EVERLIGHT ELECTRONICS CO., LTD.

PART NO. : 67-21SUGC/C525/TR8 Device Number : DSE-671-148 REV. 1.1

TOP LEDs

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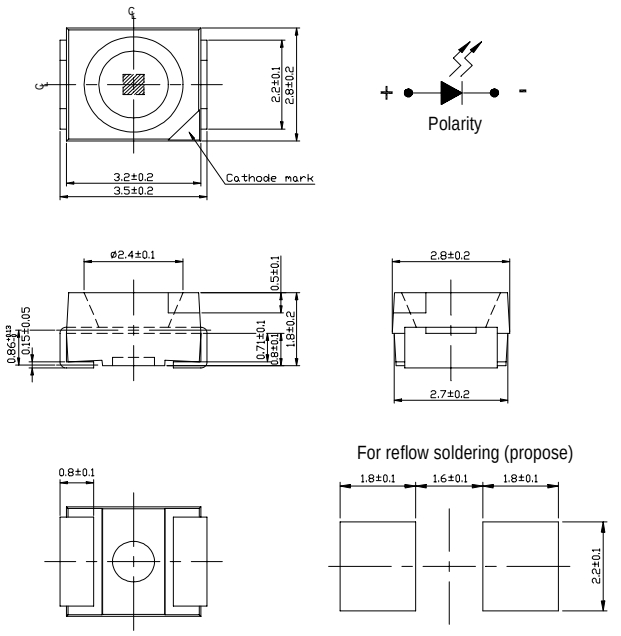
Features :

- P-LCC-2 package.
- White package.
- Optical indicator.
- Colorless clear window.
- Ideal for backlight and light pipe application.
- Inter reflector.
- Low (2mA) current operation.
- Wide viewing angle.
- Computable with automatic placement equipment.
- Suitable for vapor-phase reflow, Infrared reflow and wave solder processes.
- Available on tape and reel (8mm Tape).

Descriptions :

The 67-21 series is available in soft orange, green, blue and yellow. Due to the package design, the LED has wide viewing angle and optimized light coupling by inter reflector.This feature makes the SMT TOP LED ideal for light pipe application. The low current requirement makes this device ideal for portable equipment or any other application where power is at a premium.

Package Dimensions :



Applications :

- Automotive: backlight in dashboards and switches
- Telecommunication: indicator and backlight in telephone and fax.
- Indicator and backlight for audio and video equipment.
- Indicator and backlight in office and family equipment.
- Flat backlight for LCD's, switches and symbols.
- Light pipe application.
- General use.

Notes :

Tolerances Unless Dimension ±0.1mm
Angle±0.5°
Unit = mm

Part NO.	Chip		Lens Color
	Material	Emitted Color	
67-21SUGC/C525/TR8	InGaN/SiC	Super Green	Water Clear

