



Technical Data Sheet

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

12-22SYGSURC/S530-A2/TR8

Features

- Package in 8mm tape on 7" diameter reel.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- Multicolor 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, lightweight makes them ideal for miniature applications. etc.

Applications

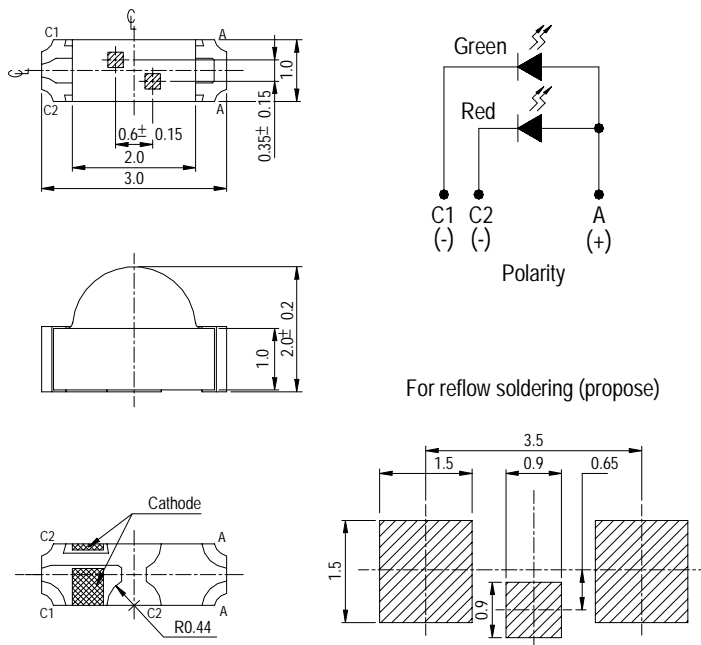
- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- General use.



Device Selection Guide

Chip			Lens Color
Type	Material	Emitted Color	
SYG	AlGaInP	Super Yellow Green	Water Clear
SUR	AlGaInP	Hyper Red	

B90052313,9011058

Package Outline Dimensions


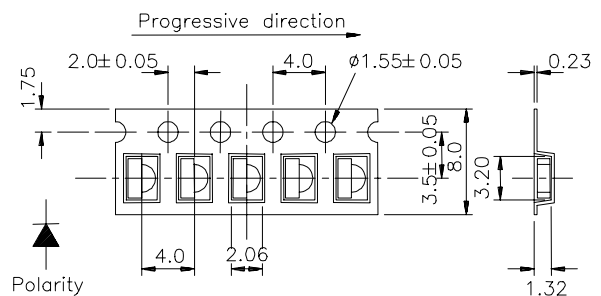
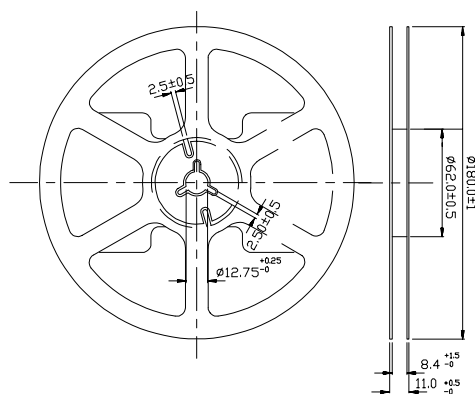
Notes: Tolerances Unless Dimension $\pm 0.1\text{mm}$, Angle $\pm 0.5^\circ$,Unit = mm

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	SYG:25 SUR: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	SYG:60 SUR:60	mW
Peak Forward Current (Duty 1/10 @1KHz)	I _F	SYG:160 SUR:160	mA

