



PART NO.: 11-21UYOC/S530-XX/TR8  
**1206 Package Chip LED with Inner Lens**

Device Number : DSE-111-068 REV. 1.0

ECN : \_\_\_\_\_ Page: 1/9

**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.

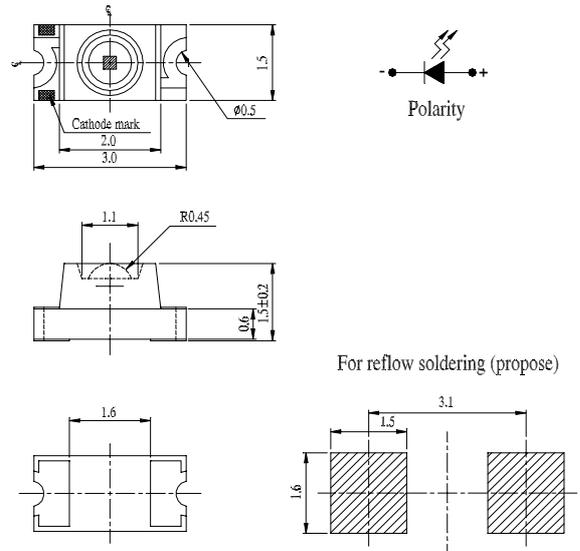
**Descriptions :**

- The 11-21 SMD Taping is much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, light weight makes them ideal for miniature applications, etc.

**Applications :**

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

**Package Dimensions :**



**Notes :**

Tolerances Unless Dimension  $\pm 0.1\text{mm}$   
 Angle  $\pm 0.5^\circ$   
 Unit = mm

PART NO.	Chip		Lens Color
	Material	Emitted Color	
11-21UYOC/S530-XX/TR8	AlGaInP	Super Yellow Orange	Water Clear

Office: NO. 25, Lane 76, Sec.3, Chung Yang Rd., Tucheng 236, Taipei, Taiwan, R.O.C.

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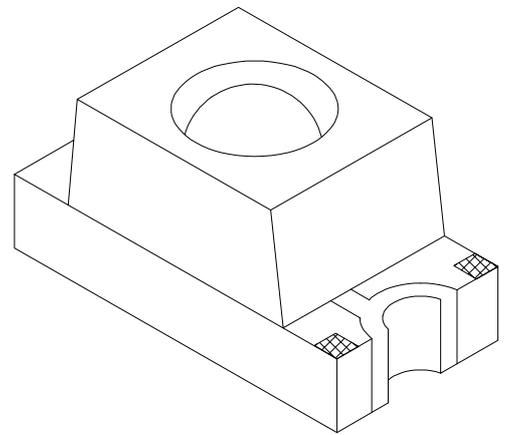
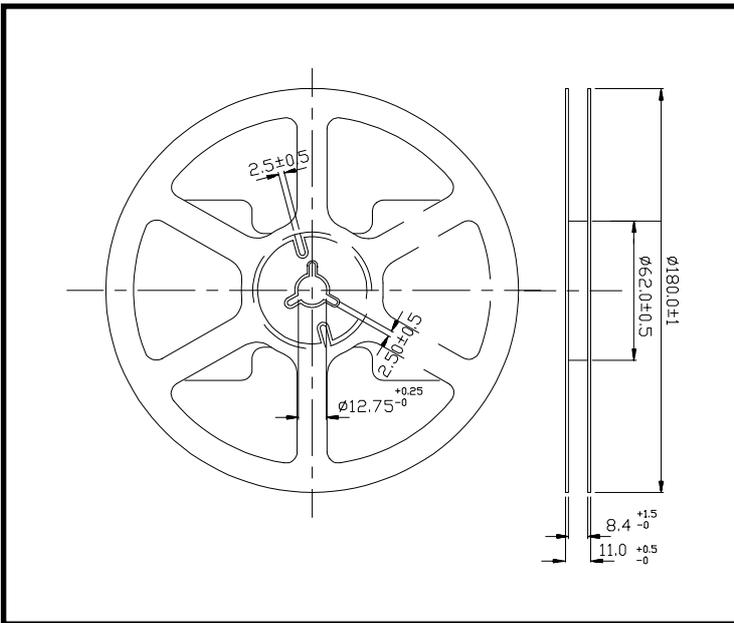