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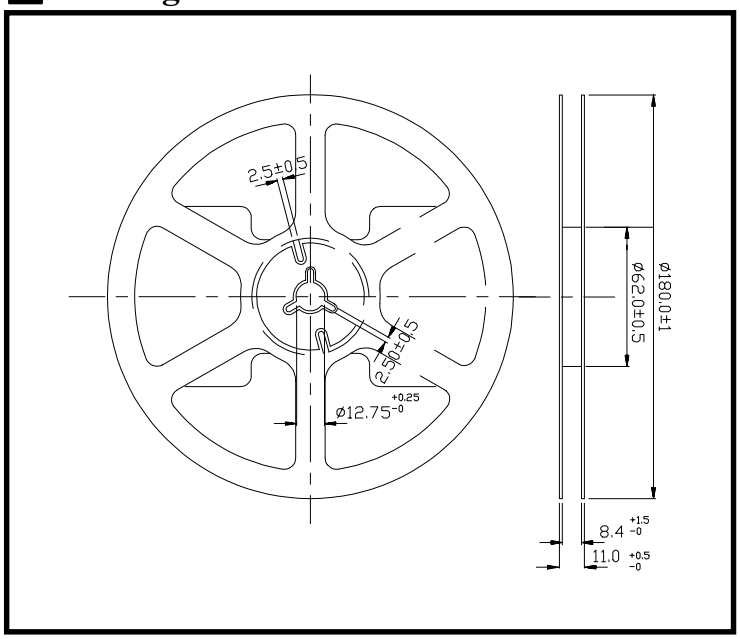
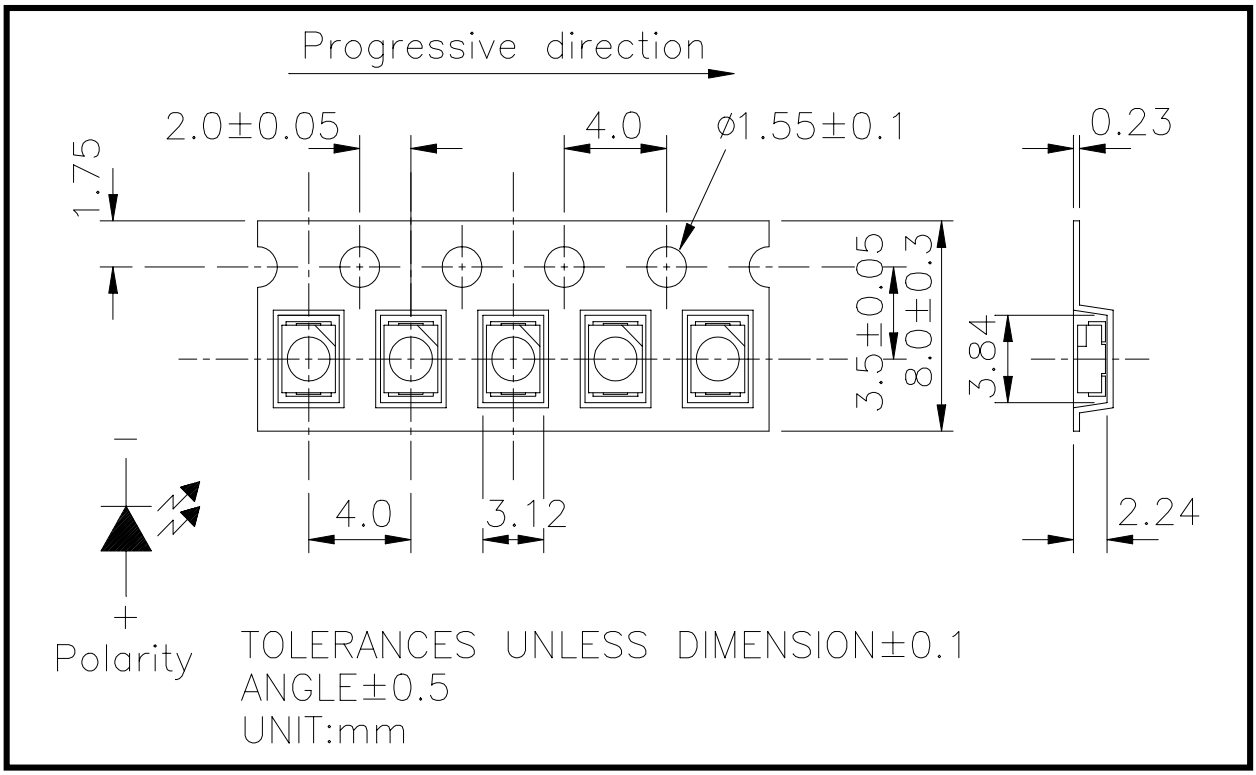
■ Package Dimensions :



■ Loaded quantity per reel 2000 PCS/reel :



