Technical Data Sheet

3.0mm Multi-Color Round Type LED Lamps

209SDRSYGW/S530-A3

■ Features :

- Two chips are matched for uniform light output, wide viewing angle
- Long life-solid state reliability
- I.C. compatible/Low power consumption
- Pb free
- The product itself will remain within RoHS compliant version

■ Descriptions :

- The 209 LED lamps contain two integral chips and is available as both bicolor and bipolar types.
- The Super Deep-Red and Super Yellow Green light is emitted by diodes of AIGaInP and AIGaInP respectively.
- Type of bipolar lamps are both White Diffused and Color Diffused while the bicolor are White Diffused.

■ Applications :

- TV set
- Monitor
- Telephone
- Computer

PART NO.	Chip		Lens Color
	Material	Emitted Color	
209SDRSYGW/S530-A3	AlGaInP	Super Deep-Red	White Diffused
	AlGaInP	Super Yellow Green	

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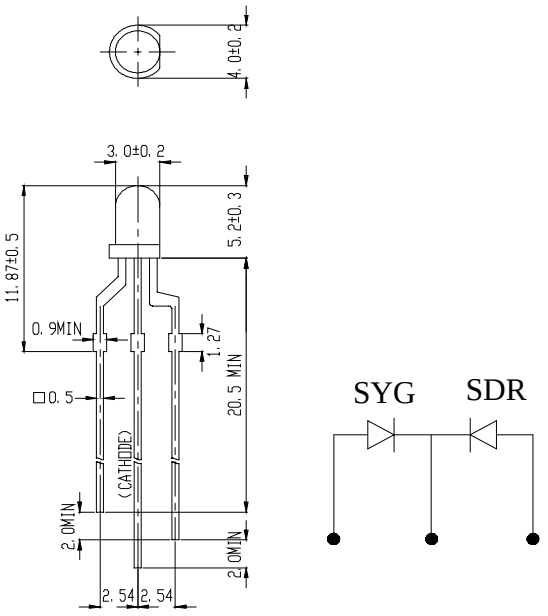
Package Dimensions



Notes: 1.All dimensions are in millimetres

2. An epoxy meniscus may extend about 1.5mm(0.059") down to the lead.
3. Tolerances unless Dimension ±0.25mm.

■ The Hyper Red and Super Yellow Green

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

Note: *1:IFP Conditions --Pulse Width ≦ 1msec and Duty ≦ 1/10.
*2:Soldering time ≦ 5 seconds.

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Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol		Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	SDR/S530	25	50	／	mcd	IF= 20 mA
		SYG/S530	16	32	／		
Viewing Angle	2θ1/2		／	80	／	deg	IF= 20 mA
Peak Wavelength	λp	SDR/S530	／	650	／	nm	IF= 20 mA
		SYG/S530	／	575	／		
Dominant Wavelength	λd	SDR/S530	／	639	／	nm	IF= 20 mA
		SYG/S530	／	573	／		
Spectrum Radiation Bandwidth	△λ	SDR/S530	／	20	／	nm	IF= 20 mA
		SYG/S530	／	20	／		
Forward Voltage	VF	SDR/S530	／	2.0	2.4	V	IF= 20 mA
		SYG/S530	／	2.0	2.4		
Reverse Current	IR		／	／	10	μA	VR= 5 V

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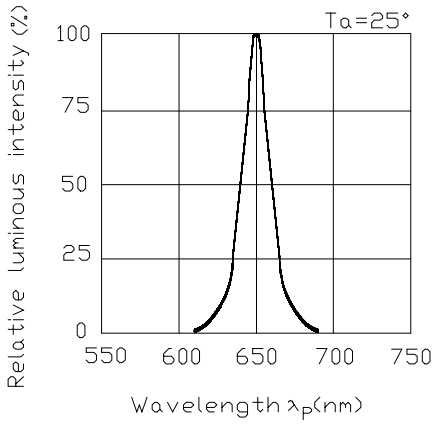
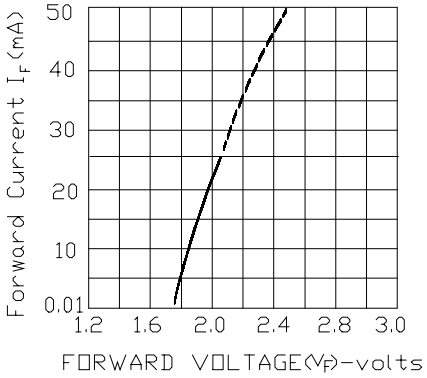
■ Typical Electro-Optical Characteristic Curves:

(SDR)

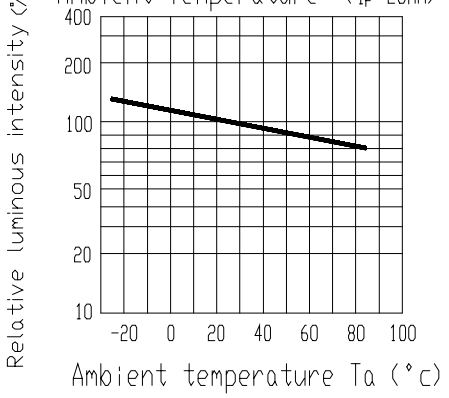
Spectrum Distribution



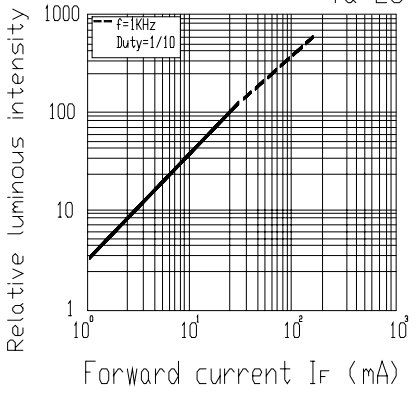
Forward Current vs. Forward Voltage



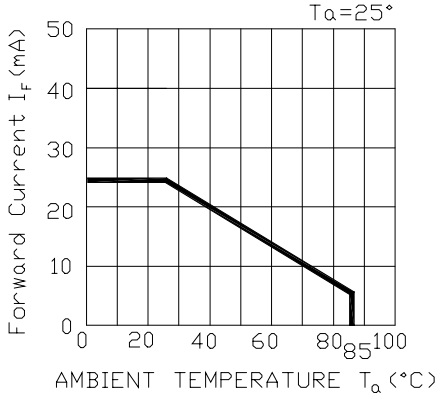
Relative Luminous Intensity vs. Ambient Temperature (IF=20mA)



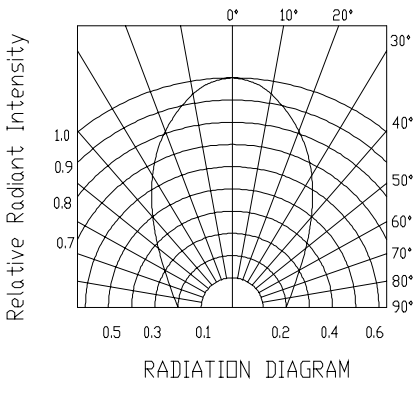
Luminous Intensity vs Forward Current Ta=25°