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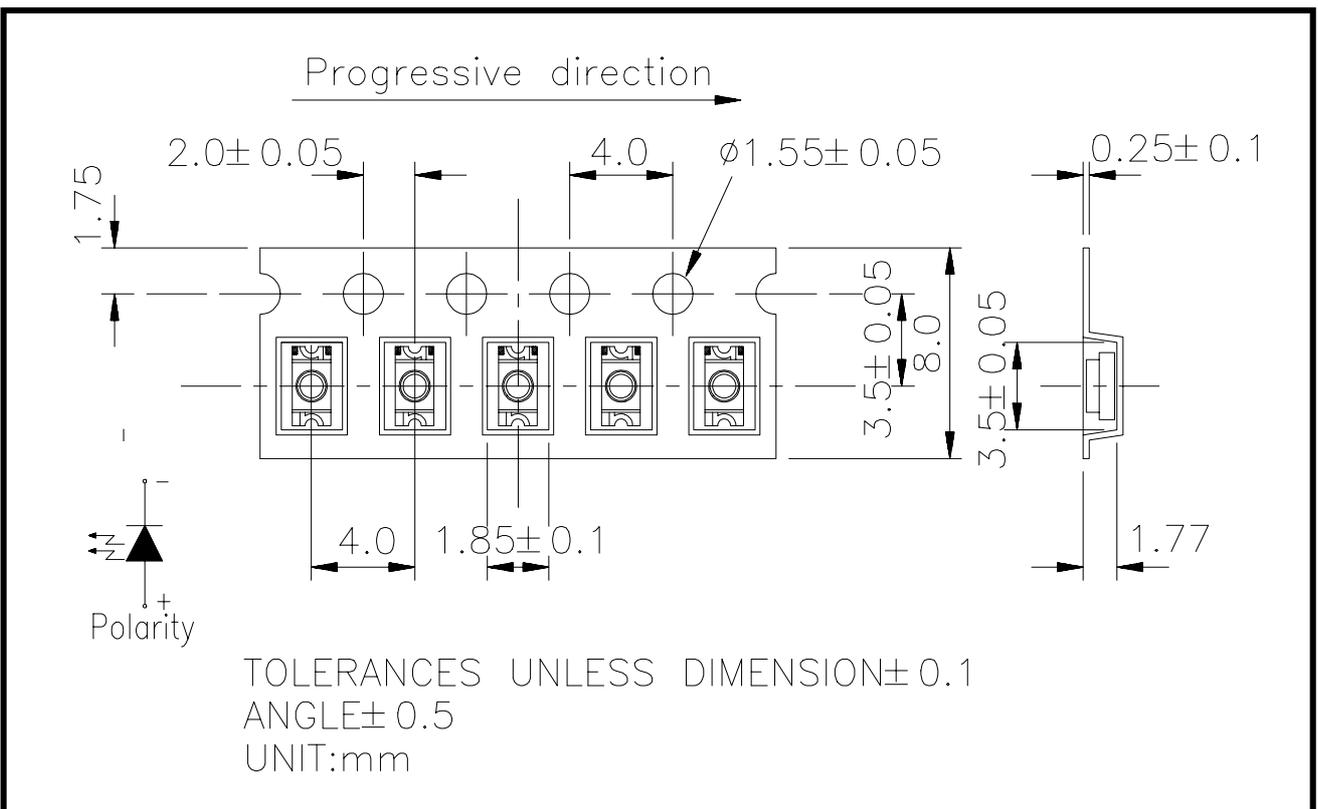
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■ Package Dimensions :



