

MODEL NO: 12-22 SURSYGC/S530-A2/TR8

Device Number : DSE-122-001 REV. 1.0

Right Angle Lens Chip LEDs with Bi-Color(Multi-Color)

ECN :

Page: 1/9

■ Features :

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

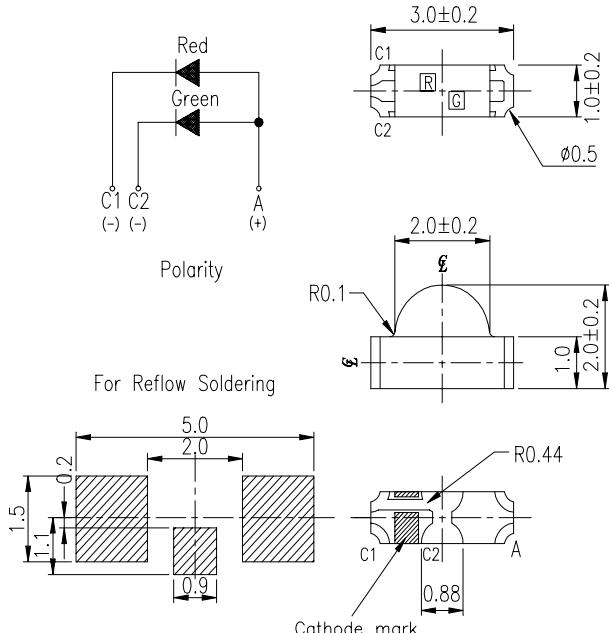
■ Descriptions :

- The 12-22 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
0.1mm
Angle $\pm 0.5^\circ$ Unit=mm

PART NO	Chip		Lens Color
	Material	Emitted Color	
12-22SURSYGC/S530-A2/TR8	SUR:	AlGaInP	Hyper Red
	SYG:	AlGaInP	Super Yellow Green

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

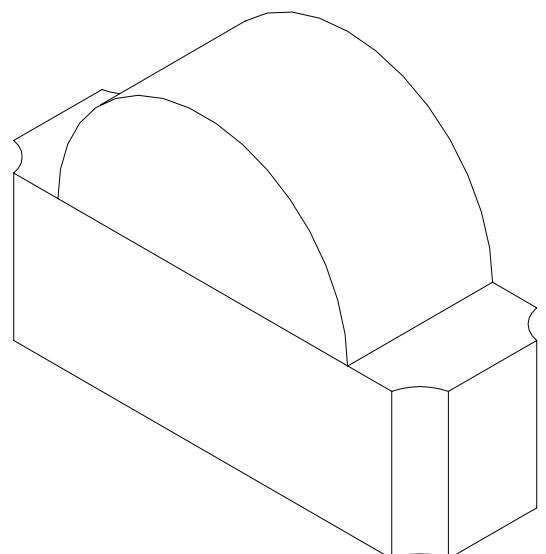
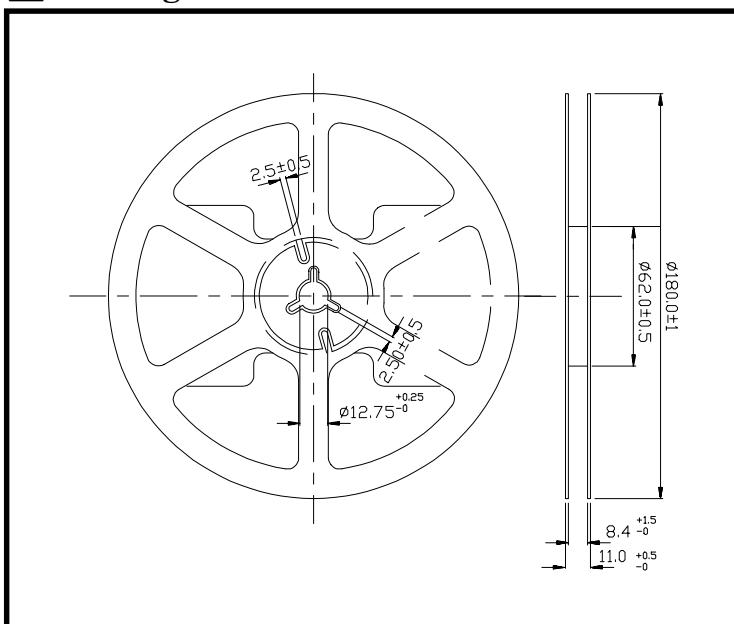
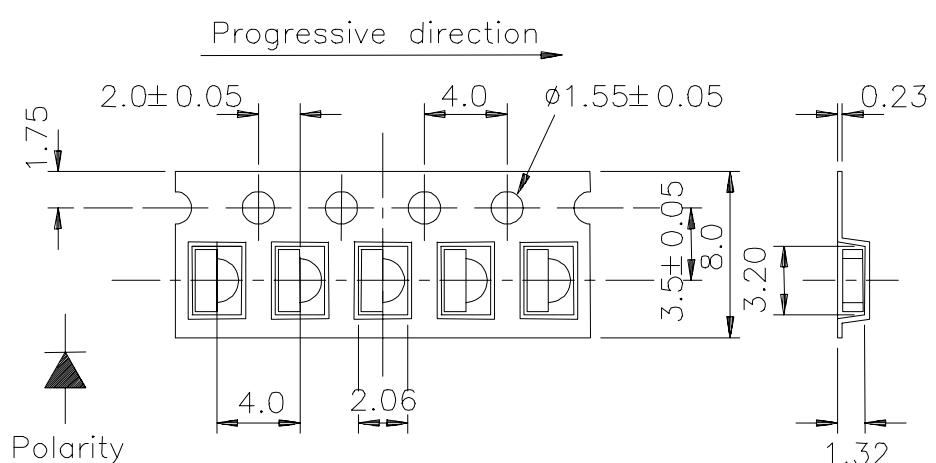
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<http://www.everlight.com>

