

Opto Plus LED Corp

OPS-L2520YGC-TRX

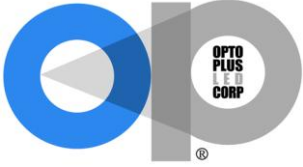
SMD LAMP

● **EDIT HISTORY**

Version A : Nov. 27, 2015

Preliminary Spec

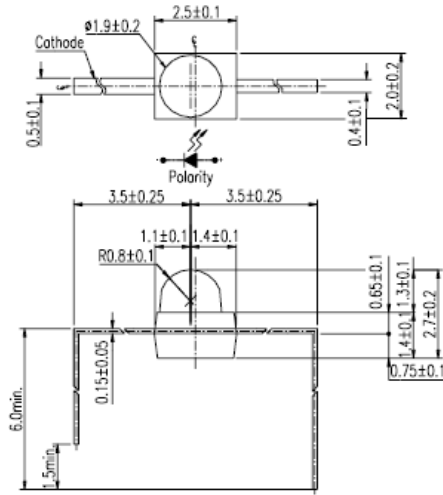
Manufacture	Examination	Approving



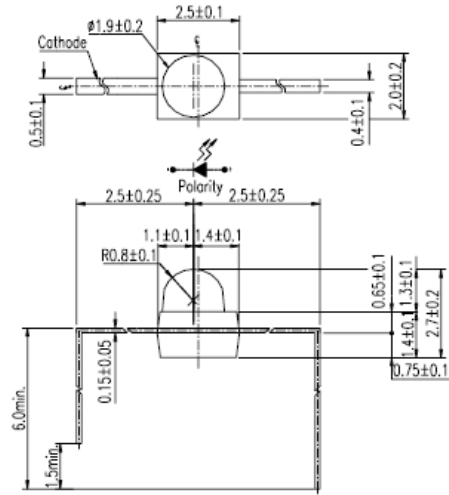
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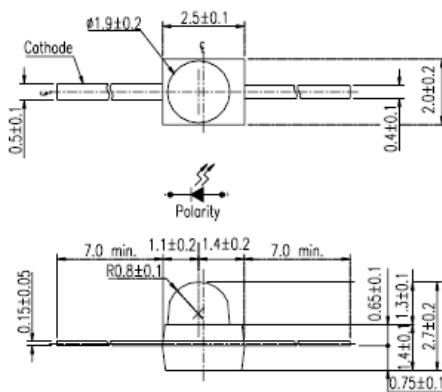
● PACKAGE DIMENSIONS



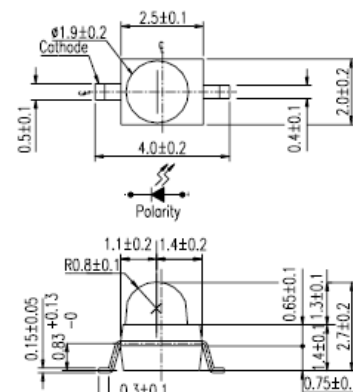
91-21/F1



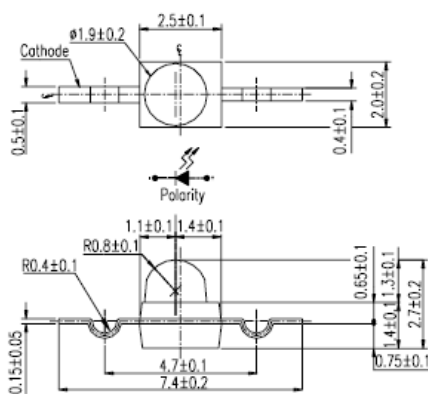
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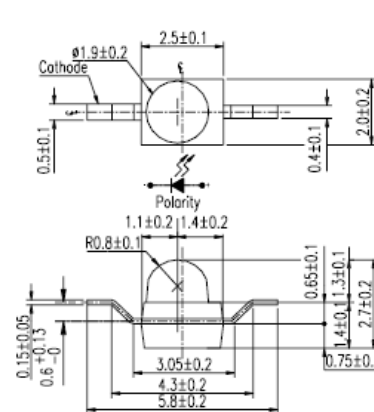
91-21



