

CMD95-21SYGC/TR7 1.9mm Round Subminiature Lead LED

Features

- Package in 12mm tape on 7" diameter reels.
- Compatible with automatic placement equipment.
- EIA Std. package.
- Mono-color type.
- Pb-free
- RoHS Compliant



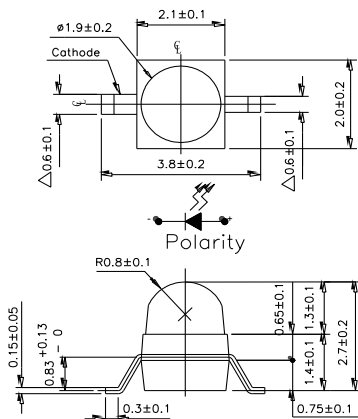
Applications

- Small indicator for indoor applications.
- Flat backlight for LCD, switches and symbols.
- Indicator and backlight in office equipment.
- Indicator and backlight for battery driven equipment.
- Indicator and backlight for audio and video equipment.
- Telecommunication : indicator and backlighting in telephone and fax.

Device Selection Guide

Part No.	Chip	Emitted Color	Resin Color
	Material		
CMD95-21SYGC/TR7	InGaN	Brilliant Yellow Green	Water Clear

Package Outline Dimensions



Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$,Unit = mm

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Absolute Maximum Ratings (Ta=25°C)

