EVERLIGHT ELECTRONICS CO.,LTD.

MODEL NO: 19-21UYOC/S530-A3/TR8 Device Number： DSE-191-086 REV. 1.0

0.8mm Height Flat Top LEDs

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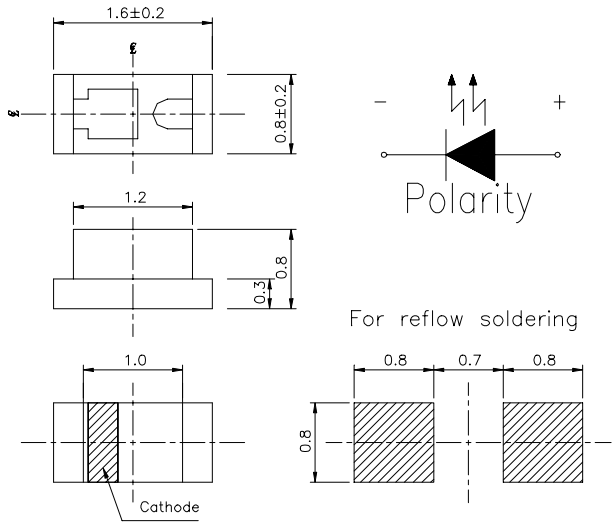
Features：

- Package in 8mm tape on 7″ diameter reel.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- Mono-color type.

Descriptions：

- The 19-21 SMD is much smaller than lead frame type components, demands smaller board size , enhances packing density, reduces storage space and finally smaller equipment is required.
- Besides, light weight makes them ideal for miniature applications, etc.

Package Dimensions：



Applications：

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- General use.

Notes：

Dimensional tolerances is ± 0.1mm unless otherwise specified.

Unit = mm

PART NO	Chip		Lens Color
	Material	Emitted Color	
19-21UYOC/S530-A3/TR8	AlGaInP	Super Yellow Orange	Water Clear

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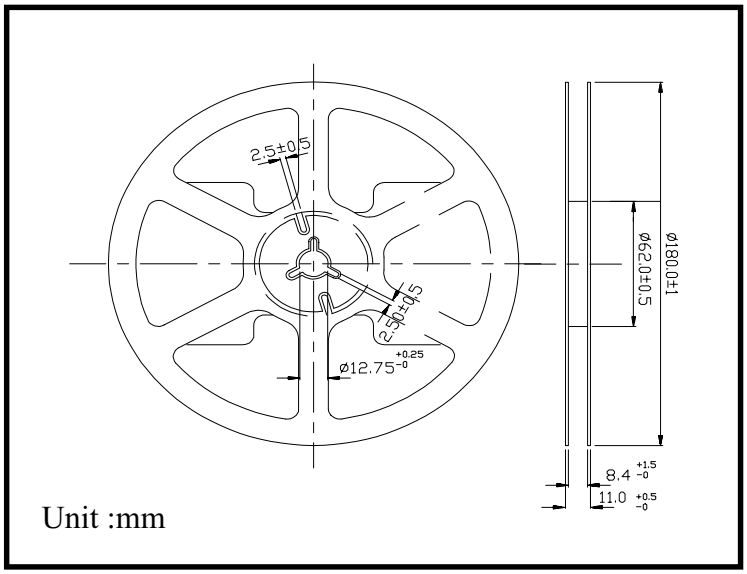
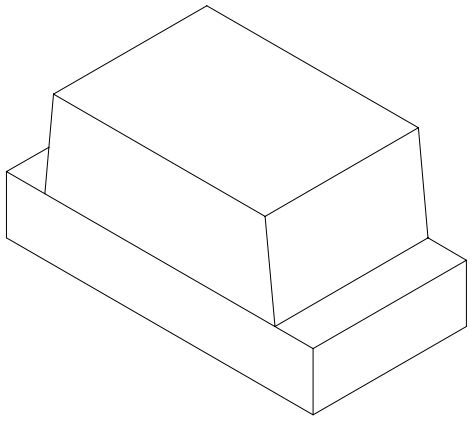
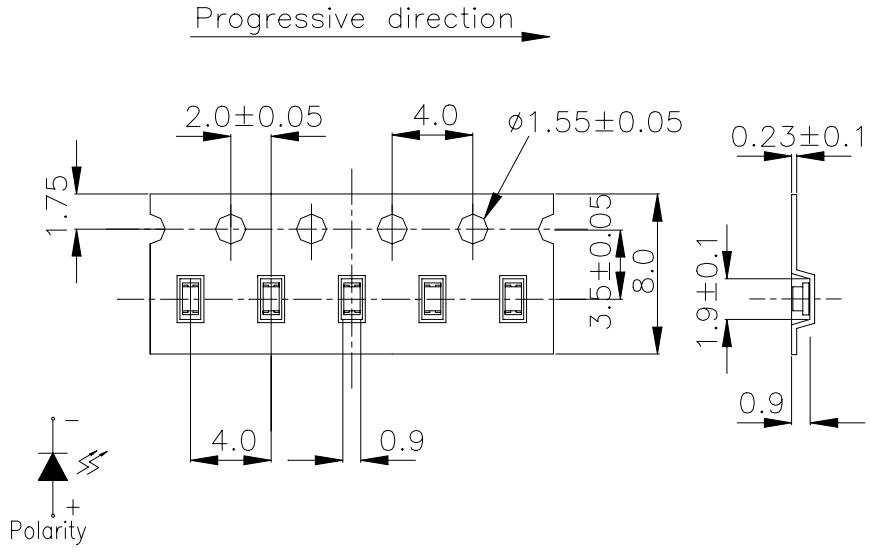
■ Package Dimensions：



