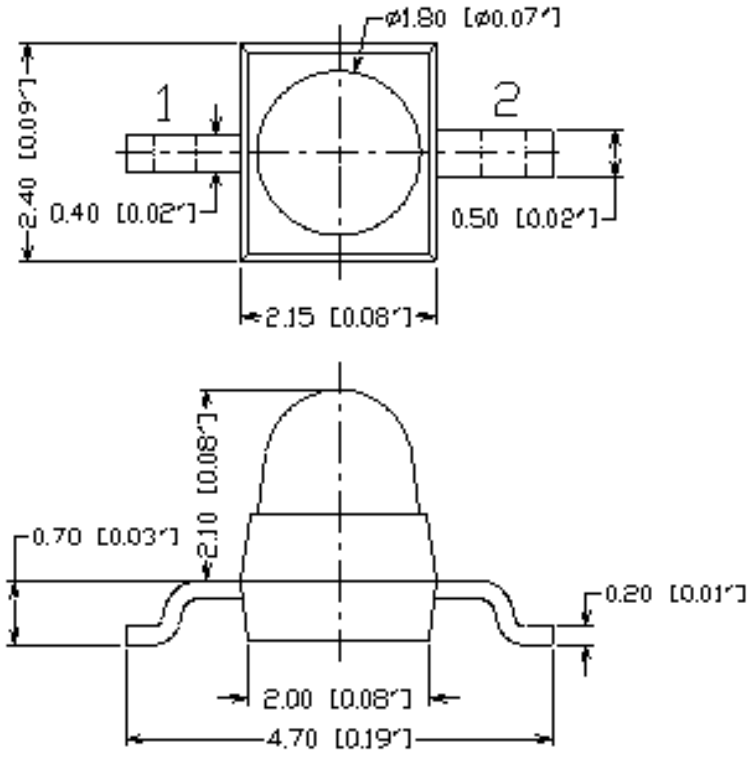
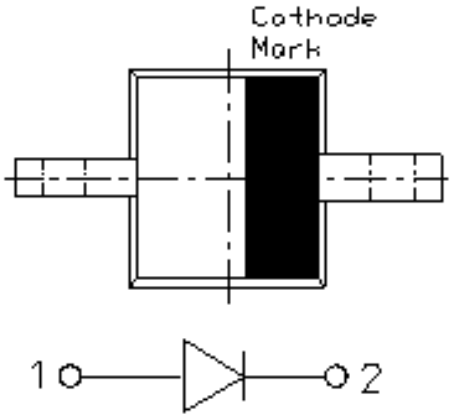
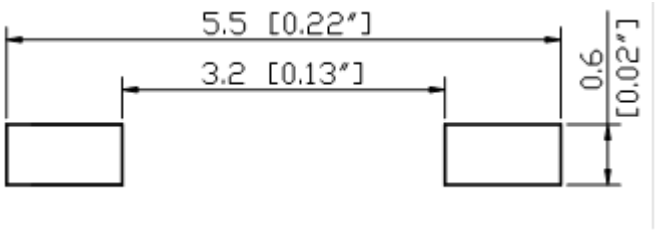
SPECIFICATION CSM28R2CG

PACKAGE OUTLINES





RECOMMENDED PAD LAYOUT



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

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CSM28R2CG	InGaAlP	Red	Water Clear	20°

RoHS Compliant Lead Free

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ABSOLUTE MAXIMUM RATINGS (TA=25°C)

Parameter	Symbol	Max Rating	Unit
Forward Current	I_F	30	mA
Reverse Current @ 5V	I_R	10	μA
Power Dissipation	Pd	75	mW
Operating Temperature Range	T_{OP}	-40~+80	°C
Storage Temperature Range	T_{STG}	-40~+85	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	I_{FP}	125	mA
Soldering Temperature	T_{SOL}	Max 260°C for 5 sec Max	

OPTICAL-ELECTRICAL CHARACTERISTICS (TA=25°C)

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	Iv	I_F = 20mA	1600	2900	-	mcd
Forward Voltage	V_F	I_F = 20mA	-	2.0	2.5	V
Reverse Leakage Current	I_R	V_R = 5V	-	-	10	μA
Viewing Angle at 50% Iv	2θ1/2	I_F = 10mA	-	20	-	Deg
Peak Wavelength	λ_P	I_F = 20mA	-	630	-	nm
Dominant Wavelength	λ_D	I_F = 20mA	620	625	630	nm