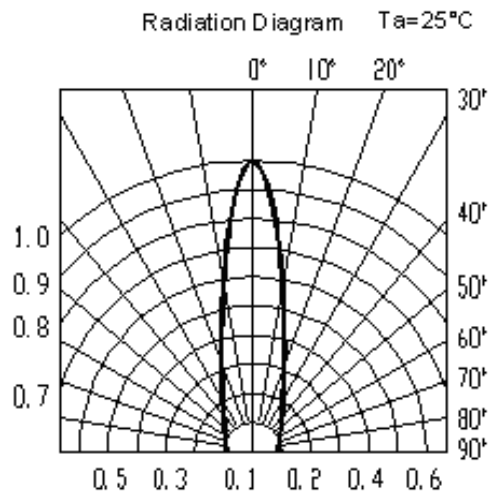
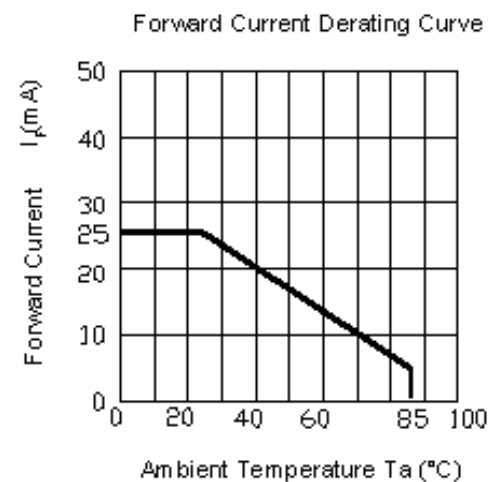
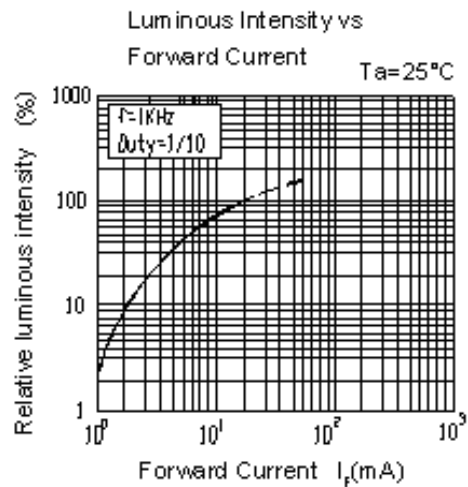
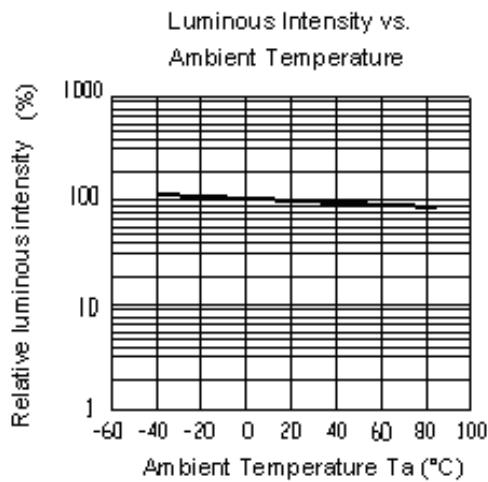
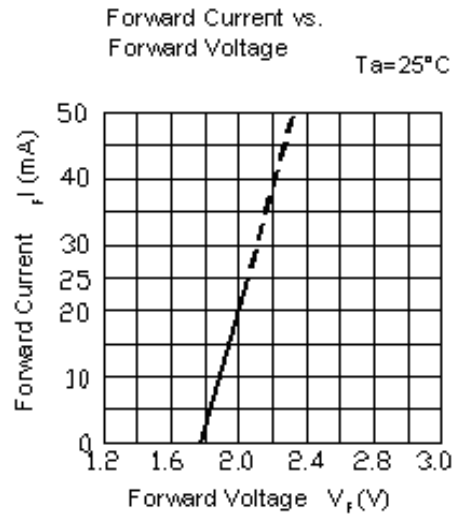
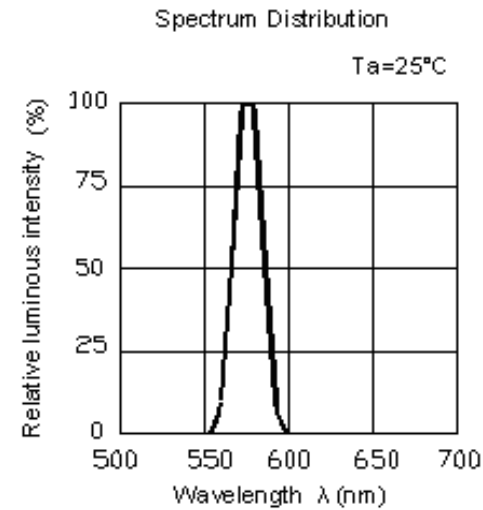
Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	25	mA
Peak Forward Current (Duty 1/10 @ 1KHz)	I _{FP}	60	mA
Power Dissipation	P _d	60	mW
Electrostatic Discharge(HBM)	ESD	2000	V
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Soldering Temperature	T _{sol}	Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Condition
Luminous Intensity	I _v	----	20	----	mcd	IF=20mA
		264	330	----	mcd	
Viewing Angle	2θ 1/2	----	25	----	deg	
Peak Wavelength	λ _p	----	575	----	nm	
Dominant Wavelength	λ _d	----	573	----	nm	
Spectrum Radiation Bandwidth	Δλ	----	20	----	nm	
Forward Voltage	V _F	1.7	2.0	2.4	V	
Reverse Current	I _R	----	----	10	μA	V _R =5V

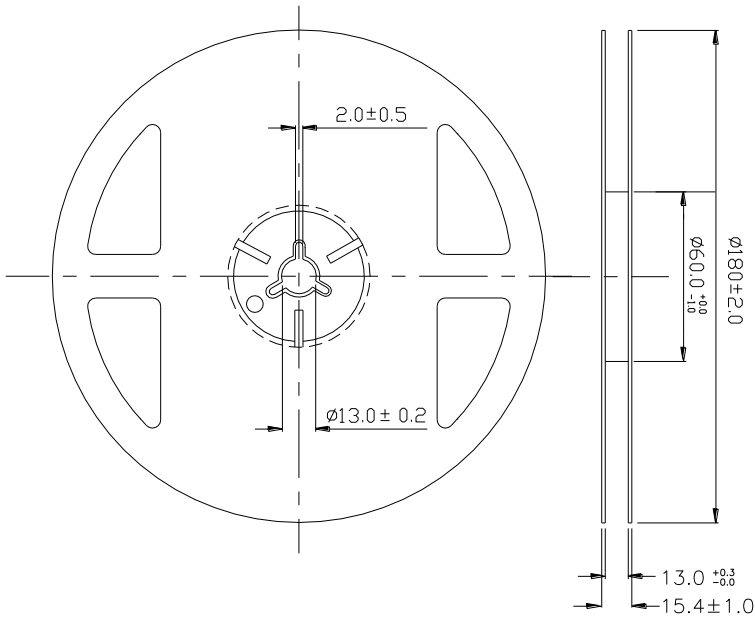
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Typical Electro-Optical Characteristics Curves