91-21F7/TR7

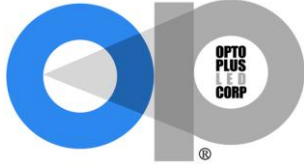


91-21F9/TR9



91-21F10/TR10

LENS COLOR	DICE MATERIAL	LIGHT COLOR
Water Clear	InGaN	Super Yellow Green



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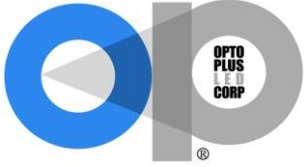
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Absolute Maximum Ratings (Ta=25°C)

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

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Chip Rank	MIN.	TYP.	MAX.	Unit	Condition
Luminous Intensity	I _v	E2	----	20	----	mcd	I _F =2mA
			264	330	----		I _F =20mA
		E3	----	28	----		I _F =2mA
			396	462	----		I _F =20mA
		E4	----	36	----		I _F =2mA
			528	594	----		I _F =20mA
Viewing Angle	2θ 1/2	----	----	25	----	deg	I _F =20mA
Peak Wavelength	λ _p	----	----	575	----	nm	
Dominant Wavelength	λ _d	----	----	573	----	nm	
Spectrum Radiation Bandwidth	△λ	----	----	20	----	nm	
Forward Voltage	V _F	----	----	2.0	2.4	V	
Reverse Current	I _R	----	----	----	10	μA	V _R =5V

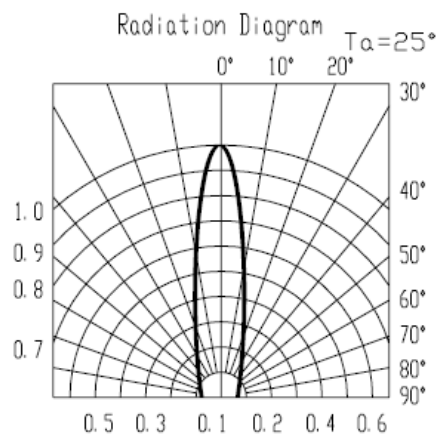
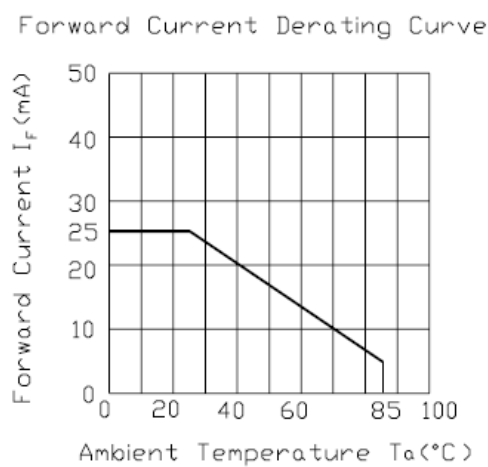
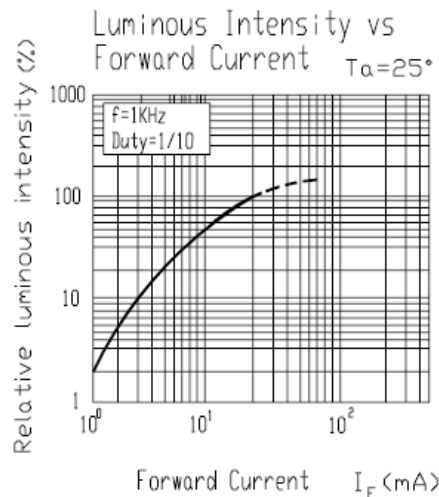
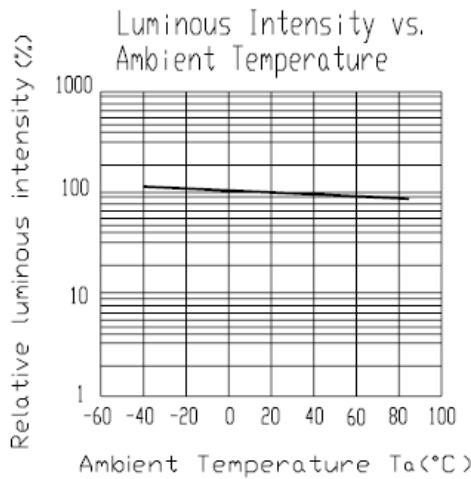
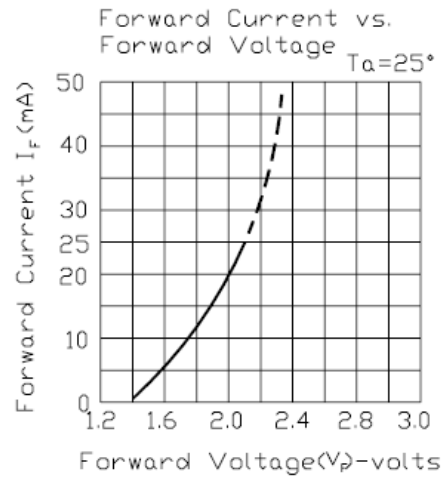
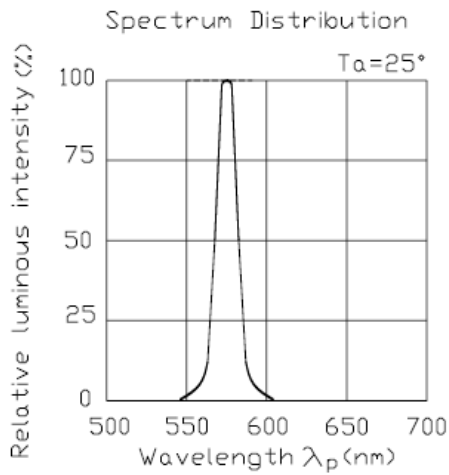