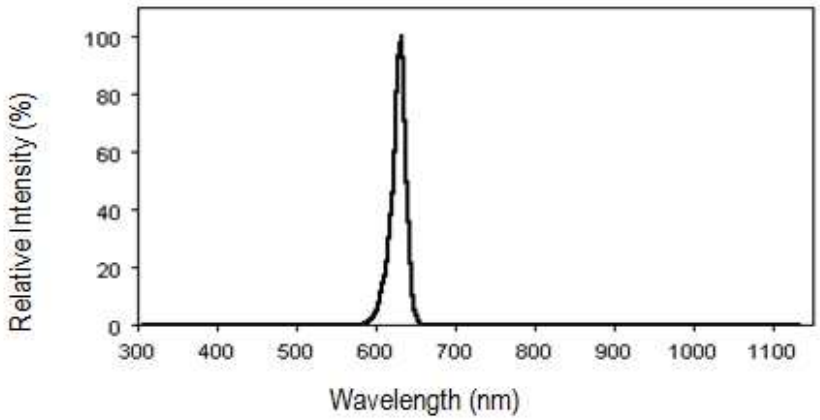
*Tolerance of viewing angle: -10 / +5 deg.

RoHS Compliant Lead Free

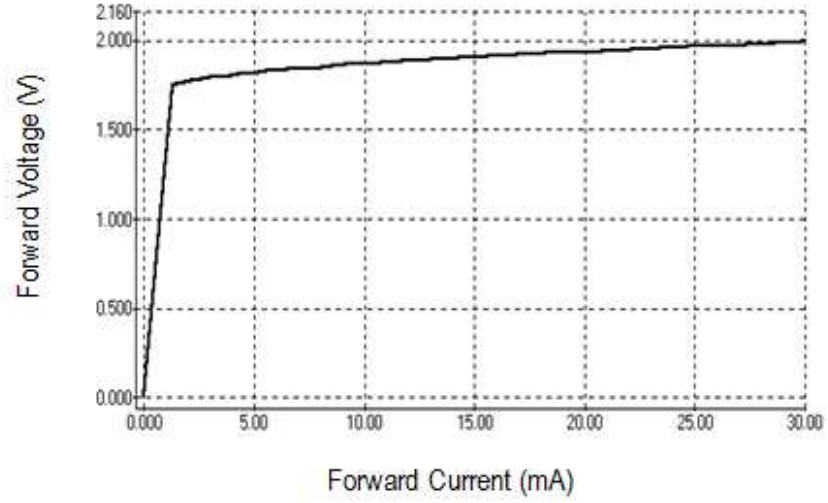
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OPTICAL CHARACTERISTIC CURVES

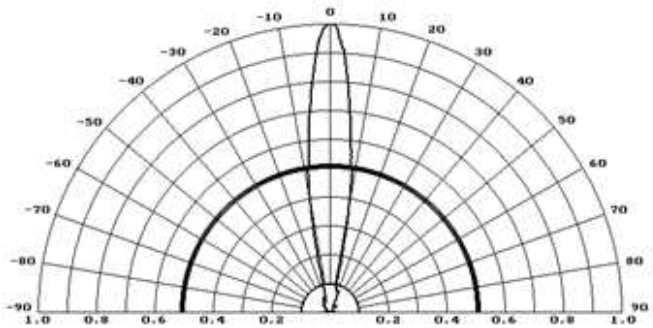
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



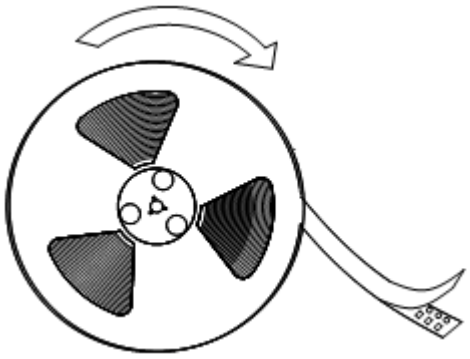
Directive Characteristics



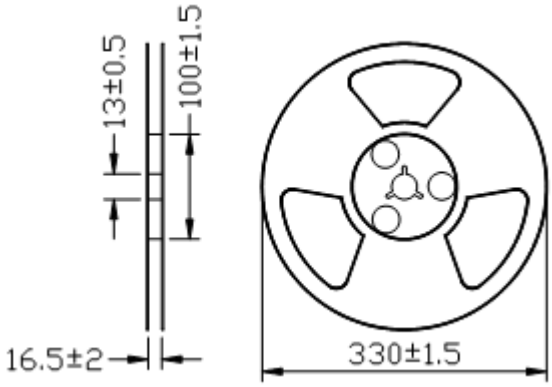
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PACKAGING SPECIFICATION