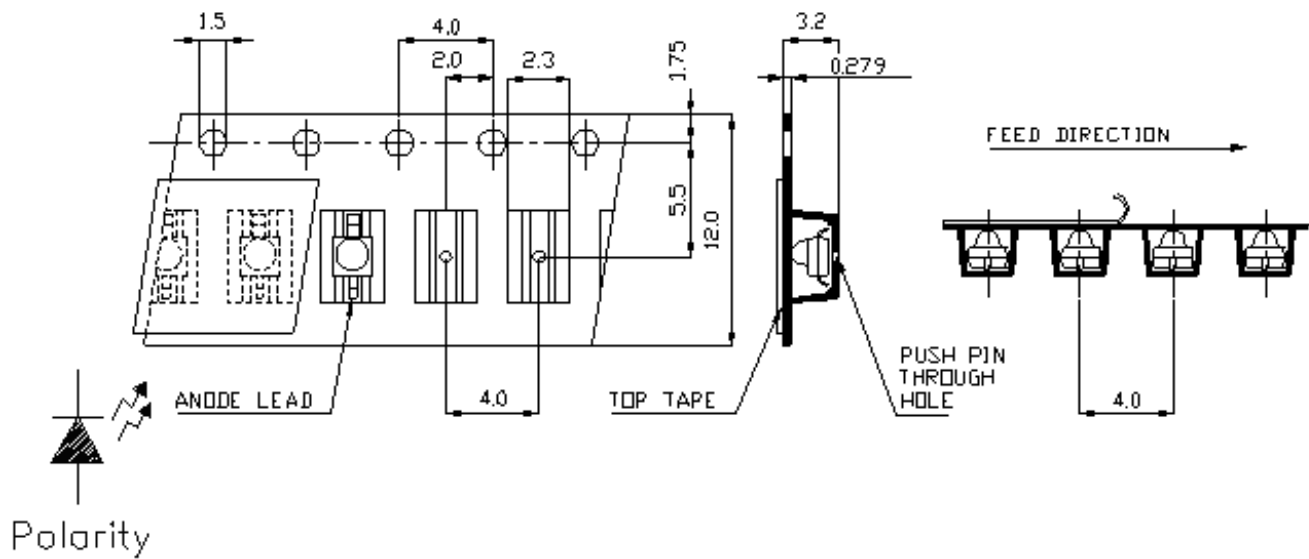
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Reel & Carrier Tape Dimensions



Note: Tolerances Unless Dimension is $\pm 0.1\text{mm}$, Unit = mm

Loaded quantity 1000 PCS per reel



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Precautions For Use

1. Over-current-proof

Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package: The LEDs should be kept at 30°C or less and 90%RH or less.

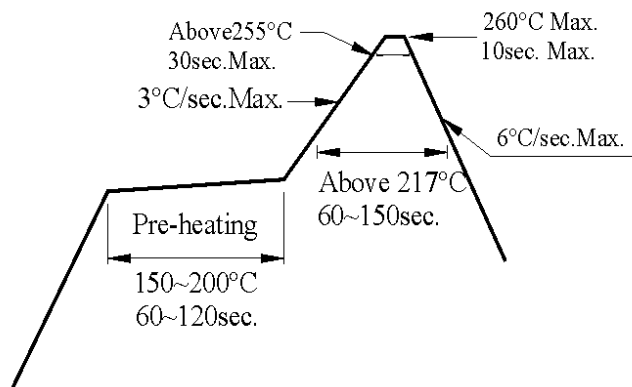
2.3 After opening the package: The LED's floor life is 1 year under 30°C or less and 60% RH or less.

If unused LEDs remain, it should be stored in moisture proof packages.

2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

3. Soldering Condition

3.1 Pb-free solder temperature profile



3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.

3.4 After soldering, do not warp the circuit board.

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4.Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5.Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