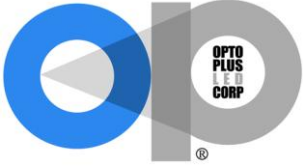
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Typical Electro-Optical Characteristics Curves

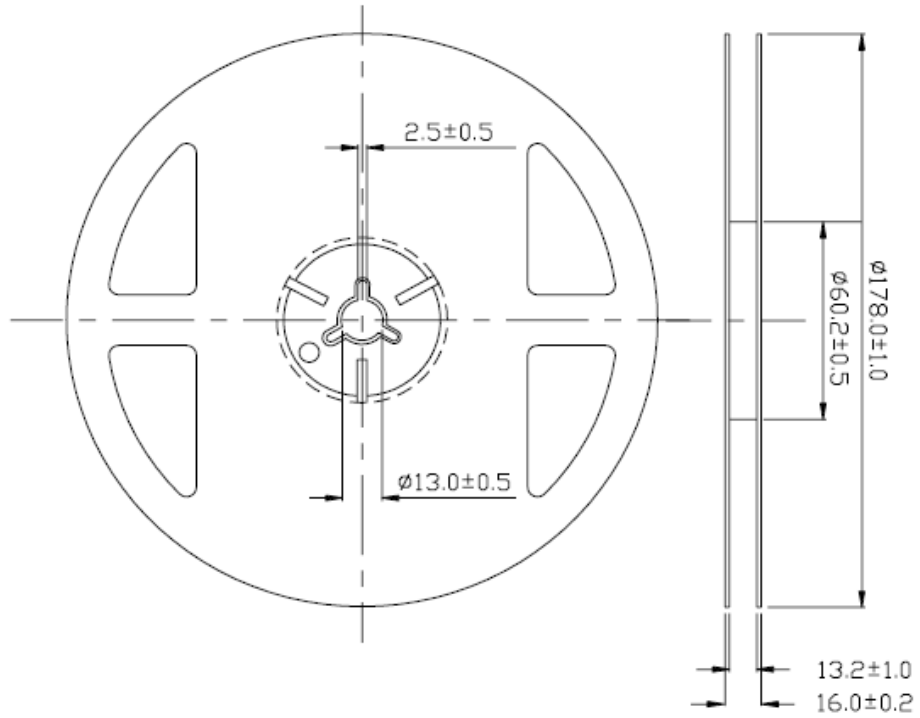


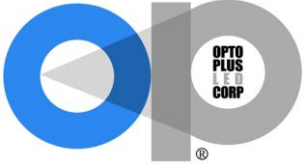


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Reel & Carrier Tape Dimensions

