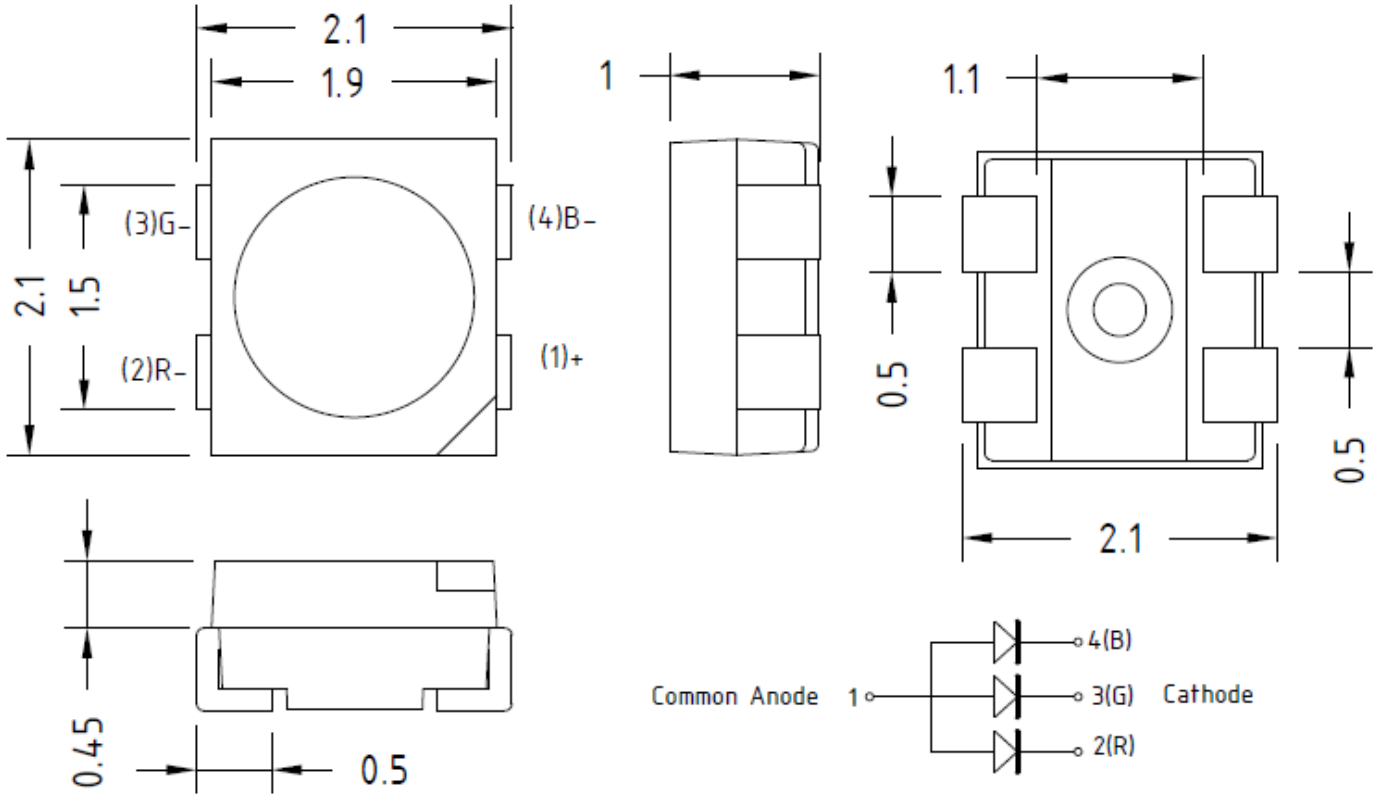


**SPECIFICATION** **CSP88R4GT3B3C**
**PACKAGE OUTLINES**

**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
CSP88R4GT3B3C	InGaAlP	Red	Water Clear	120°
	InGaN	Green	Water Clear	120°
	InGaN	Blue	Water Clear	120°