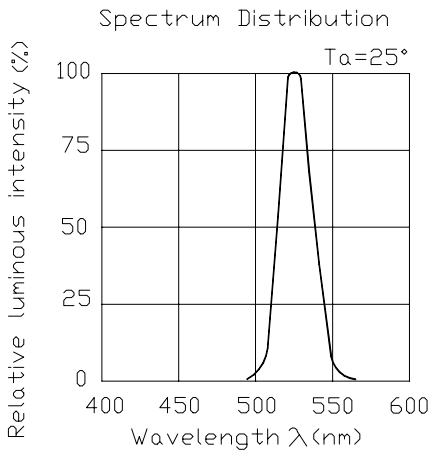
■ Absolute Maximum Ratings at Ta = 25℃:

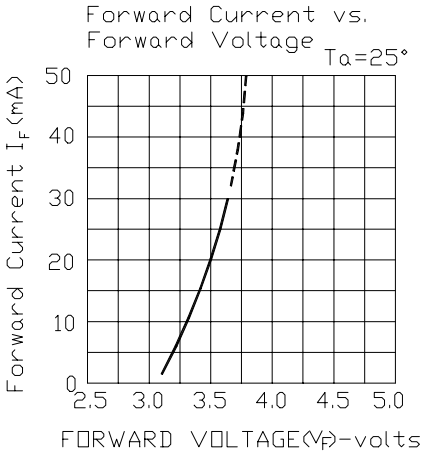
Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	30	mA
Operating Temperature	Topr	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +100	℃
Electrostatic Discharge	ESD	1000	V
Soldering Temperature	Tsol	260 (for 5 second)	℃
Power Dissipation	Pd	120	mW
Peak Forward Current(Duty 1/10 @ 1KHz)	I_F(Peak)	100	mA

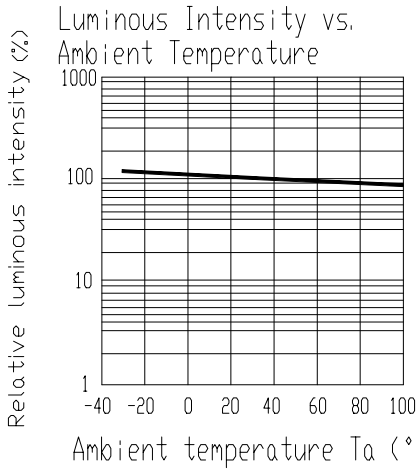
■ Electronic Optical Characteristics :

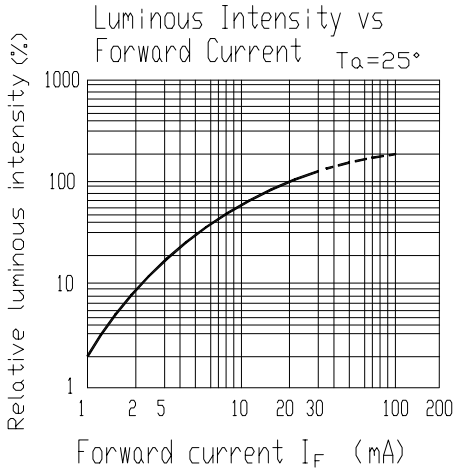
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous intensity	Iv	-----	10	-----	mcd	I_F=2mA
		80	133	-----	mcd	I_F=20mA
Viewing Angle	2θ 1/2	-----	120	-----	deg	I_F=20mA
Peak Wavelength	λ p	-----	518	-----	nm	I_F=20mA
Dominant Wavelength	λ d	-----	525	-----	nm	I_F=20mA
Spectrum Radiation Bandwidth	△ λ	-----	30	-----	nm	I_F=20mA
Forward Voltage	V_F	-----	3.5	4.3	V	I_F=20mA
Reverse Current	I_R	-----	-----	10	μA	V_R=5V

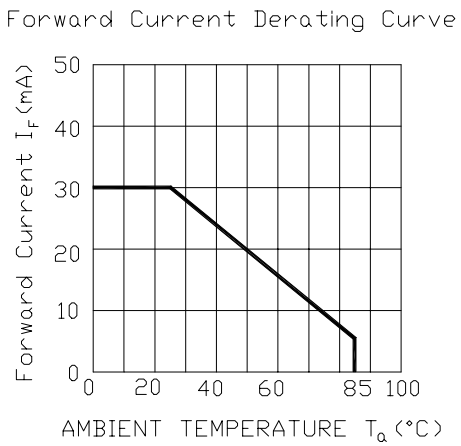
■ Typical Electro-Optical Characteristic Curves :