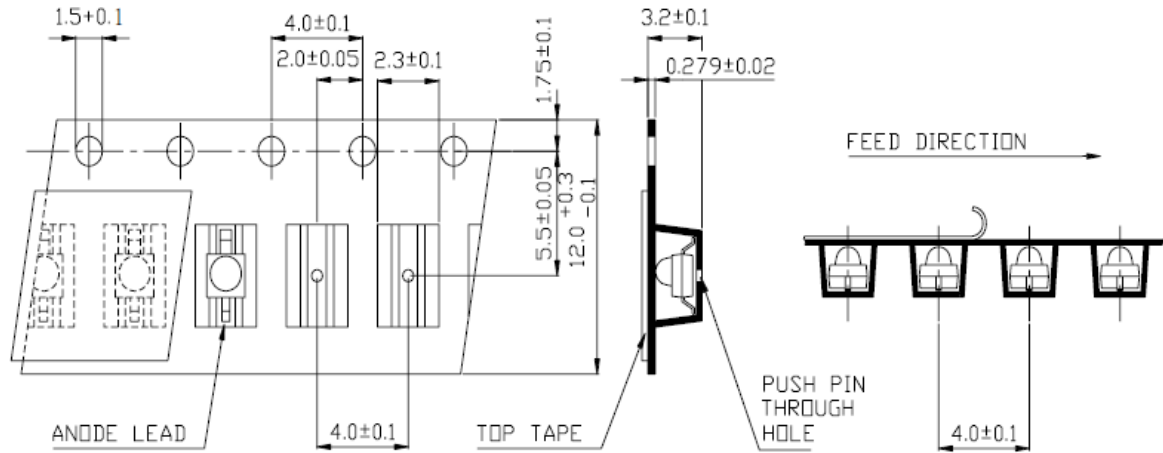




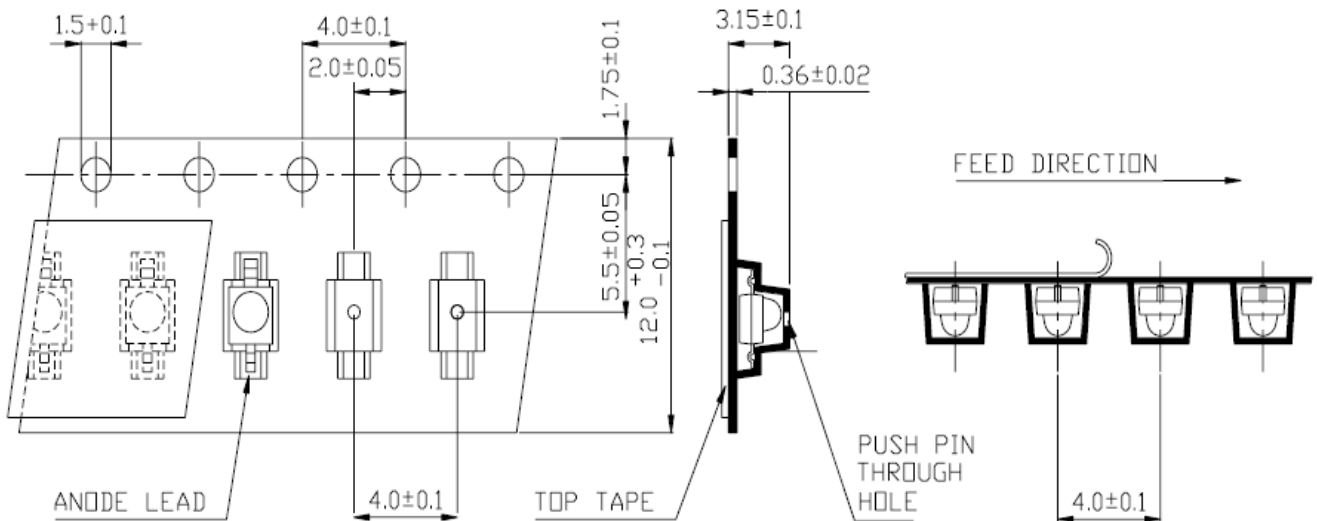
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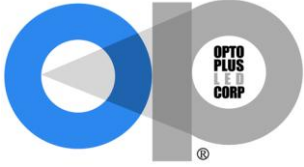
Loaded quantity per reel 1000 PCS/reel



