



Device Number :      CDLE-051-071      REV.:      3

## 2.0\*5.0mm Multi-Color Rectangle Type LED Lamps

PART NO.: 519-1SURSYGW/S530-A2 ECN: Page: 1/5

■ Features :

- Two chips are matched for uniform light output, wide viewing angle
- Long life-solid state reliability
- IC compatible/Low power consumption

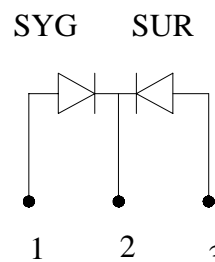
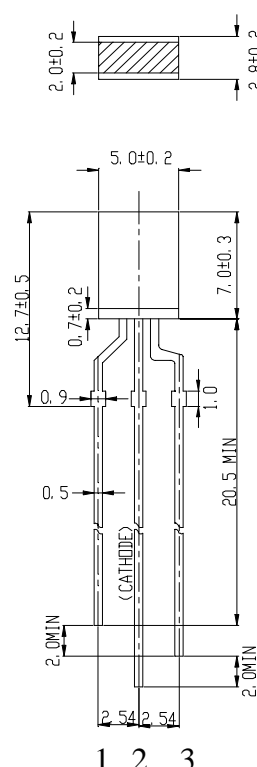
■ Descriptions :

- The 519-1 LED lamp contain two integral chips and are available as both bicolor and bipolar types.
- The Hyper Red and Super Yellow Green light is emitted by diodes of AlGaInP and AlGaInP respectively.
- Type of bipolar lamps are both White Diffused and Color Diffused while the bicolor are White Diffused

## ■ Applications :

- TV set
- Monitor
- Telephone
- Computer

### ■ Package Dimensions:



■ Notes :

1. All dimensions are in millimeters.
2. An epoxy meniscus may extend about 1.5mm(0.059") down to the lead.
3. Tolerances unless Dimension  $\pm 0.25\text{mm}$ .

PART NO.	Chip		Lens Color
	Material	Emitted Color	
519-1SURSYGW/S530-A2	AlGaInP	Hyper Red	White Diffused
	AlGaInP	Super Yellow Green	

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## ■ Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Rating	Unit
Forward Current	IF	SUR/S530 25	mA
		SYG/S530 25	
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C
Soldering Temperature	Tsol	260 ± 5	°C
Electrostatic Discharge	ESD	SUR/S530 2000	V
		SYG/S530 2000	
Power Dissipation	Pd	SUR/S530 60	mW
		SYG/S530 60	
Peak Forward Current (Duty 1/10 @ 1KHz)	IF(Peak)	SUR/S530 160	mA
		SYG/S530 160	
Reverse Voltage	VR	5	V

## ■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv SUR/S530 SYG/S530	8.00	16.00	/	mcd	IF= 20 mA
		6.30	12.50	/		
Viewing Angle	2 θ 1/2	/	160	/	deg	IF= 20 mA
Peak Wavelength	λ p SUR/S530 SYG/S530	/	632	/	nm	IF= 20 mA
		/	575	/		
Dominant Wavelength	λ d SUR/S530 SYG/S530	/	624	/	nm	IF= 20 mA
		/	573	/		
Spectrum Radiation Bandwidth	△ λ SUR/S530 SYG/S530	/	20	/	nm	IF= 20 mA
		/	20	/		
Forward Voltage	VF SUR/S530 SYG/S530	1.7	2.0	2.4	V	IF= 20 mA
		1.7	2.0	2.4		
Reverse Current	IR	/	/	10	μ A	VR= 5 V



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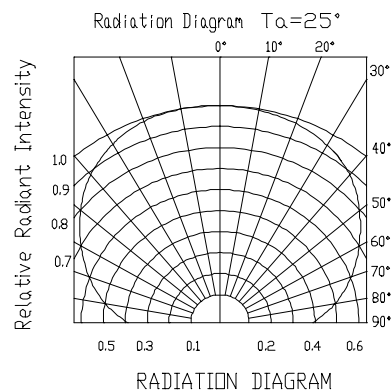
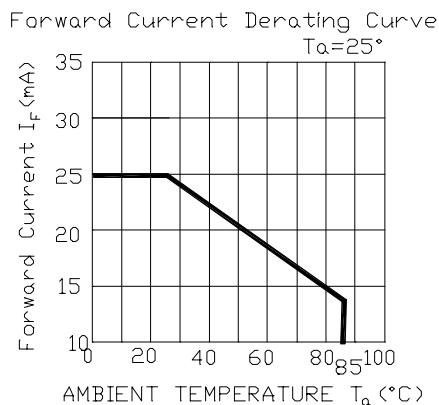
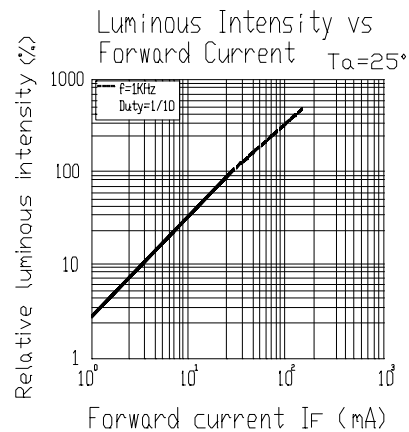
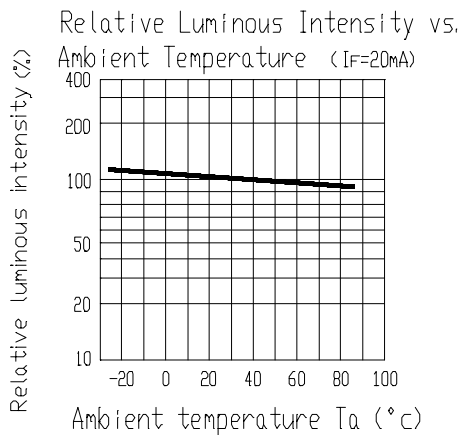
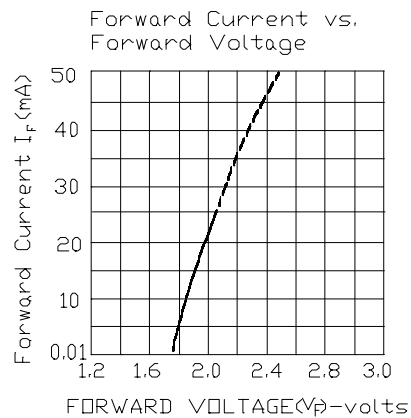
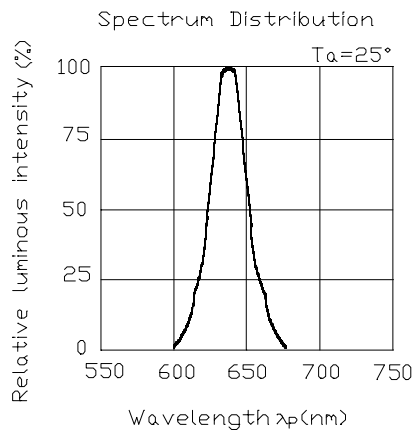
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■ Typical Electro-Optical Characteristic Curves:

( SUR )





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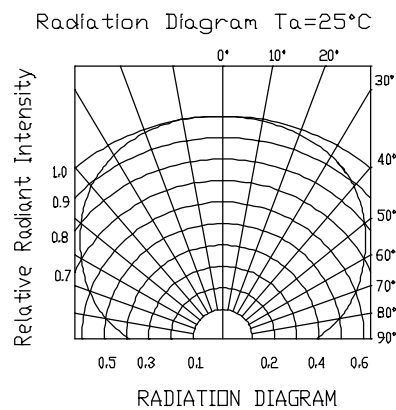
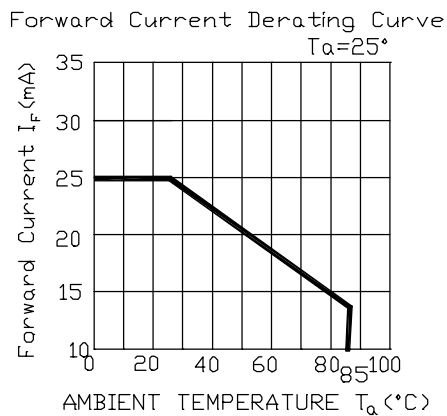
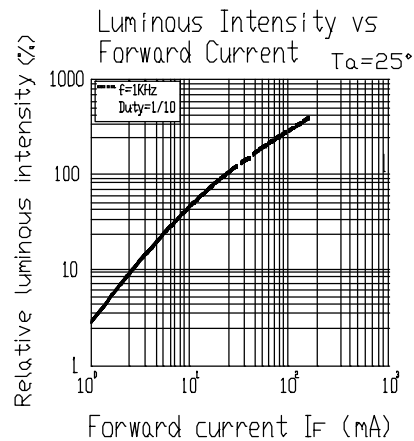
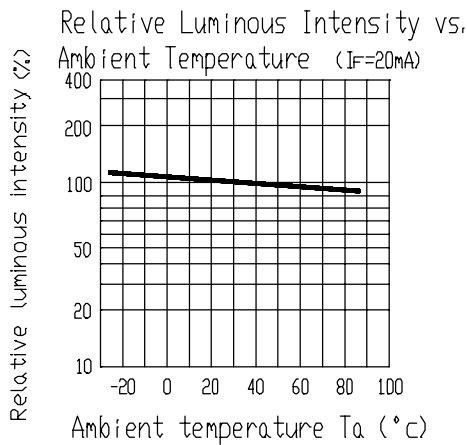
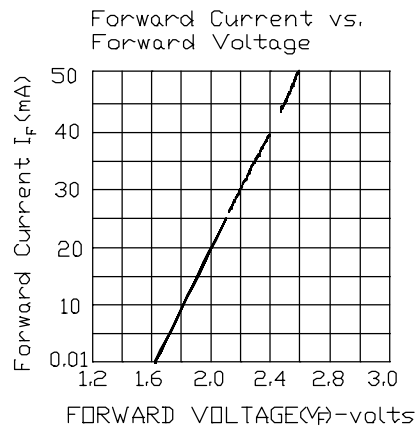
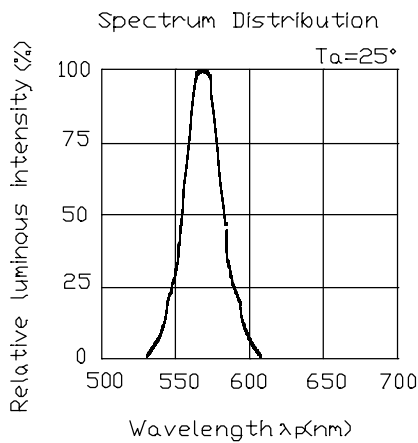
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## ■ Typical Electro-Optical Characteristic Curves:

(SYG)





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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 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -55°C	1000 HRS	76 PCS	0/1
6	DC Operating Life	I <sub>F</sub> = 20 mA	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85°C/85% RH	1000 HRS	76 PCS	0/1