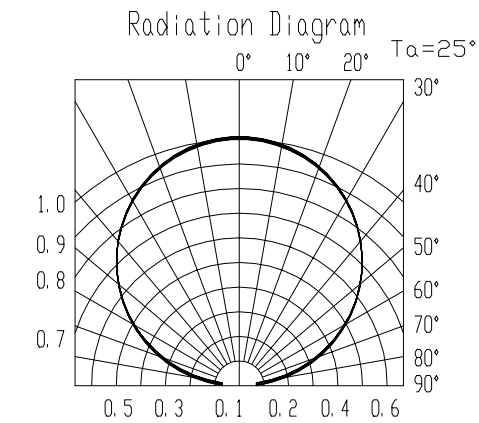
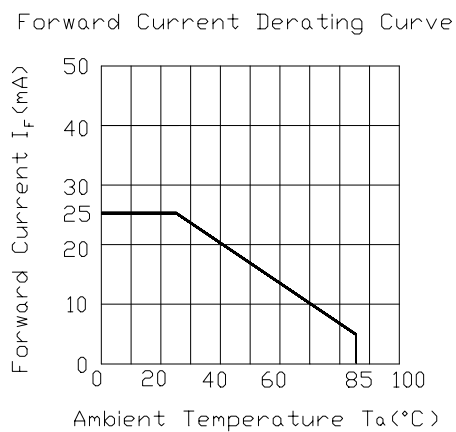
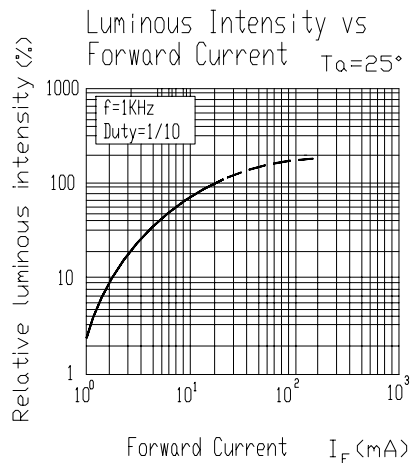
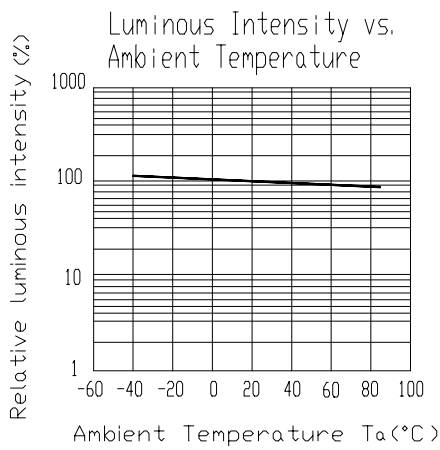
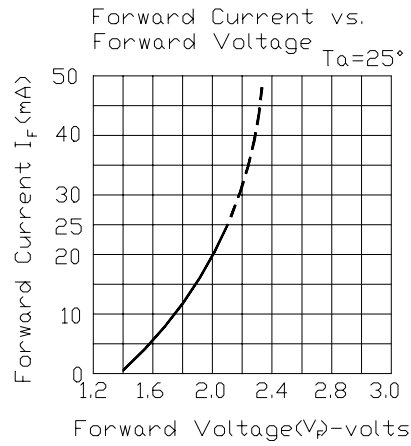
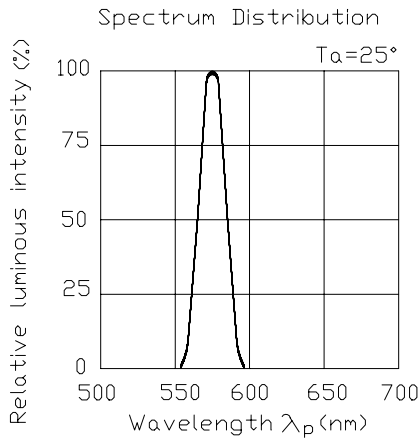
12-22SYGSURC/S530-A2/TR8
Electro-Optical Characteristics (Ta=25°C)