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

Parameter	Symbol	Max Rating		Unit
		Red	Green/Blue	
Forward Current	I <sub>F</sub>	30	25	mA
Reverse Voltage	V <sub>R</sub>	5	5	V
Power Dissipation	P <sub>d</sub>	72	90	mW
Operating Temperature Range	T <sub>OP</sub>	-30~+85		°C
Storage Temperature Range	T <sub>STG</sub>	-40~+100		°C
Peak Pulsing Current	I <sub>FP</sub>	100	100	mA
Soldering Temperature	T <sub>SOL</sub>	Max 260°C for 5 sec Max		

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

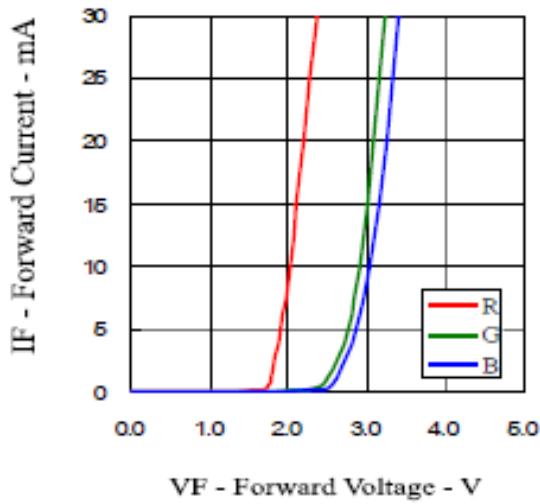
Parameter	Symbol	Test Condition	Color	Value			Unit
				Min	Typ	Max	
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> = 20mA	Red	210	330	-	mcd
			Green	400	560		
			Blue	100	130		
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	Red	-	2.0	2.4	V
			Green	-	3.2	3.6	
			Blue	-	3.2	3.6	
Viewing Angle at 50% I <sub>v</sub>	2θ <sub>1/2</sub>	I <sub>F</sub> = 20mA	-	-	120	-	Deg
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> = 20mA	Red	-	625	-	nm
			Green		525		
			Blue		470		

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

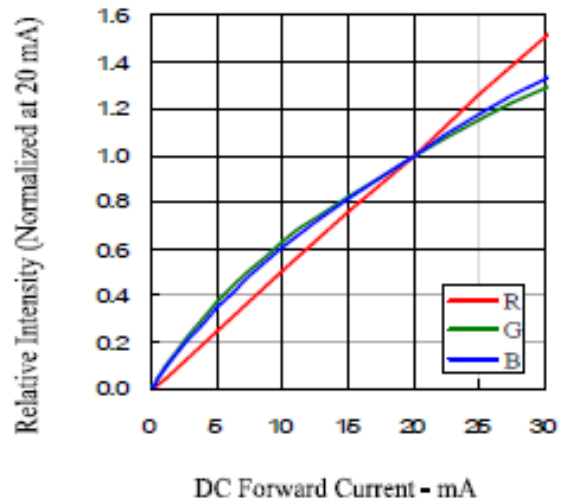

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## TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES