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ECN :

Page: 2/9**■ Package Dimensions :****■ Loaded quantity per reel 2000 pcs/reel :**TOLERANCES UNLESS DIMENSION ± 0.1 ANGLE ± 0.5

UNIT:mm

SCALE:3=1

MODEL NO: 12-22 SURSYGC/S530-A2/TR8 Device Number : DSE-122-001 REV. 1.0***Right Angle Lens Chip LEDs with Bi-Color(Multi-Color)***

ECN :

Page: 3/9**■ Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Rating	Unit
Reverse Voltage	Vr	5	V
Forward Current	If	SUR: 25 SYG: 25	mA
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +90	°C
Soldering Temperature	Tsol	260 (for 5 second)	°C
Power Dissipation	Pd	SUR: 60 SYG: 60	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	If(Peak)	SUR: 160 SYG: 160	mA

■ Reliability Test Item And Condition

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 CYCLE	76 Pcs	0/1
3	Thermal Shock	H : +100°C 5min ↓ 10 sec L : -10°C 5min	50 CYCLE	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	If = 20 m A	1000 HRS	76 Pcs	0/1
7	High Temperature / High Humidity	85°C/85% RH	1000 HRS	76 Pcs	0/1



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Right Angle Lens Chip LEDs with Bi-Color(Multi-Color)

ECN : ----- Page: 4/9

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous intensity	I _v SUR: SYG:	19 13	46 19	-----	mcd	I _f =20mA
Viewing Angle	2θ 1/2	-----	120	-----	deg	I _f =20mA
Peak Wavelength	λ _p SUR: SYG:	-----	632 575	-----	nm	I _f =20mA
Dominant Wavelength	λ _d SUR: SYG:	-----	624 573	-----	nm	I _f =20mA
Spectrum Radiation Bandwidth	△λ SUR: SYG:	-----	20 20	-----	nm	I _f =20mA
Forward Voltage	V _f SUR: SYG:	-----	2.0 2.0	2.4 2.4	V	I _f =20mA
Reverse Current	I _r	-----	-----	10	μA	V _r =5V

