

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).

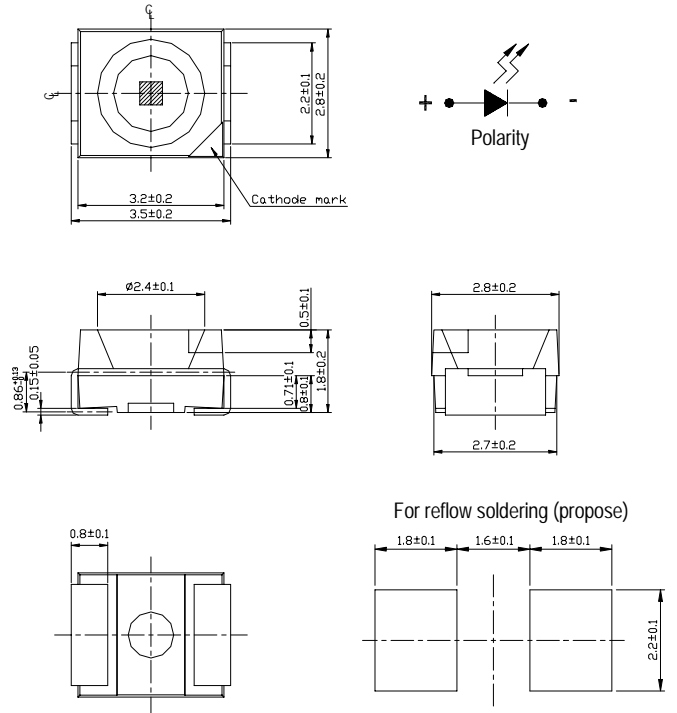
Descriptions :

- 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.

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.

Package Dimensions :

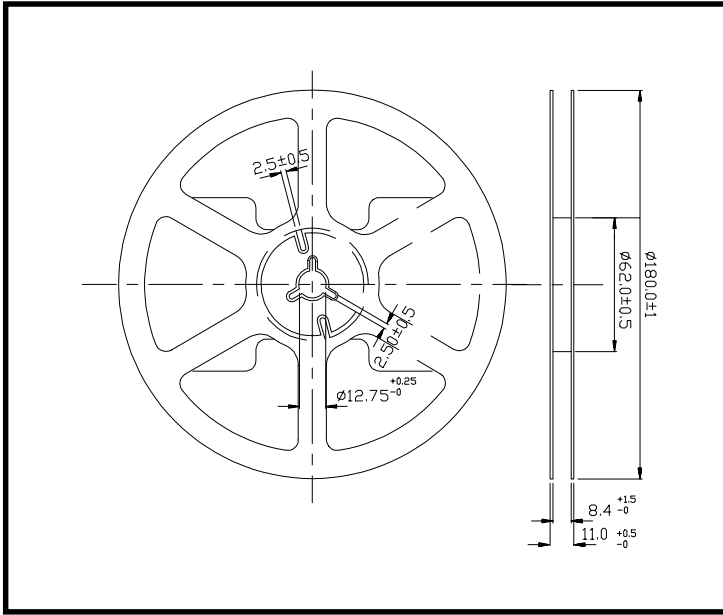


Notes :