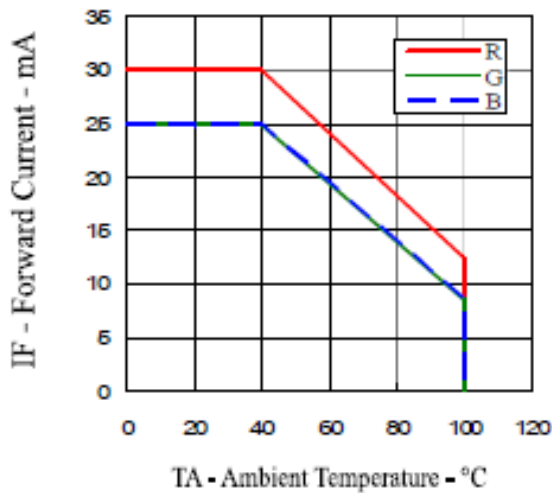
Forward Current vs. Forward Voltage



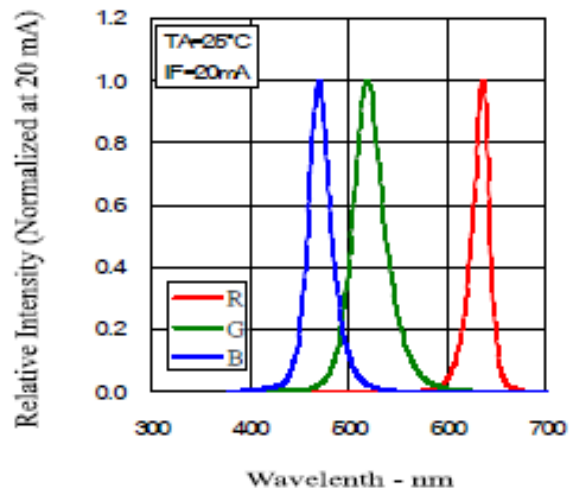
Relative Intensity vs. Forward Current



Forward Current vs. Ambient Temperature

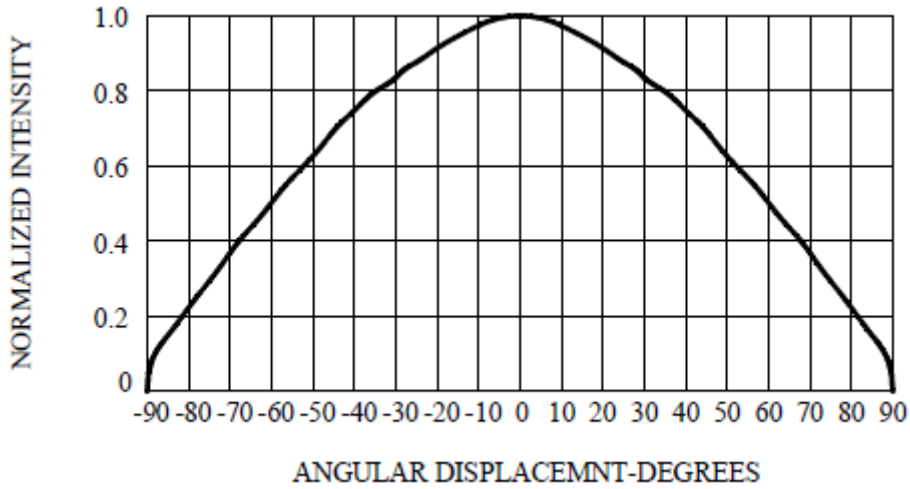


Relative Intensity vs. Wavelength

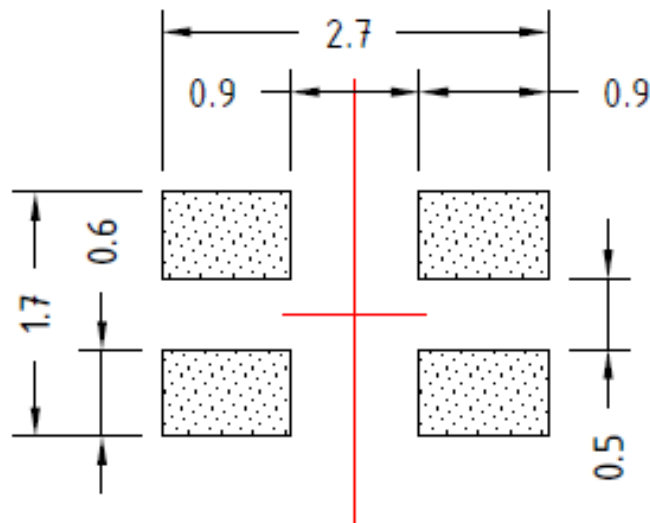


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## RADIATION PATTERN



## RECOMMENDED SOLDERING PAD PATTERN



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# SOLDERING CONDITIONS

