



MODEL NO: 15-21 SYGC/S530-E2/TR8

Device Number : DSE-151-066 REV. 1.1

1206 Package Chip LEDs

ECN : _____ Page: 1/8

Features :

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

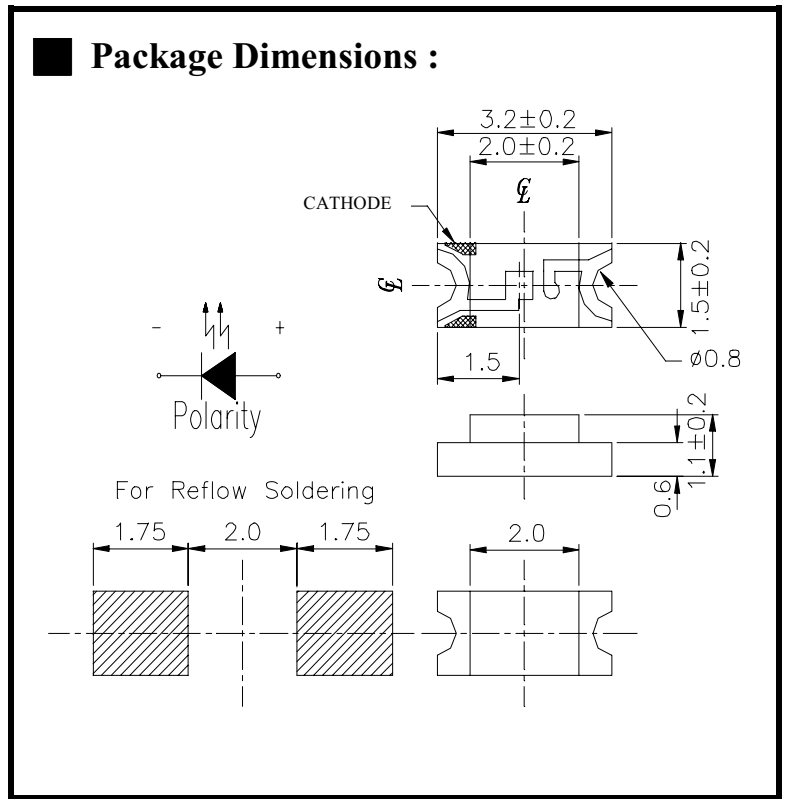
Descriptions :

- The 15-21 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, lightweight 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
± 0.1mm Angle ± 0.5° Unit = mm

PART NO	Chip		Lens Color
	Material	Emitted Color	
15-21 SYGC/S530-E2/TR8	AlGaInP	Super Green Yellow	Water Clear

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TEL: 886-2-2267-2000, 2267-9936

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<http://www.everlight.com>



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1206 Package Chip LEDs

ECN : _____ Page: 3/8

■ **Absolute Maximum Ratings at 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~ +90	°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

■ **Electronic Optical Characteristics :**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	-----	2	-----	mcd	I _F =2mA
		15	21	-----	mcd	I _F =20mA
Viewing Angle	2θ 1/2	-----	140	-----	deg	I _F =20mA
Peak Wavelength	λ _p	-----	575	-----	nm	I _F =20mA
Dominant Wavelength	λ _d	-----	573	-----	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