Forward Current Derating Curve Ta=25°



Radiation Diagram Ta=25°



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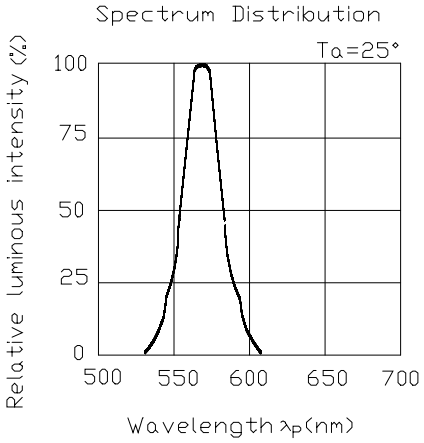
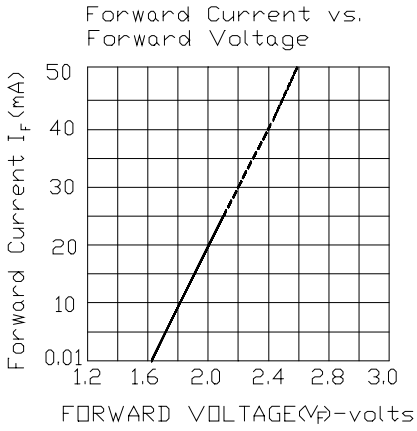
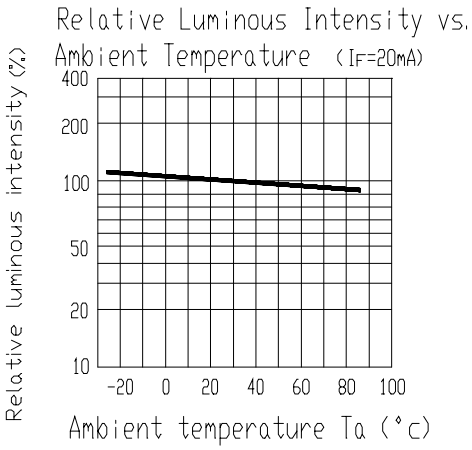
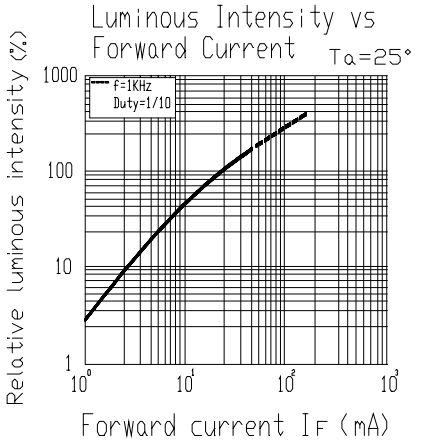
■ Typical Electro-Optical Characteristic Curves:

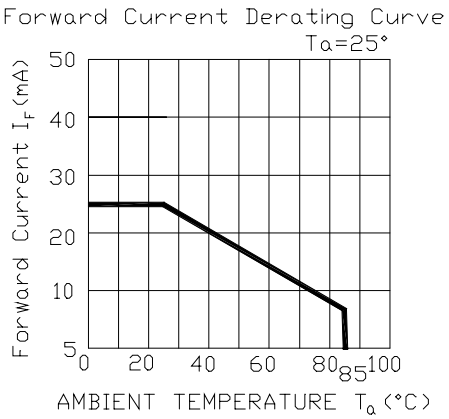
(SYG)

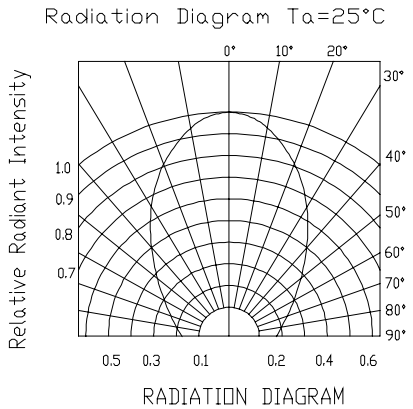












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■ Reliability test items and conditions:

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP : 260℃ ± 5 ℃	10 SEC	76 PCS	0/1
2	Temperature Cycle	H : +100℃ 15min ∫ 5 min L : -40℃ 15min	300 CYCLES	76 PCS	0/1
3	Thermal Shock	H : +100℃ 5min ∫ 10 sec L : -10℃ 5min	300 CYCLES	76 PCS	0/1
4	High Temperature Storage	TEMP : 100℃	1000 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -40℃	1000 HRS	76 PCS	0/1
6	DC Operating Life	TEMP : 25℃ IF = 20mA	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85℃ / 85% RH	1000 HRS	76 PCS	0/1

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Packing Quantity Specification

1.500PCS/1Bag，6Bags/1Box

2.10Boxes/1Carton

Label Form Specification

CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Peak Wavelength

REF: Reference

LOT No: Lot Number

MADE IN TAIWAN: Production Place

Notes

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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