TR7



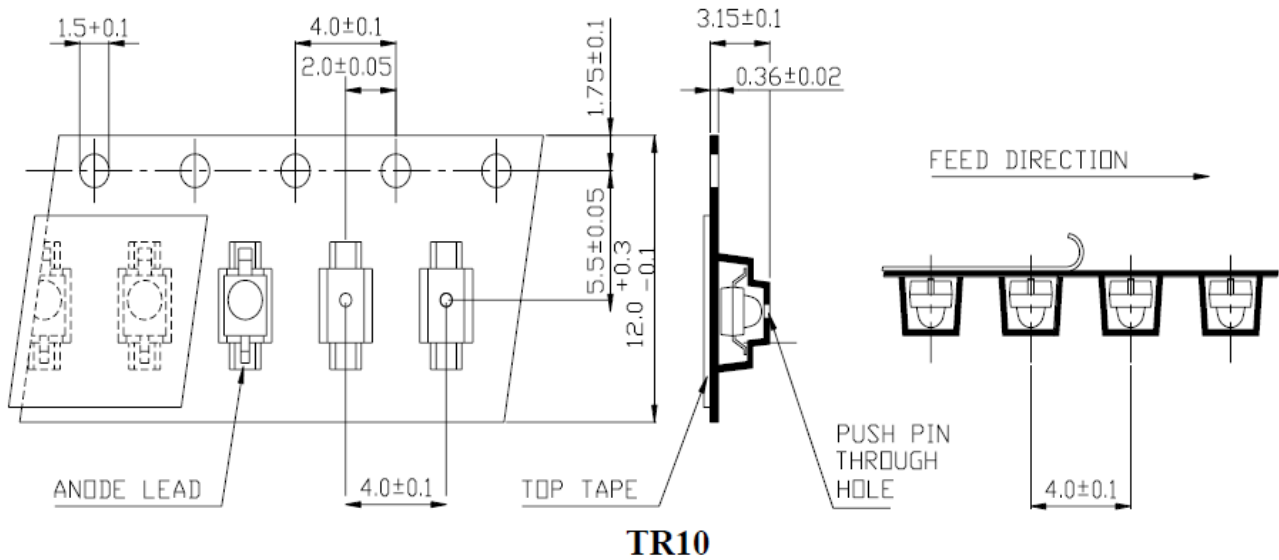
TR9



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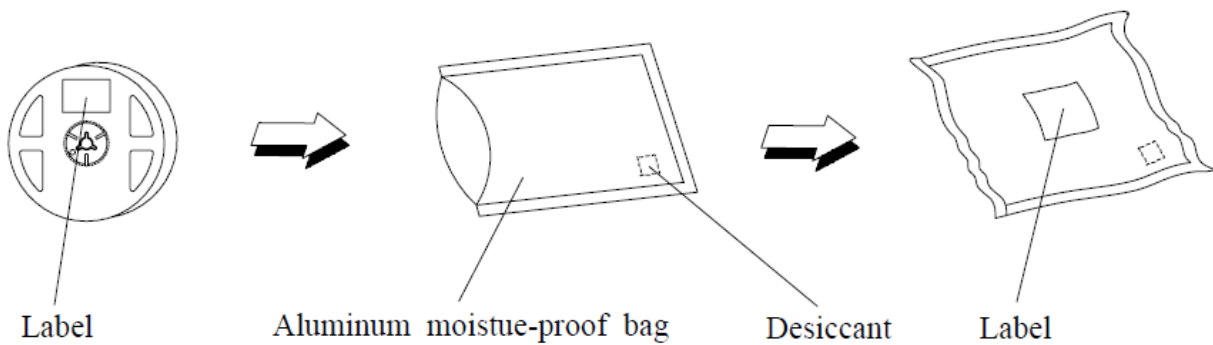
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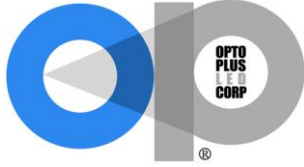
Loaded quantity per reel 1000 PCS/reel



Unit :mm

Moisture Resistant Packaging





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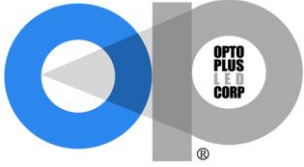
Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.