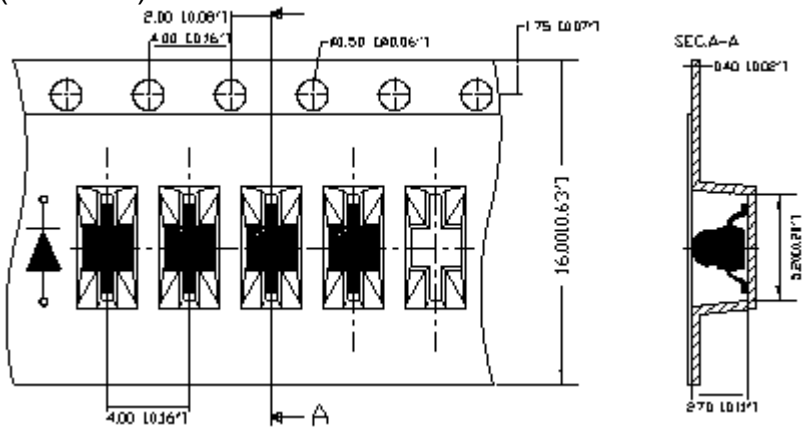
Feeding Direction



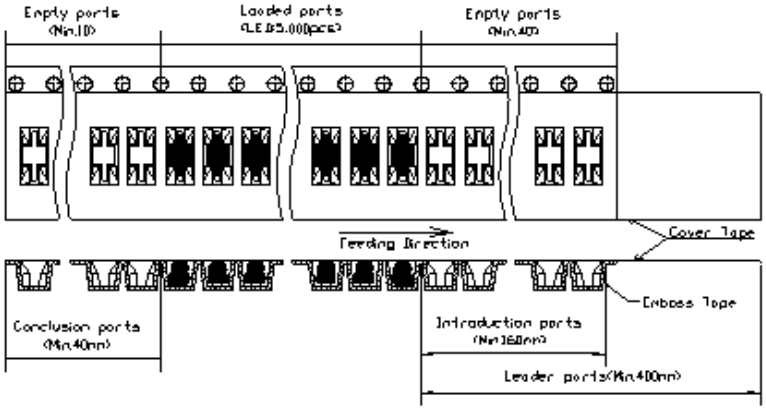
Dimensions of Reel (Unit: mm)



Dimensions of Tape (Unit: mm)



Arrangement of Tape



Notes:

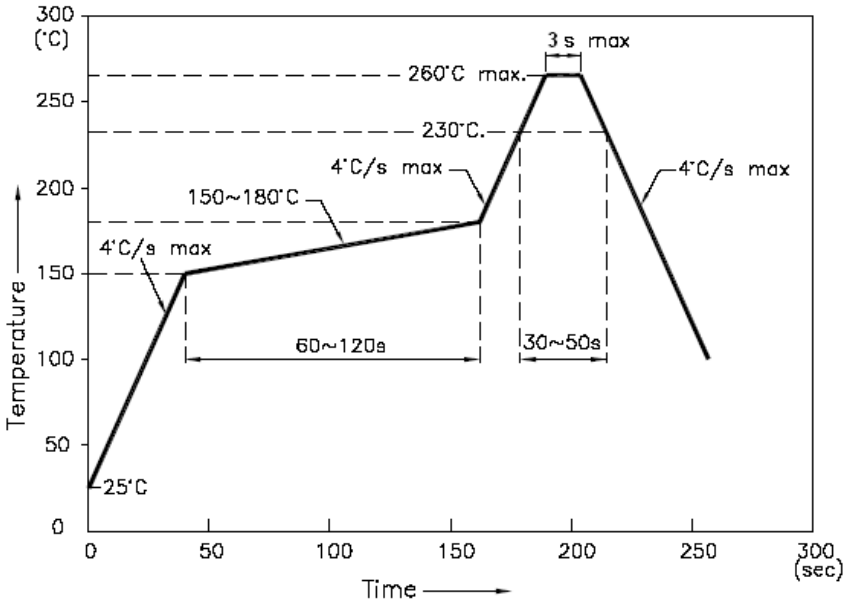
1. Empty component pockets are sealed with top cover tape;
2. The maximum number of missing lamp is two;
3. The cathode is oriented towards the tape sprocket hole;
4. 1,000 pcs/Reel

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SOLDERING CONDITIONS

REFLOW PROFILE

- Reflow Temp/Time



Notes:

1. We recommend the reflow temperature 245°C (±5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process should be 2 times or less.

- Soldering Iron

  Basic spec is ≤ 5 sec when 260°C. If temperature is higher, time should be shorter (±10°C→-1sec). Power dissipation of iron should be smaller than 20W and temperature should be controllable. Surface temperature of the device should be under 230°C.

RoHS Compliant
Lead Free

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