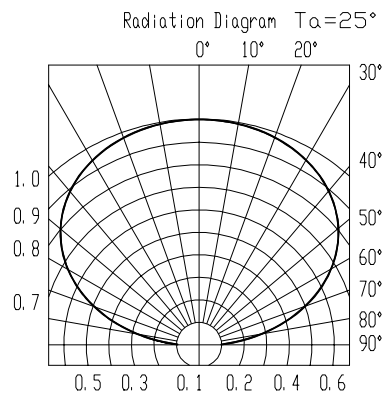
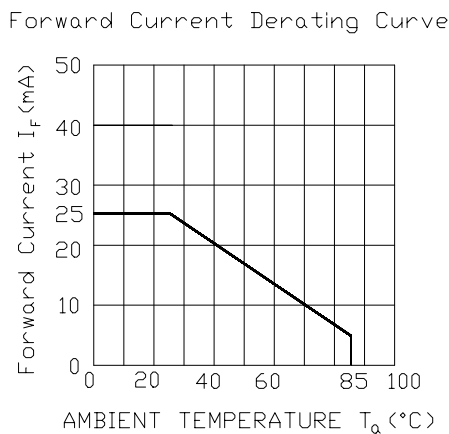
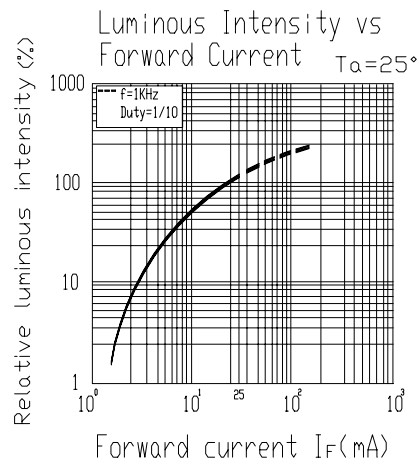
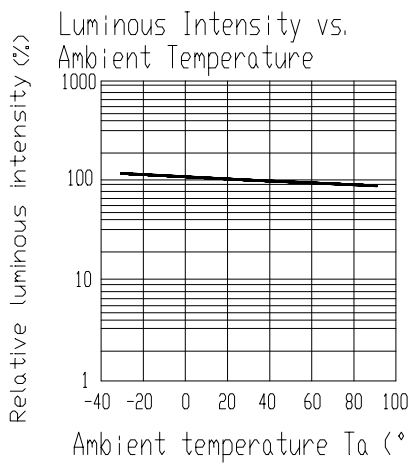
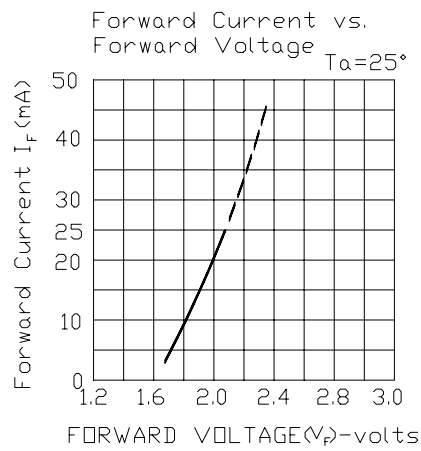
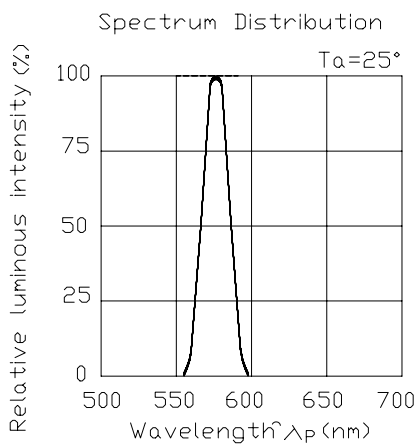
MODEL NO: 15-21 SYGC/S530-E2/TR8

Device Number : DSE-151-066 REV. 1.1

1206 Package Chip LEDs

ECN : _____ Page: 4/8

Typical Electro-Optical Characteristic Curves





MODEL NO: 15-21 SYGC/S530-E2/TR8

Device Number : DSE-151-066 REV. 1.1

1206 Package Chip LEDs

ECN : Page: 5/8

■ 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 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -55°C	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°C/85% RH	1000 HRS	76 PCS	0/1