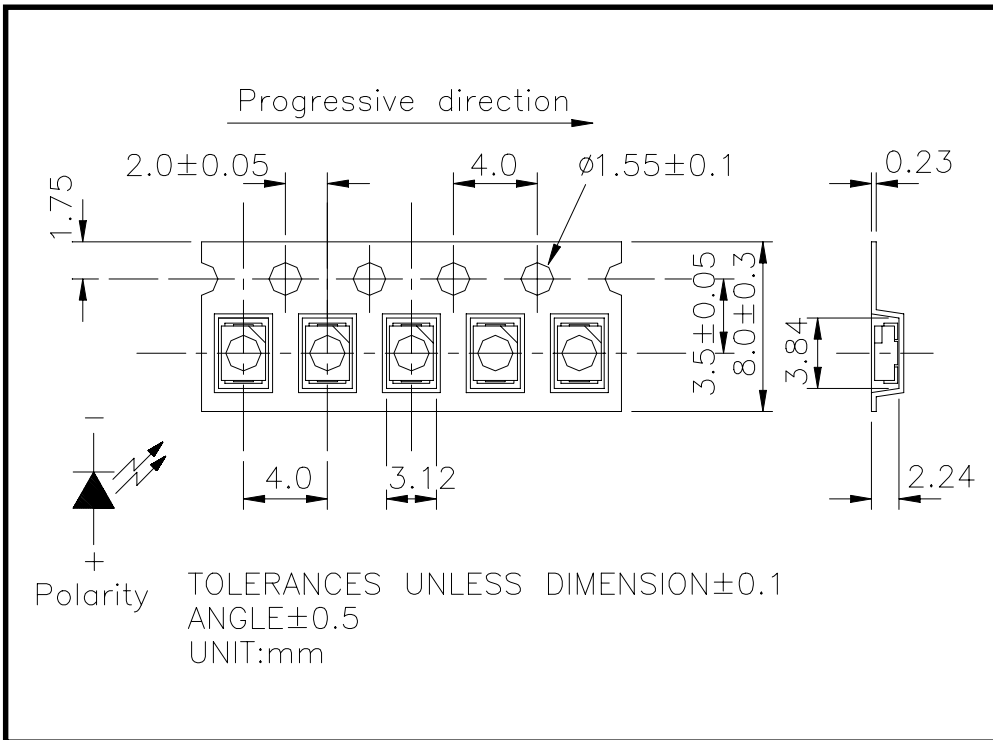
Tolerances Unless Dimension ±0.1mm
 Angle ±0.5°
 Unit = mm

Part NO.	Chip		Lens Color
	Material	Emitted Color	
67-21SURC/S530-XX/TR8	AlGaInP	Hyper Red	Water Clear

■ **Package Dimensions :**



■ **Loaded quantity per reel 2000 PCS/reel :**



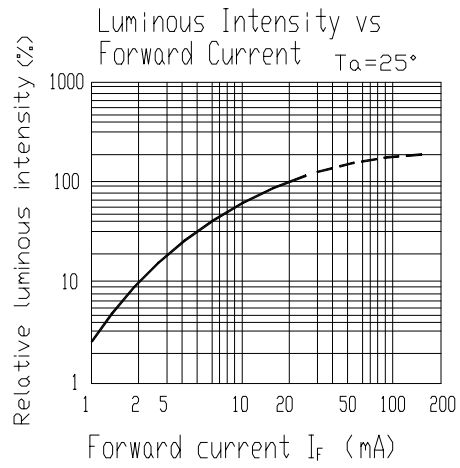
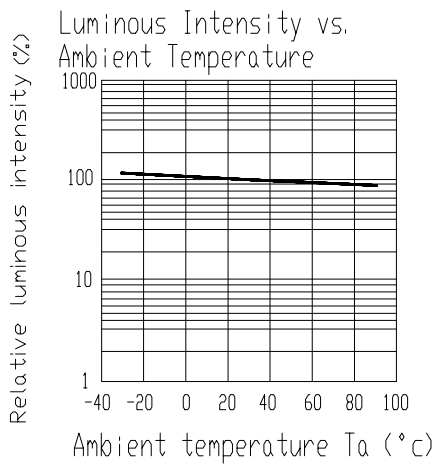
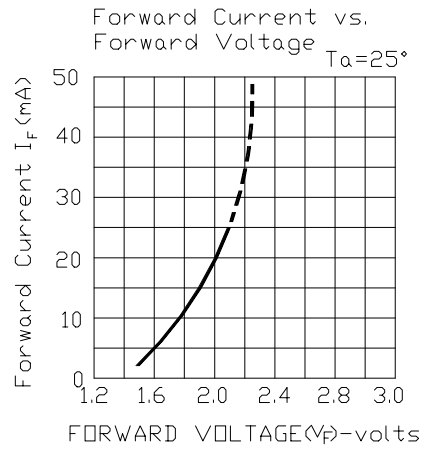
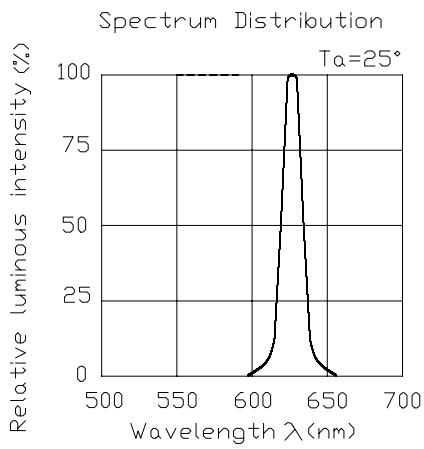
Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	25	mA
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Soldering Temperature	T _{sol}	260 (for 5 second)	°C
Electrostatic Discharge	ESD	2000	V
Power Dissipation	P _d	60	mW
Peak Forward Current(Duty 1/10 @ 1KHz)	I _F (Peak)	160	mA