■ Loaded quantity per reel 2000 PCS/reel :





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■ Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Rating	Unit
Reverse Voltage	V <sub>R</sub>	5	V
Forward Current	I <sub>F</sub>	25	mA
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +90	°C
Soldering Temperature	T <sub>sol</sub>	260 (for 5 second)	°C
Electrostatic Discharge	ESD	2000	V
Power Dissipation	P <sub>d</sub>	60	mW
Peak Forward Current(Duty 1/10 @ 1KHz)	I <sub>F(Peak)</sub>	160	mA



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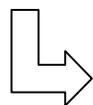
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■ **Electronic Optical Characteristics :**

Parameter	Symbol	*Chip Rank	Min.	Typ.	Max.	Unit	Condition			
Luminous Intensity	Iv	A2	-----	4	-----	mcd	IF=2mA			
			29	73	-----		IF=20mA			
		A3	-----	6	-----		IF=2mA			
			68	106	-----		IF=20mA			
		A4	-----	9	-----		IF=2mA			
			97	145	-----		IF=20mA			
		A5	-----	11	-----		IF=2mA			
			116	184	-----		IF=20mA			
		A6	-----	13	-----		IF=2mA			
			145	213	-----		IF=20mA			
		Viewing Angle	2θ 1/2	-----	-----		20	-----	deg	IF=20mA
		Peak Wavelength	λ p	-----	-----		611	-----	nm	IF=20mA
Dominant Wavelength	λ d	-----	-----	605	-----	nm	IF=20mA			
Spectrum Radiation Bandwidth	Δ λ	-----	-----	17	-----	nm	IF=20mA			
Forward Voltage	VF	-----	-----	2.0	2.4	V	IF=20mA			
Reverse Current	IR	-----	-----	-----	10	μ A	VR=5V			

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Chip Rank

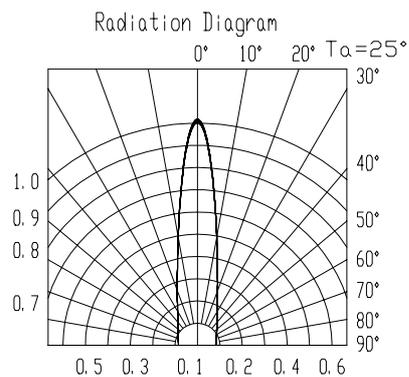
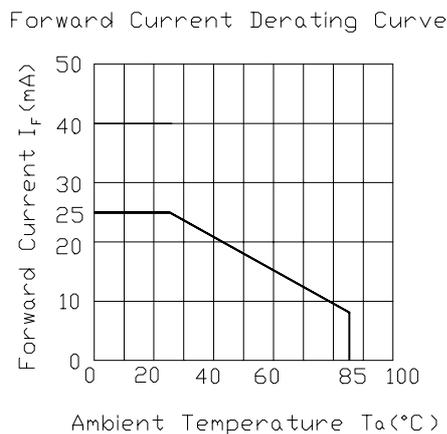
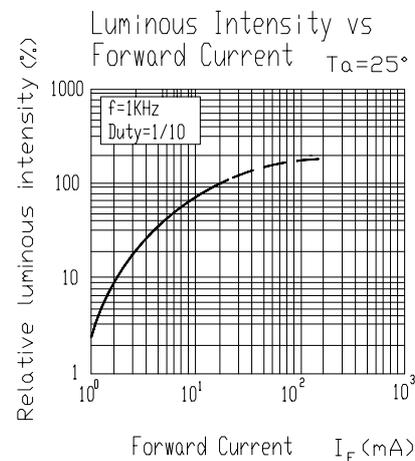
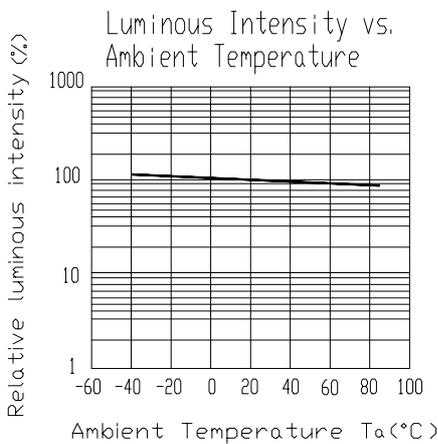
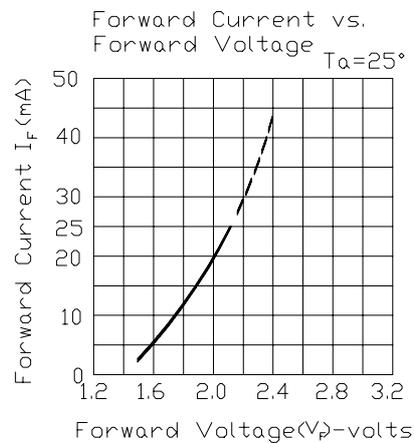
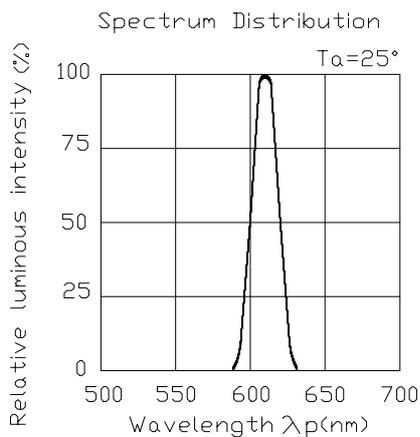


