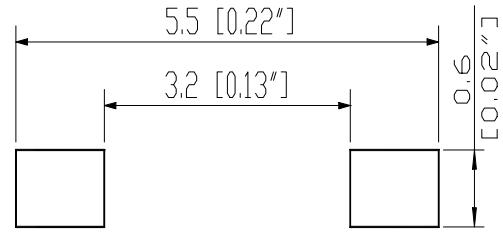
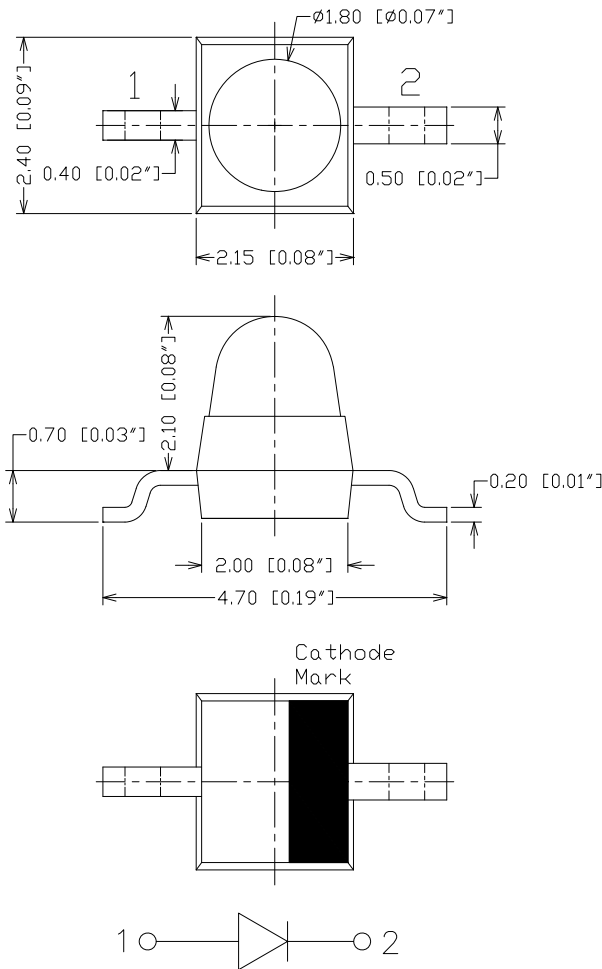


**SPECIFICATION** **CSM28A2CG**
**PACKAGE OUTLINES**


ITEM	MATERIALS
Resin (mold)	Epoxy
Lens Color	Water transparent
Dice	AlGaInP/GaAs
Emitted Color	Orange

- 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
CSM28A2CG	AlGaInP/GaAs	Orange	Water Clear	20°



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

Parameter	Symbol	Max Rating	Unit
Forward Current	I <sub>F</sub>	30	mA
Reverse Current @ 5V	I <sub>R</sub>	5	μA
Power Dissipation	P <sub>d</sub>	75	mW
Operating Temperature Range	T <sub>OP</sub>	-40~+80	°C
Storage Temperature Range	T <sub>STG</sub>	-40~+85	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	I <sub>FP</sub>	125	mA
Soldering Temperature	T <sub>SOL</sub>	Max 260°C for 5 sec Max	

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

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> = 20mA	1250	2300	-	mcd
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	-	2.0	2.5	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 5V	-	-	10	μA
Viewing Angle at 50% I <sub>v</sub>	2θ <sub>1/2</sub>	I <sub>F</sub> = 20mA	-	20	-	Deg
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> = 20mA	-	610	-	nm
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> = 20mA	-	605	-	nm

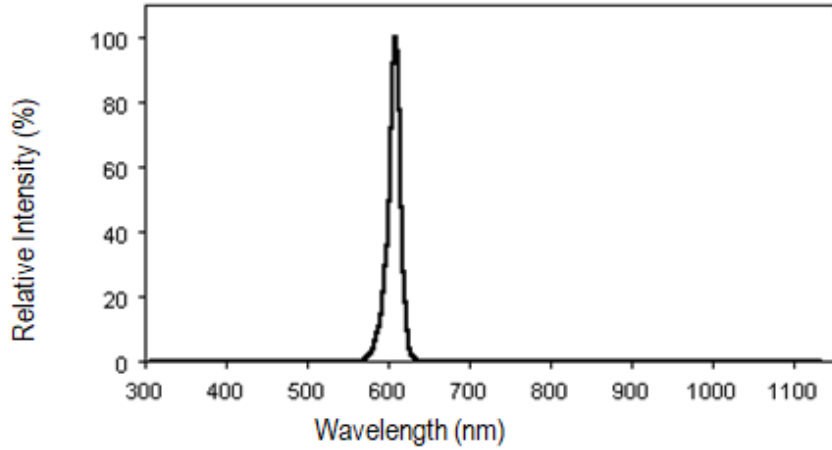
\*Tolerance of viewing angle: -10 / +5 deg.