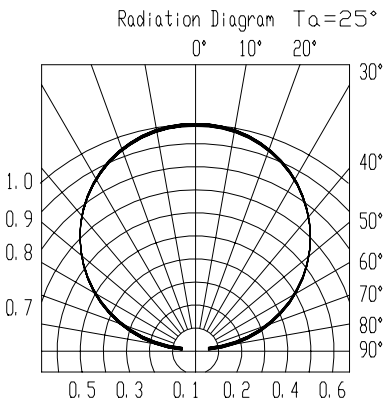












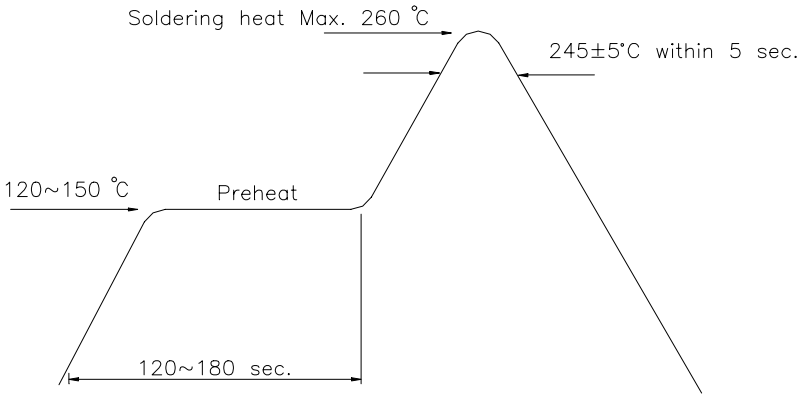
■ Reliability Test Items And Conditions :

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP : 260℃ ± 5 ℃	5 SEC	76 PCS	0/1
2	Temperature Cycle	H : +85℃ 30min ∫ 5 min L : -55℃ 30min	50 CYCLES	76 PCS	0/1
3	Thermal Shock	H : +100℃ 5min ∫ 10 sec L : -10℃ 5min	50 CYCLES	76 PCS	0/1
4	High Temperature Storage	TEMP : 100℃	1000 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -55℃	1000 HRS	76 PCS	0/1
6	DC Operating Life	I_F = 20 mA	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85℃/85% RH	1000 HRS	76 PCS	0/1

Products are evaluated according to the above standard reliability criteria.

■ Soldering heat reliability (DIP) :

Please refer to the following figure :

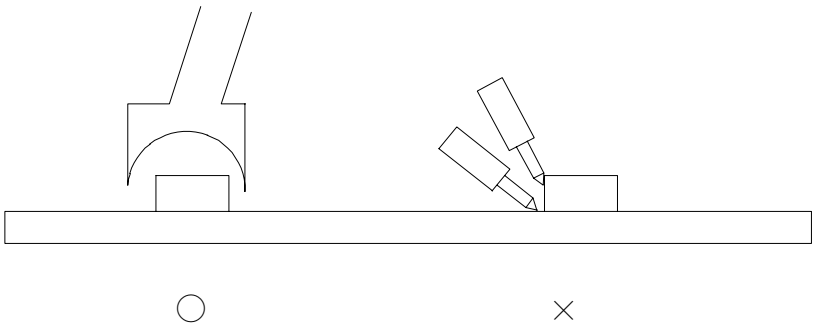


■ Soldering Iron :

Basic spec is ≦5 sec when 245℃.If temperature is higher, time should be shorter (+10℃ → -1sec). Power dissipation of Iron should be smaller than 15 W , and temperature should be controllable. Surface temperature of the device should be under 230 ℃.

■ Rework :

1. Customer must finish rework within 5 sec under 245℃.
2. The head of iron can not touch copper foil.
3. Twin-head type is preferred.



■ Reflow Temp. / Time :