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■ **Typical Electro-Optical Characteristic Curves :**





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■ 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 <sub>F</sub> = 20 mA	1000 HR.	76 PCS	0/1
7	High Temperature / High Humidity	85°C/RH85%	1000 HR.	76 PCS	0/1

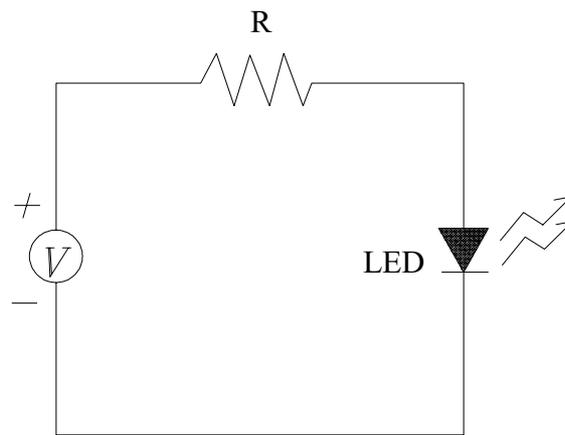


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■ **Test Circuit :**



■ **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 kept 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.



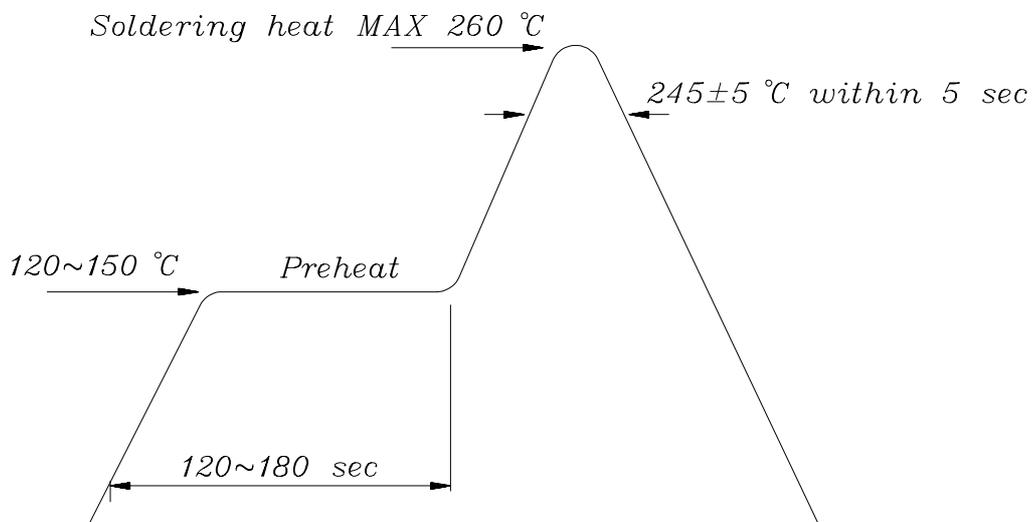
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■ **Soldering heat reliability ( DIP ) :**