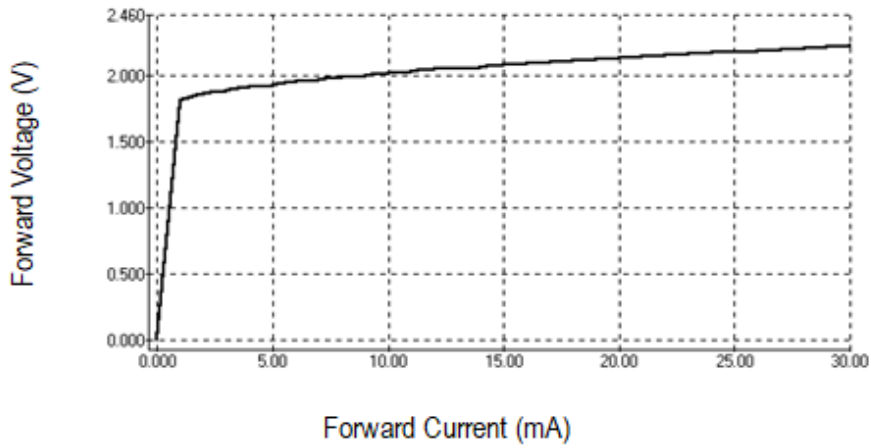
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**OPTICAL CHARACTERISTIC CURVES**

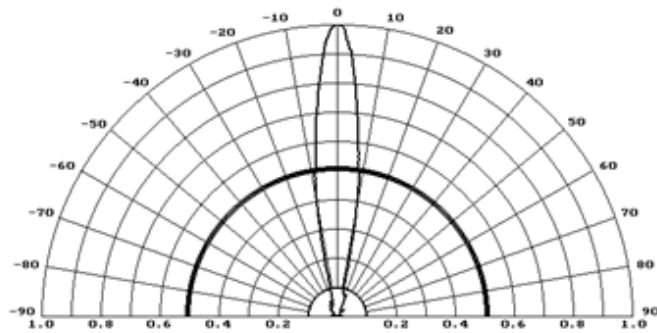
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



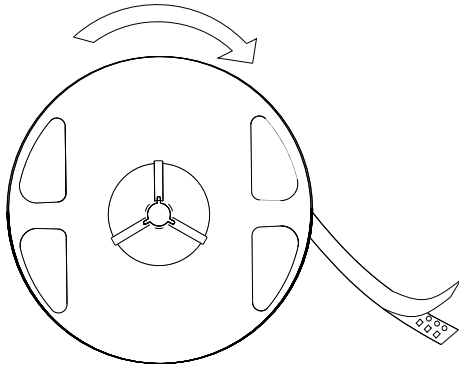
Directive Characteristics



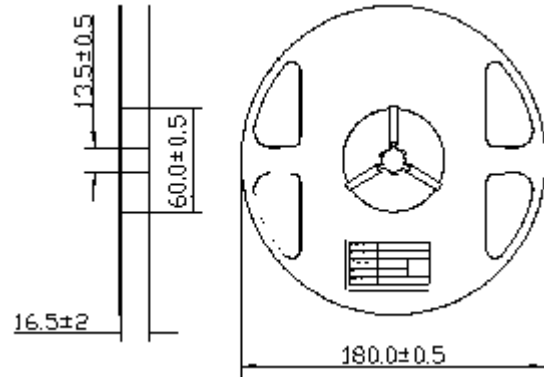
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## PACKAGING SPECIFICATION

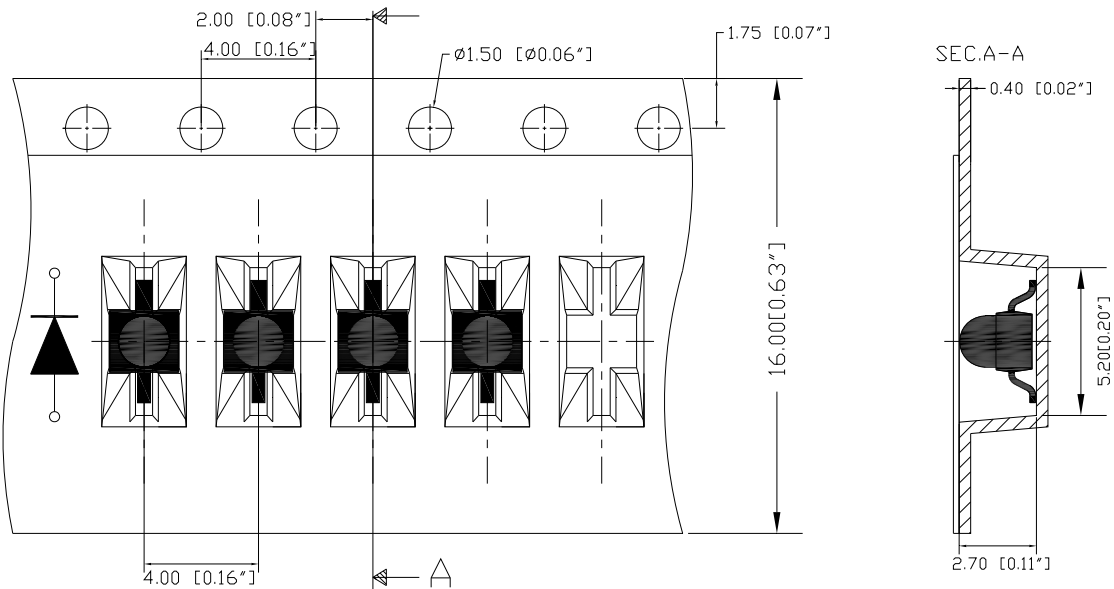
● Feeding Direction



● Dimensions of Reel (Unit: mm)



● Dimensions of Tape (Unit: mm)



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# SOLDERING CONDITIONS

## RECOMMENDED Sn-PB IR-Reflow Soldering Profile



## RECOMMENDED Pb-Free Soldering Profile



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