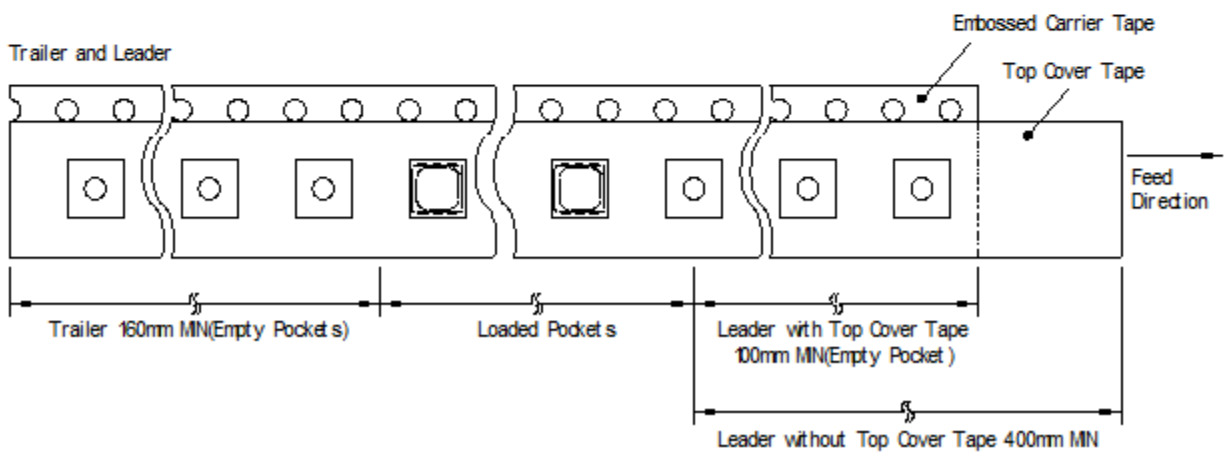
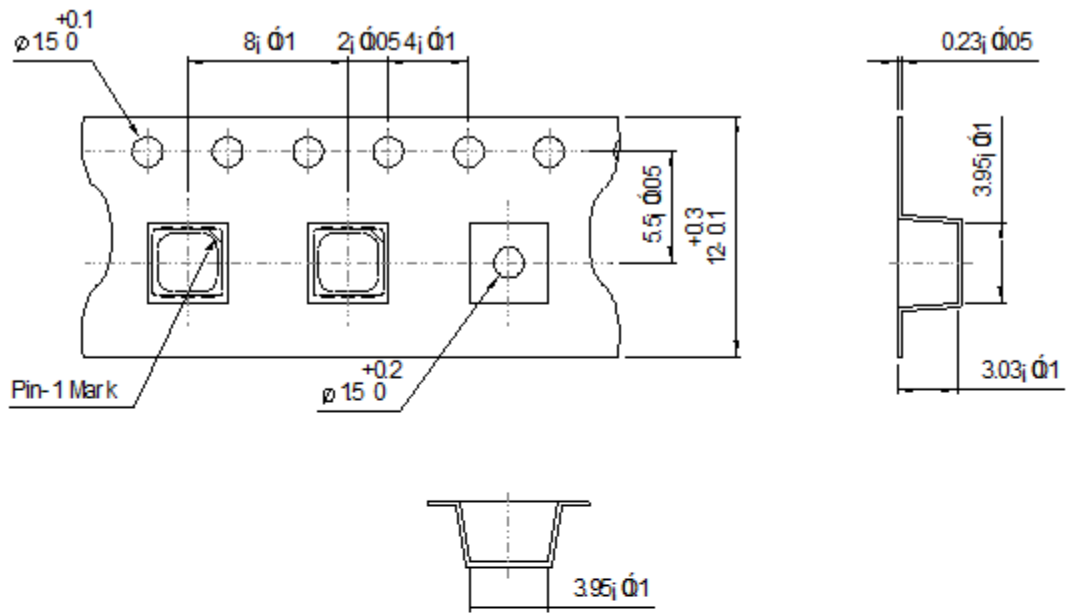
**Recommended Pb-free reflow soldering profile**

- Repairing should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used. It should be confirmed beforehand whether the Characteristics of the LEDs will or will not be damaged by repairing.
- Reflow soldering should not be done more than two times.
- When soldering, do not put stress on the LEDs during heating.
- After soldering, do not warp the circuit board.



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## REEL PACKAGING



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