Parameter	Symbol	*Chip Rank	Min.	Typ.	Max.	Unit	Condition			
Luminous Intensity	I _v	A2	-----	1.5	-----	mcd	I _F =2mA			
			25	45	-----		I _F =20mA			
		A3	-----	2	-----		I _F =2mA			
			40	68	-----		I _F =20mA			
		A4	-----	2.5	-----		I _F =2mA			
			50	82	-----		I _F =20mA			
		A5	-----	3	-----		I _F =2mA			
			63	99	-----		I _F =20mA			
		A6	-----	4.5	-----		I _F =2mA			
			80	135	-----		I _F =20mA			
		Viewing Angle	2θ 1/2	-----	-----		120	-----	deg	I _F =20mA
		Peak Wavelength	λ _p	-----	-----		632	-----	nm	I _F =20mA
Dominant Wavelength	λ _d	-----	-----	624	-----	nm	I _F =20mA			
Spectrum Radiation Bandwidth	Δλ	-----	-----	20	-----	nm	I _F =20mA			
Forward Voltage	V _F	-----	-----	2.0	2.4	V	I _F =20mA			
Reverse Current	I _R	-----	-----	-----	10	μA	V _R =5V			

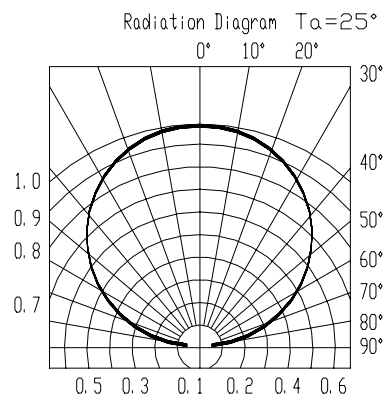
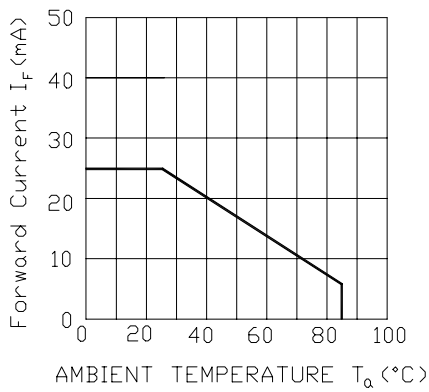
*67-21SURC/S530-XX/TR8

 Chip Rank

Typical Electro-Optical Characteristic Curves :

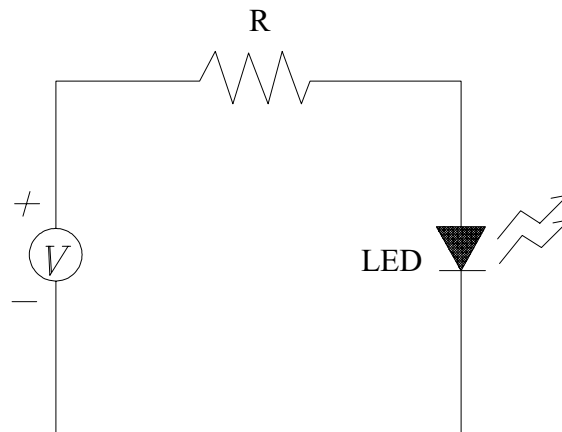


Forward Current Derating Curve



■ Reliability Test Items And Conditions :