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

Reel & Carrier Tape Dimensions
Loaded quantity per reel 2000 PCS/reel


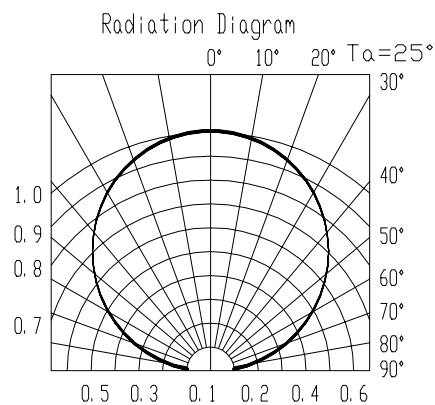
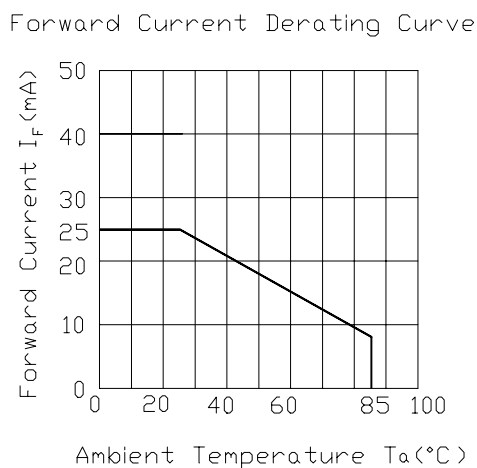
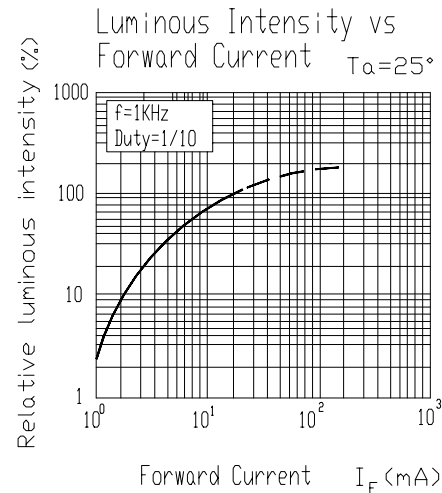
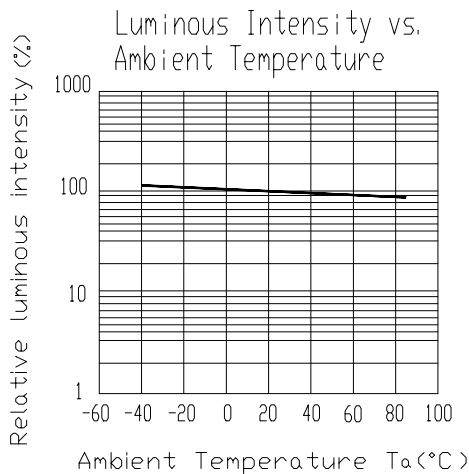
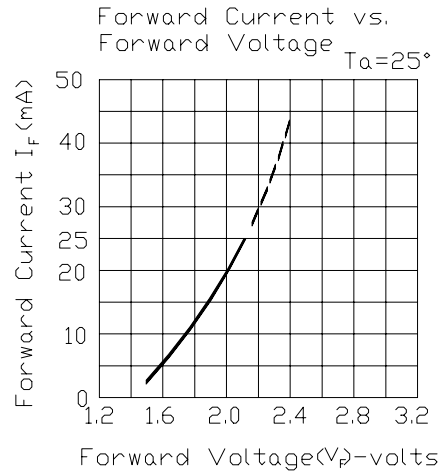
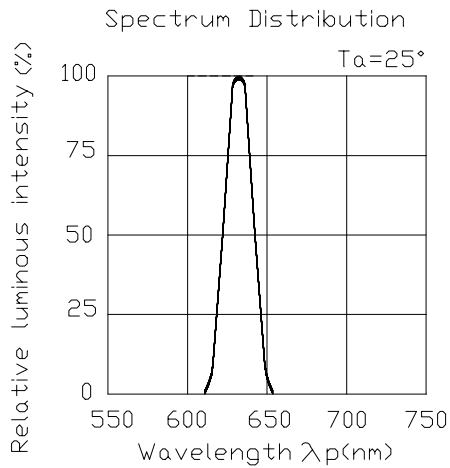
Notes: Tolerances Unless Dimension ± 0.1mm , Angle± 0.5° ,Unit = mm

Typical Electro-Optical Characteristics Curves
SYG



12-22SYGSURC/S530-A2/TR8

**Typical Electro-Optical Characteristics Curves
SUR**



Reliability Test Items And Conditions

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Rc
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 /RH85%	1000 Hrs.	76 PCS.	0/1

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

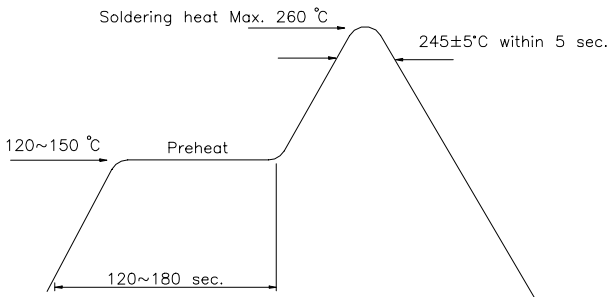
2.1 The operation of Temperature and RH are : 5°C ~35°C , RH60%.

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 SURgest our customers to use our products within a year(from production date).