Unit :mm



■ Loaded quantity per reel 3000 PCS/reel：



Unit : mm

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■ Absolute Maximum Ratings at Ta = 25℃

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_F	5	V
Forward Current	I_F	25	mA
Operating Temperature	Topr	-40 ~ +85	℃
Storage Temperature	Tstg	-40 ~ +90	℃
Soldering Temperature	Tsol	260 (for 5 second)	℃
Electrostatic Discharge	ESD	2000	V
Power Dissipation	Pd	60	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	I_F(Peak)	160	mA

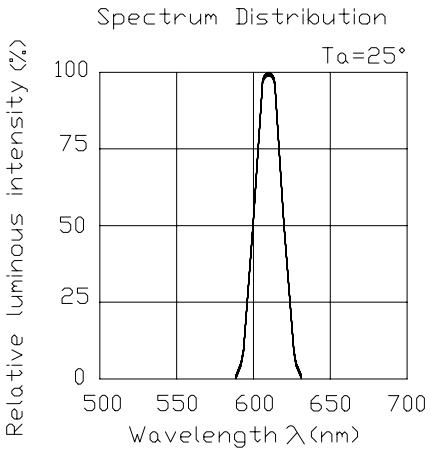
■ Electronic Optical Characteristics :

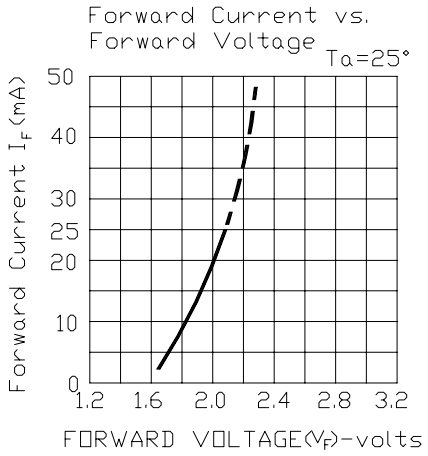
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_V	-----	4	-----	mcd	I_F=2mA
		37	58	-----	mcd	I_F=20mA
Viewing Angle	2 θ 1/2	-----	100	-----	deg	I_F=20mA
Peak Wavelength	λ p	-----	611	-----	nm	I_F=20mA
Dominant Wavelength	λ d	-----	605	-----	nm	I_F=20mA
Spectrum Radiation Bandwidth	$\triangle \lambda$	-----	17	-----	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