Confidence level : 90 %

LTPD : 10 %

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	Reflow Soldering	Temp. : $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Min. 5 sec.	6 Min.	22 Pcs.	0/1
2	Temperature Cycle	H : $+100^{\circ}\text{C}$ 15 min. § 5 min. L : -40°C 15 min.	300 Cycles	22 Pcs.	0/1
3	Thermal Shock	H : $+100^{\circ}\text{C}$ 5 min. § 10 sec. L : -10°C 5 min.	300 Cycles	22 Pcs.	0/1
4	High Temperature Storage	Temp. : 100°C	1000 Hrs.	22 Pcs.	0/1
5	Low Temperature Storage	Temp. : -40°C	1000 Hrs.	22 Pcs.	0/1
6	DC Operating Life	$I_F = 20 \text{ mA}$	1000 Hrs.	22 Pcs.	0/1
7	High Temperature / High Humidity	$85^{\circ}\text{C} / 85\% \text{RH}$	1000 Hrs.	22 Pcs.	0/1



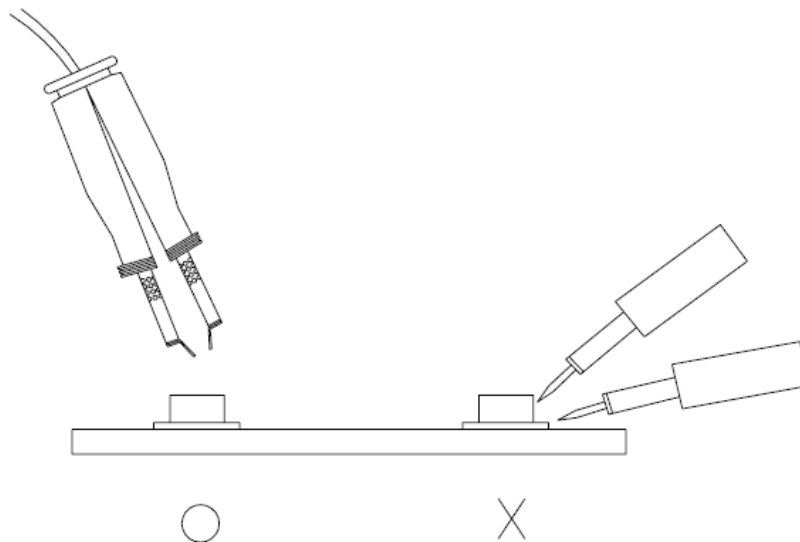
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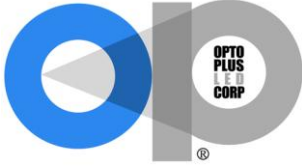
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5.Repairing

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.





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Precautions For Use

1. Over-current-proof

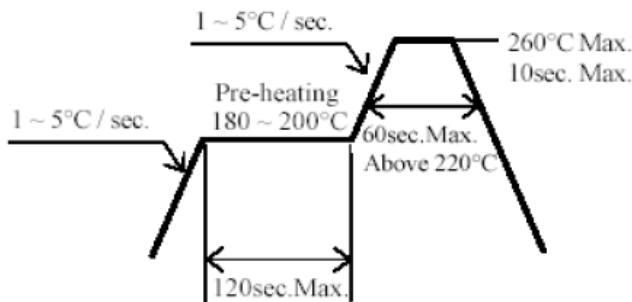
Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change (Burn out will happen).

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 The LEDs should be used within a year.
- 2.4 After opening the package, the LEDs should be kept at 30°C or less and 70%RH or less.
- 2.5 The LEDs should be used within 168 hours (7 days) after opening the package.
- 2.6 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.
Baking treatment : 60±5°C for 24 hours.

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.

4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 280°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.