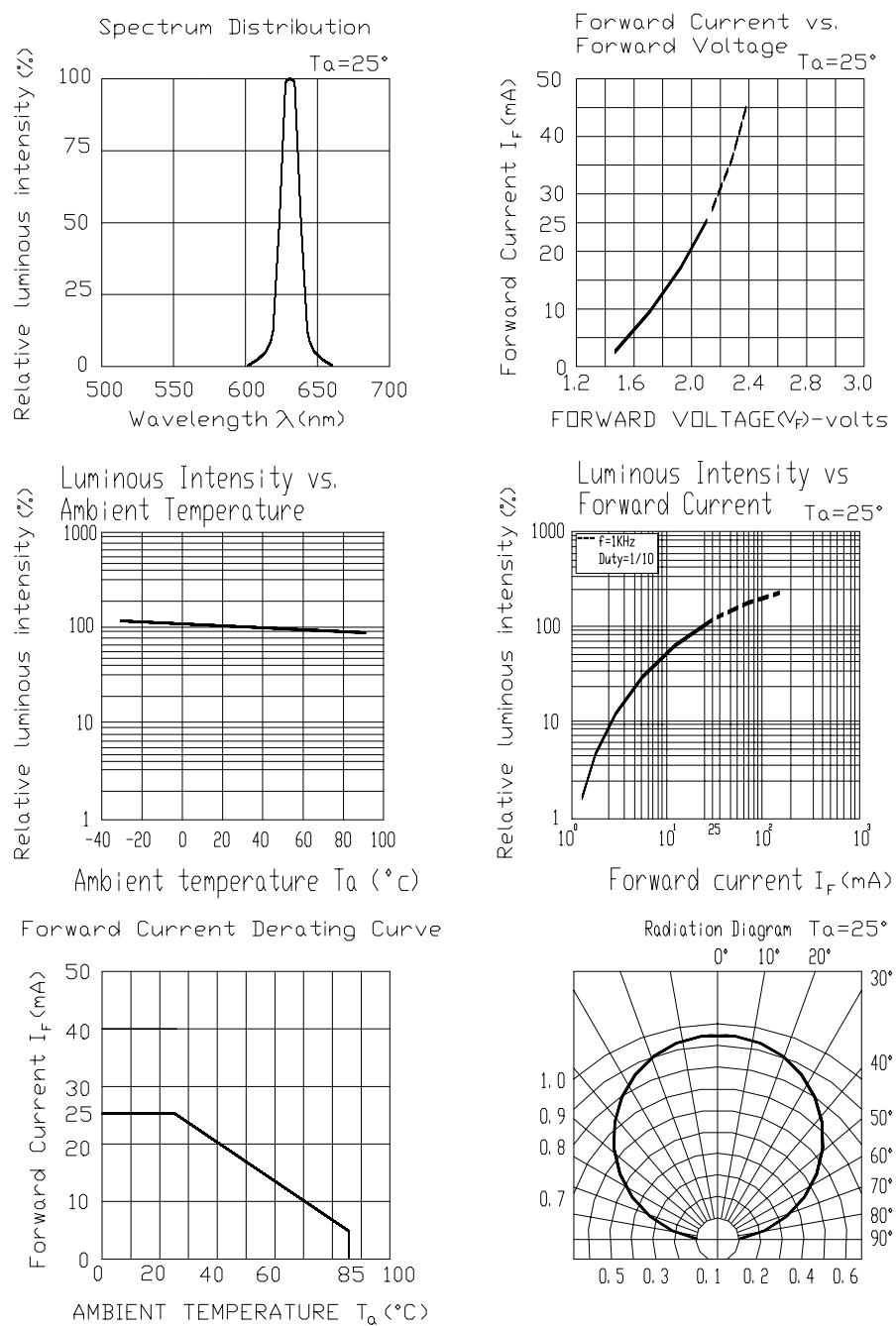
MODEL NO: 12-22 SURSYGC/S530-A2/TR8 Device Number : DSE-122-001 REV. 1.0
Right Angle Lens Chip LEDs with Bi-Color(Multi-Color)

ECN :