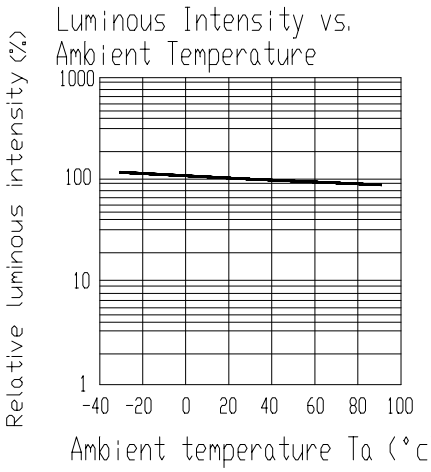
■ Reliability Test Items And Conditions

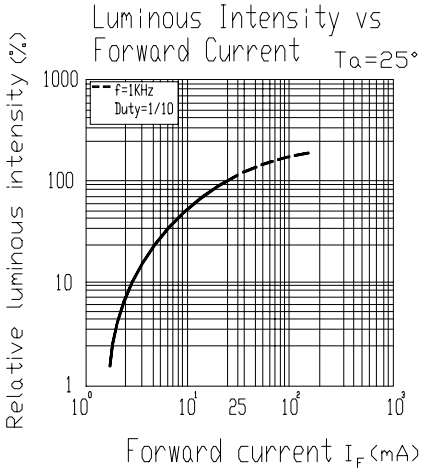
NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP : 260℃ ± 5 ℃	5 SEC	76 PCS	0/1
2	Temperature Cycle	H : +85℃ 30min ∫ 5 min L : -55℃ 30min	50 CYCLE	76 PCS	0/1
3	Thermal Shock	H : +100℃ 5min ∫ 10 sec L : -10℃ 5min	50 CYCLE	76 PCS	0/1
4	High Temperature Storage	TEMP : 100℃	1000 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

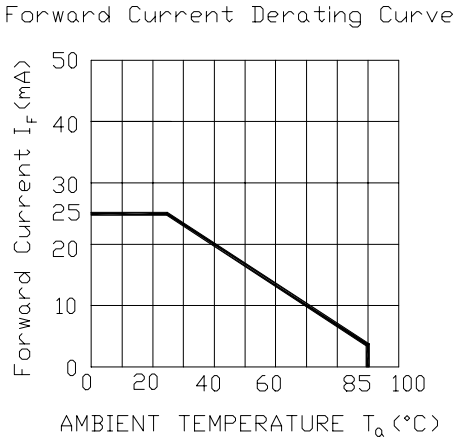
Typical Electro-Optical Characteristic Curves