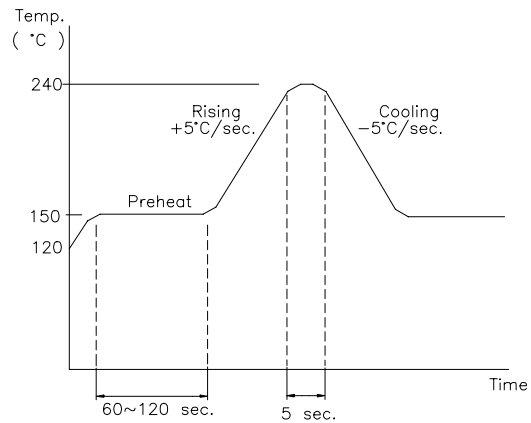
2.3 If opened more than one week in an atmosphere 5°C ~35°C , RH 60% , they should be treated at 60°C± 5°C for 15hrs.

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)



Reflow Temp / Time

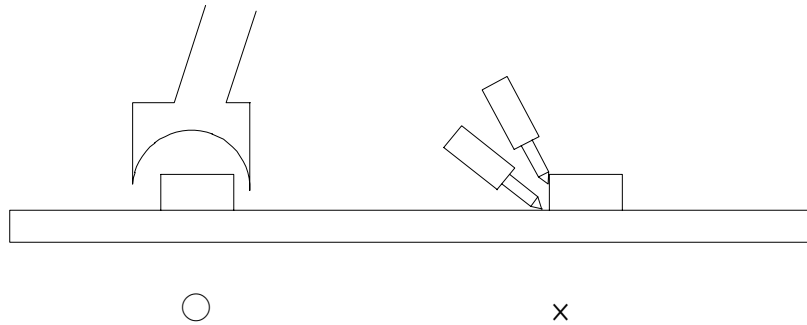


Soldering Iron

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 245°C.
2. The head of iron can not touch copper foil.
3. Twin-head type is preferred.



EVERLIGHT ELECTRONICS CO., LTD.
Office: No 25, Lane 76, Sec 3, Chung Yang Rd,
Tucheng, Taipei 236, Taiwan, R.O.C

Tel: 886-2-2267-2000, 2267-9936
Fax: 886-2267-6244, 2267-6189, 2267-6306
<http://www.everlight.com>

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Standard LEDs - SMD category](#):

Click to view products by [Everlight manufacturer](#):

Other Similar products are found below :

[LTST-C190KYKT](#) [LTST-C19GD2WT](#) [LTST-N683GBEW](#) [LTW-170ZDC](#) [LTW-M140SZS40](#) [LTW-M140ZVS](#) [598-8110-100F](#) [91-21SUBCS400-A6TR7](#) [AAAF5060QBFSEEZGS](#) [APT1608QGW](#) [99-213/R6C-AR2T1B/2C](#) [SML-LX0606SISUGC/A](#) [SML-LXR851SIUPGUBC](#) [LT1ED53A](#) [AM27ZGC03](#) [APFA3010SURKCGKQBDC](#) [APHK1608VGCA](#) [APT2012QGW](#) [LTST-008BGEW](#) [LTW-010DCG](#) [LTW-020ZDCG](#) [LTW-21TS5](#) [LTW-220DS5](#) [LO T67F-V1AB-24-1](#) [598-8330-117F](#) [CMDA20AYAA7D1S](#) [95-21SURCS530-A3TR10](#) [HSMQ-C177](#) [598-8040-100F](#) [598-8070-100F](#) [598-8140-100F](#) [598-8610-200F](#) [SML-LXL1209SYC/ATR](#) [CMD91-21VRC/TR7](#) [SML-512PWT86A](#) [SMF-2432GYC-TR](#) [EASV3015RGYA0](#) [LTST-C190KFKT-5A](#) [LTST-C194TBKT-5A](#) [CLX6E-FKC-CH1M1D1BB7C3D3](#) [SML-LXL0805USBC-TR](#) [SML-LX2835SYSUGCTR](#) [LTW-M670ZVS-M5](#) [APA2106ZGC/G](#) [CLMXB-FKA-CbcfghjnpACBB79463](#) [VFA1101W-5AY3B2-TR](#) [LCB P473-P2R2-3J7L-1-Z](#) [HSMR-C197](#) [LW A67C-S2U1-FK0KM0](#) [LW A673-P1S1-FK0PM0](#)