 Page: 5/9

■ Typical Electro-Optical Characteristic Curves

SUR



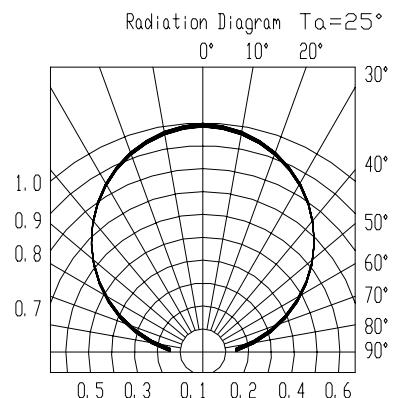
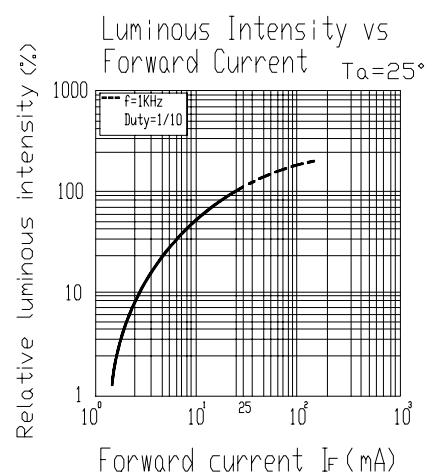
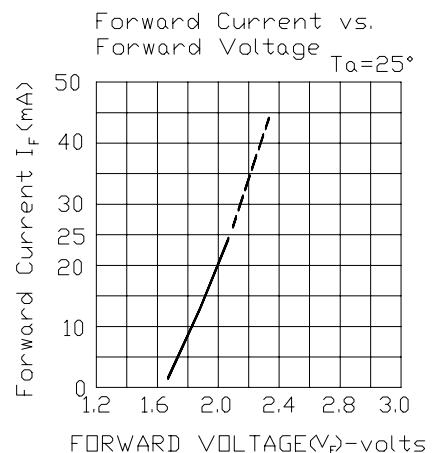
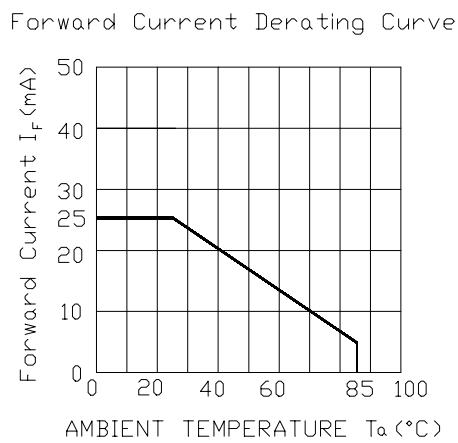
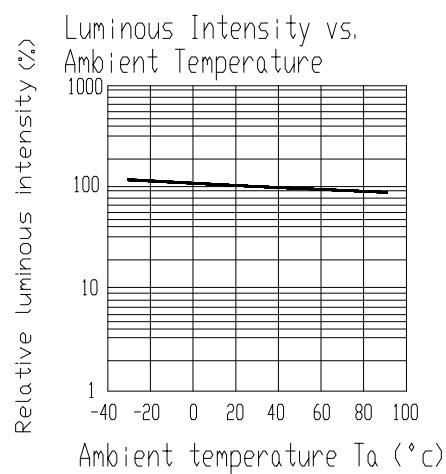
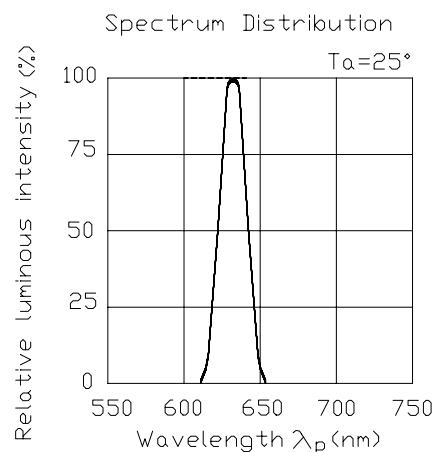
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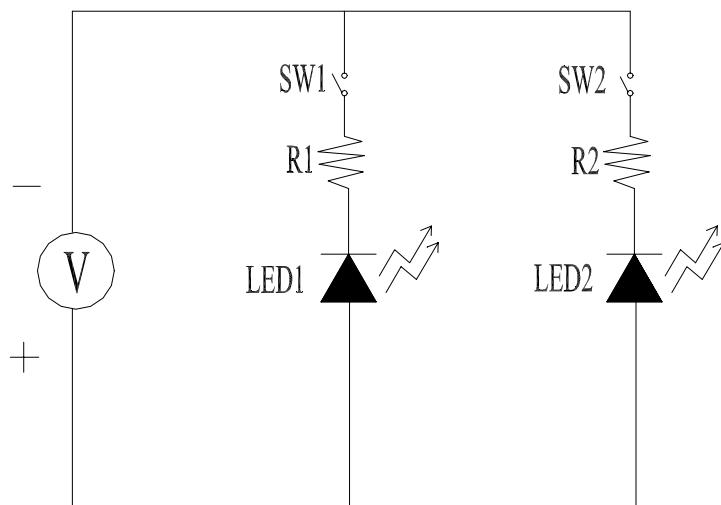
Page: 6/9