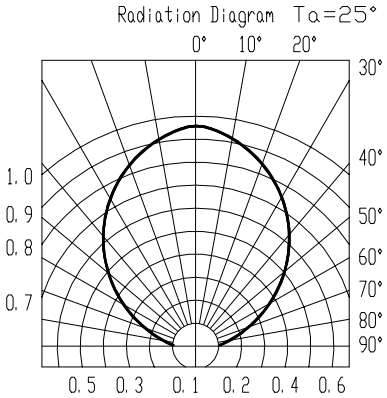




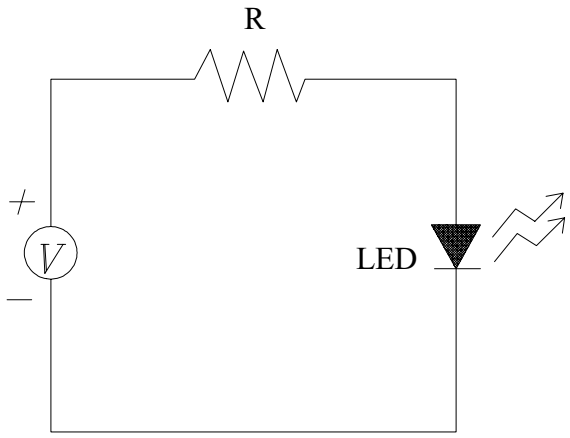








Test Circuit



Precautions For Use

1. Over-current-proof

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

2. Storage time

2.1 The operation temperature and R.H. are : 5℃~35℃, R.H.60%.

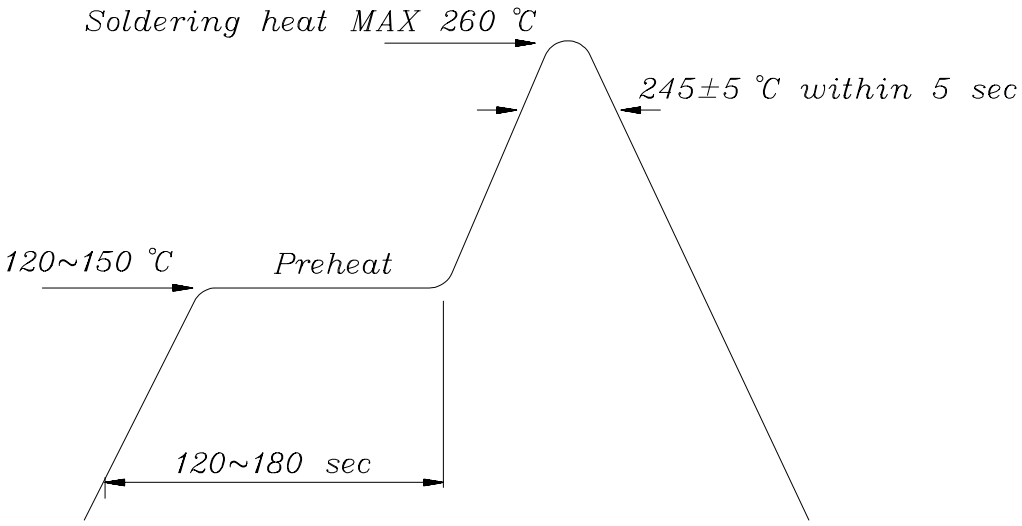
2.2 Once the package is opened , the products should be used within a week. Otherwise , they should be kept in a dampproof box with desiccants. Considering the tape life , we suggest our customers to use our products within a year(from production date).

2.3 If opened more than one week in an atmosphere 5℃~35℃, R.H.60%, they should be treated at 60℃± 5℃ for 15hrs.

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

■ Soldering heat reliability (DIP)

Please refer to the following figure :

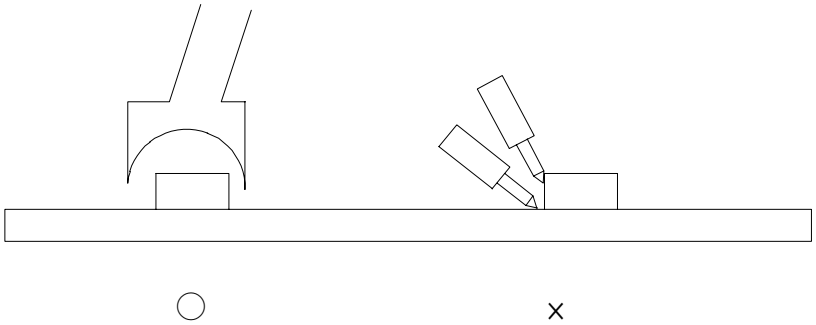


■ Soldering Iron

Basic spec is ≦5 sec when 260℃.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 260℃.
2. Copper foil can not be touched by the head of iron.
3. Twin-head type is preferred.



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■ **Reflow Temp / Time：**