Please refer to the following figure :

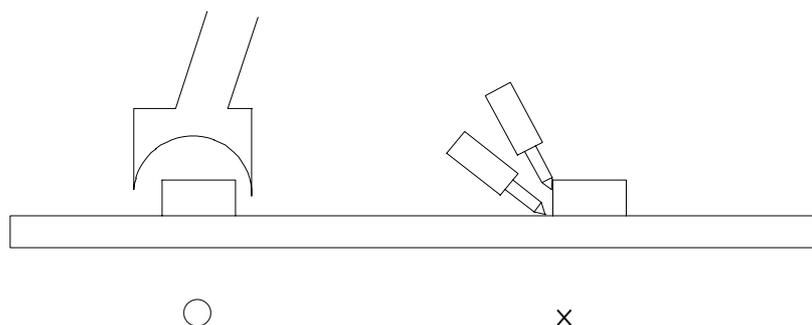


■ **Soldering Iron :**

Basic spec is  $\leq 5$  sec when 260°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 260°C .
2. The head of iron can not touch copper foil.
3. Twin-head type is preferred.





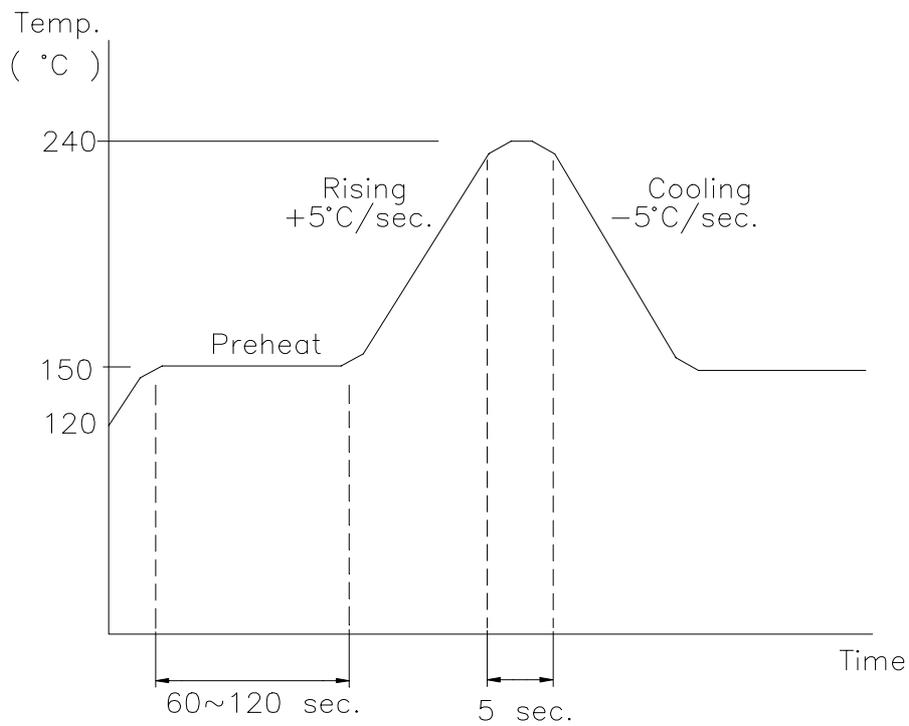
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■ Reflow Temp./Time :



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