■ Typical Electro-Optical Characteristic Curves

SYG


MODEL NO: 12-22 SURSYGC/S530-A2/TR8 Device Number : DSE-122-001 REV. 1.0**Right Angle Lens Chip LEDs with Bi-Color(Multi-Color)**

ECN :

Page: 7/9**■ 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 desiccants.

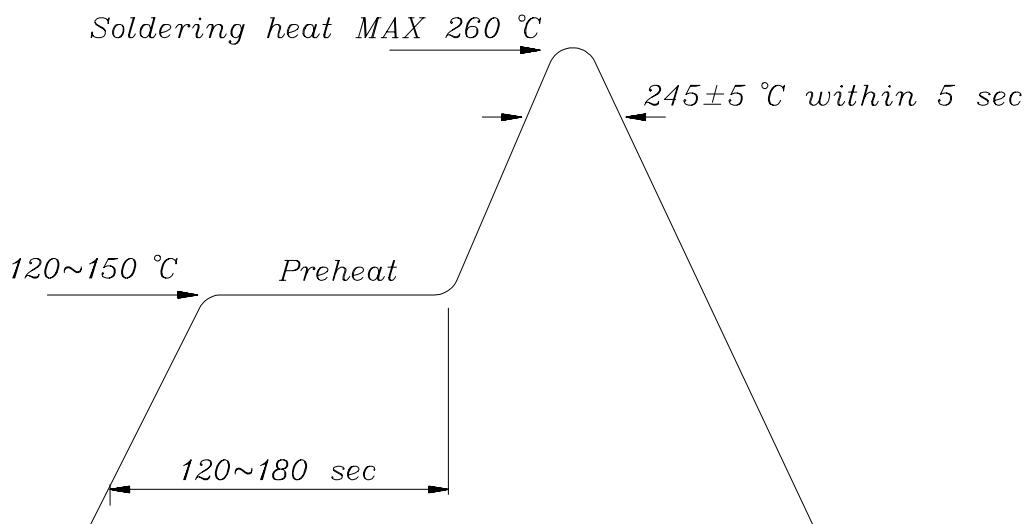
Considering the tape life , we suggest our customers to use our products within a year(from production date).

2.3 If opened more than one week in an atmosphere $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$, 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.

MODEL NO: 12-22 SURSYGC/S530-A2/TR8 Device Number : DSE-122-001 REV. 1.0**Right Angle Lens Chip LEDs with Bi-Color(Multi-Color)**ECN : ----- Page: 8/9**■ Soldering heat reliability (DIP)**

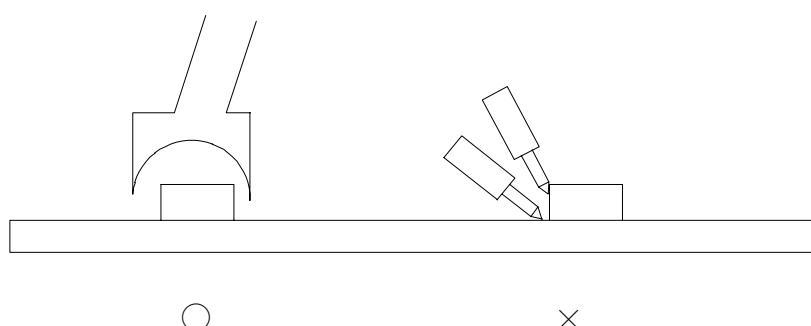
Please refer to the following figure :

**■ Soldering Iron**

Basic spec is ≤ 5 sec when 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec}$). 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. Copper foil can not be touched by the head of iron.
3. Twin-head type is preferred.



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