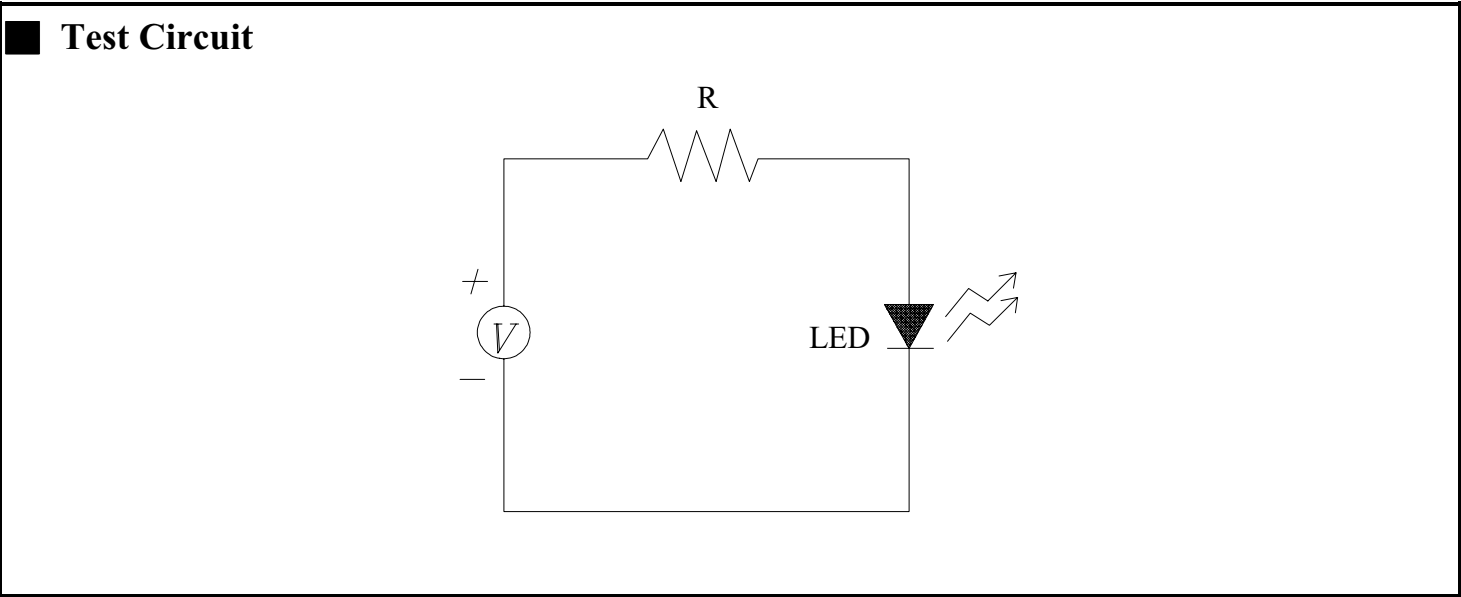


MODEL NO: 15-21 SYGC/S530-E2/TR8

Device Number : DSE-151-066 REV. 1.1

1206 Package Chip LEDs

ECN : Page: 6/8



- **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 descanting 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.



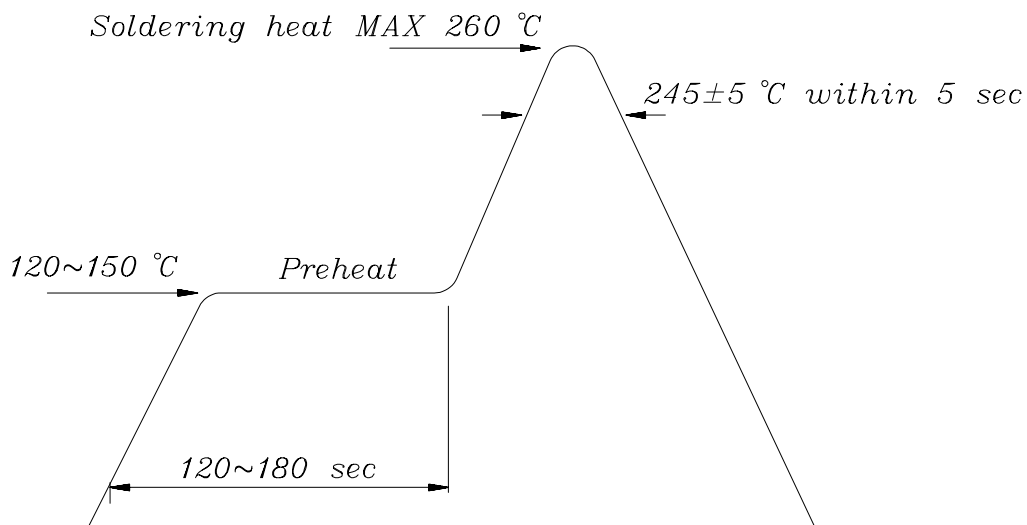
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Device Number : DSE-151-066 REV. 1.1

ECN : Page: 7/8

■ **Soldering heat reliability (DIP)**

Please refer to the following figure :

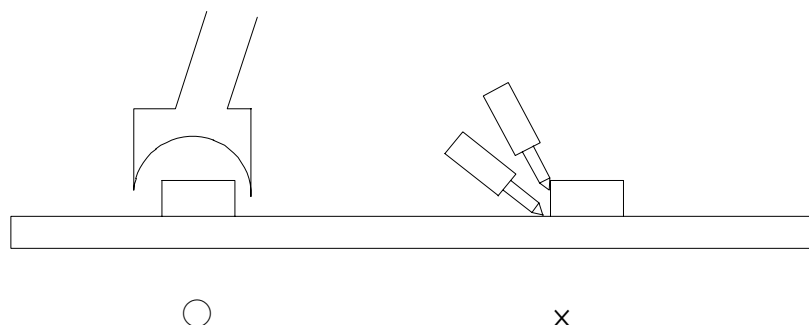


■ **Soldering Iron**

Basic spec is ≤ 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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ECN : Page: 8/8

■ Reflow Temp / Time :