## RECOMMENDED Sn-PB IR-Reflow Soldering Profile



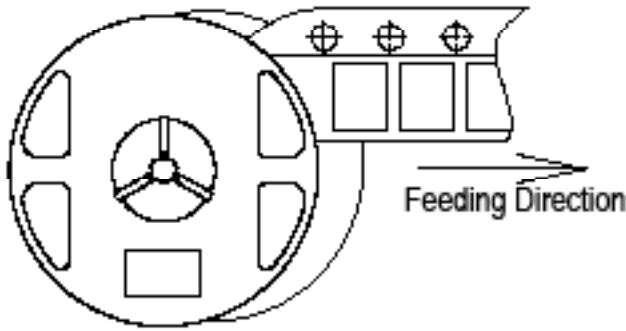
## RECOMMENDED Pb-Free Soldering Profile



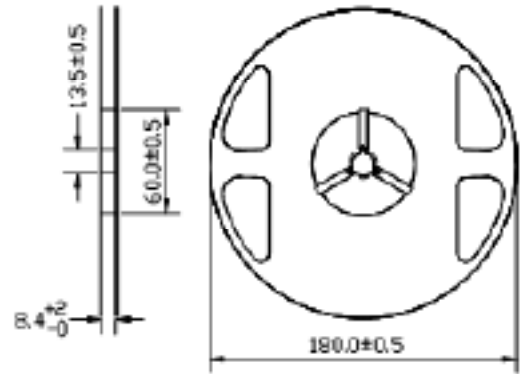
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## REEL PACKAGING

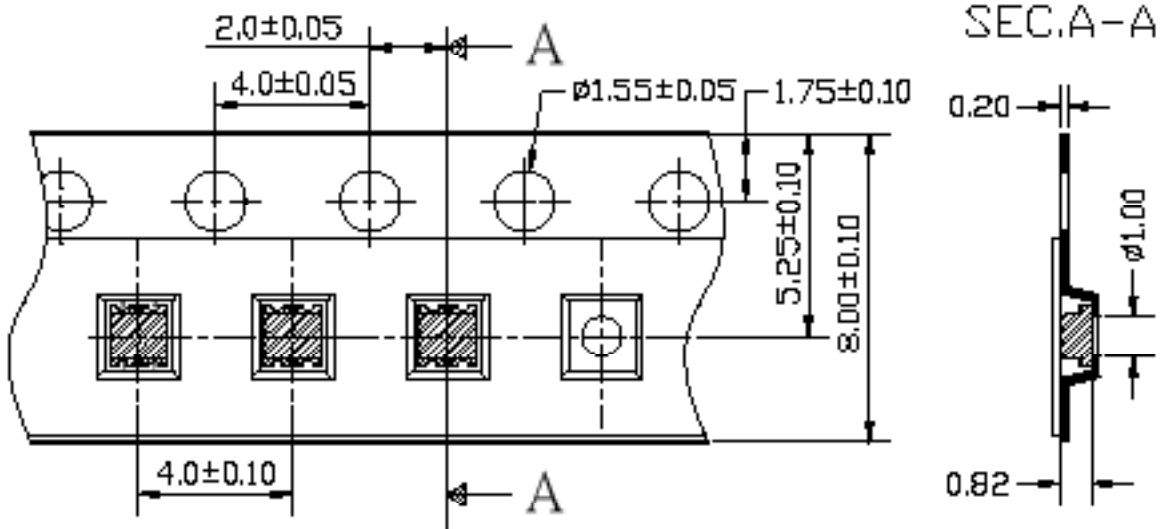
- Feeding Direction



- Dimensions of Reel (Unit: mm)



- Dimensions of Tape (Unit: mm)



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