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 SEC	76 PCS	0/1
2	Temperature Cycle	H : +85°C 30min ∫ 5 min L : -55°C 30min	50 CYCLES	76 PCS	0/1
3	Thermal Shock	H : +100°C 5min ∫ 10 sec L : -10°C 5min	50 CYCLES	76 PCS	0/1
4	High Temperature Storage	TEMP : 100°C	1000 HR.	76 PCS	0/1
5	Low Temperature Storage	TEMP : -55°C	1000 HR.	76 PCS	0/1
6	DC Operating Life	I _F = 20 mA	1000 HR.	76 PCS	0/1
7	High Temperature / High Humidity	85°C/RH85%	1000 HR.	76 PCS	0/1

■ Test Circuit :**■ 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 time

2.1 The operation of temperature and R.H. are : $5^{\circ}\text{C}\sim 35^{\circ}\text{C}$, R.H.60%.

2.2 Once the package is opened , the products should be used within a week.

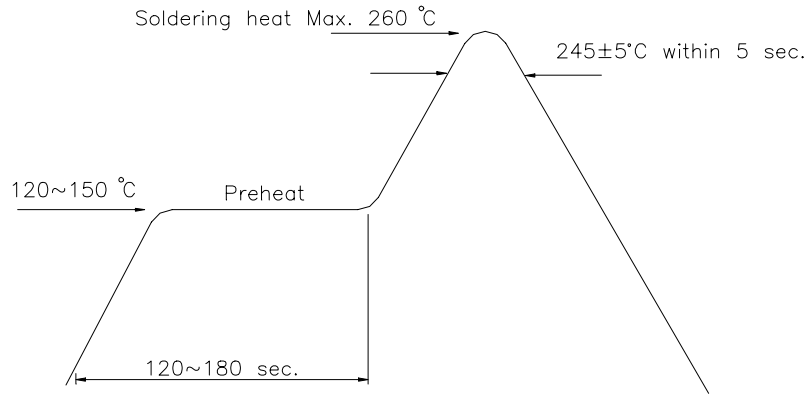
Otherwise , they should be keep in a damp proof box with desiccating agent.
Considering the tape life , we suggest our customers to use our products within a year(from production date).

2.3 If opened more than one week in an atmosphere $5^{\circ}\text{C}\sim 35^{\circ}\text{C}$, R.H.60%, they should be treated at $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 15hrs.

2.4 When you discover that the desiccant in the package has a pink color (normal=blue) , you should treat them in the same conditions as 2.3.

■ Soldering heat reliability (DIP) :

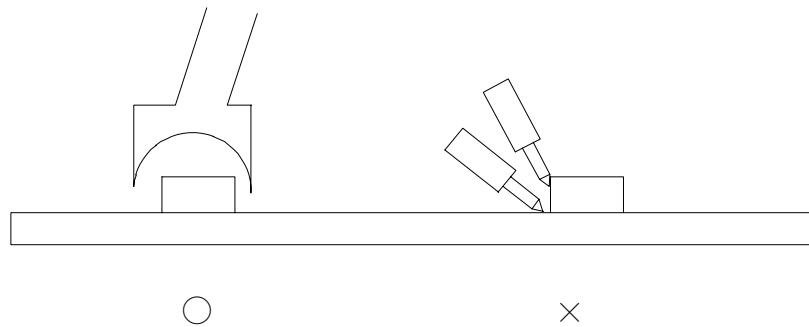
Please refer to the following figure :

**■ Soldering Iron :**

Basic spec is ≤ 5 sec when 245°C. If temperature is higher, time should be shorter (+10°C → -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 °C .

■ Rework :

1. Customer must finish rework within 5 sec under 245°C .
2. Copper foil can not be touched by the head of iron.
3. Twin-head type is preferred.



■ Reflow Temp. / Time :

