



LIGHTING FOREVER

Technical Data Sheet

3.0mm Multi-Color Round Type LED Lamps

209-3SRSUBW/S400-A6/R2

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 lamp contain two integral chips and is available as both bicolor and bipolar types.
- The Deep-Red and Blue light is emitted by diodes of GaAlAs and InGaN
- 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	
209-3SRSUBW/S400-A6/R2	GaAlAs	Deep-Red	White Diffused
	InGaN	Blue	

EVERLIGHT ELECTRONICS CO.,LTD.

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Rev.: 1

Page: 1 of 7

Device Number : 0

Prepared date: 2010/9/28

Prepared by: LIMING

DR000029546

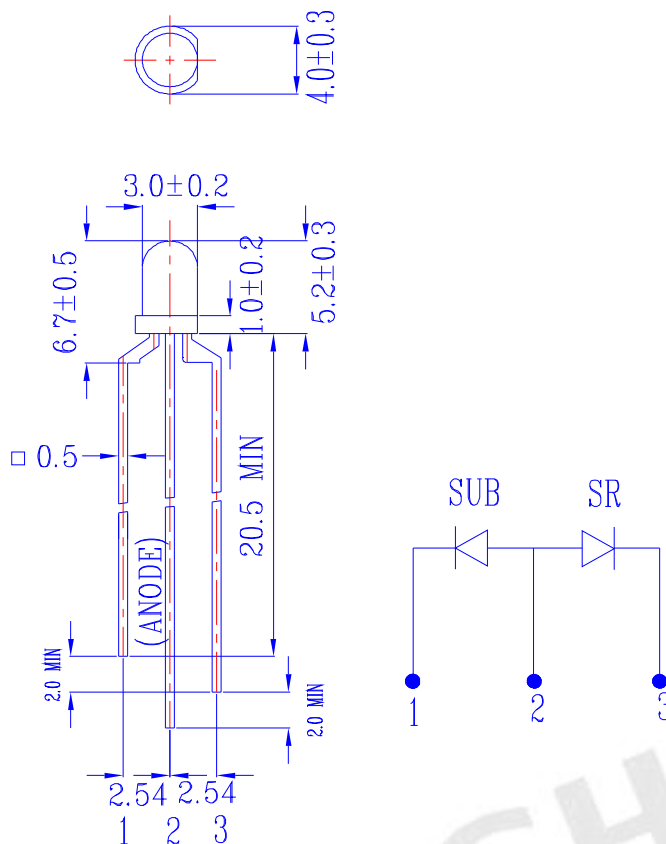
Revision : 1

LifecyclePhase: 正式發行

Release Date:2010-09-30 10:35:32.0

Expired Period: Forever

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 $\pm 0.25\text{mm}$.

Absolute Maximum Ratings at $T_a = 25$

Parameter	Symbol	Rating		Unit
Forward Current	I_F	SR	40	mA
		SUB	25	
Operating Temperature	T_{opr}	-40 to +85		
Storage Temperature	T_{stg}	-40 to +100		
Soldering Temperature	T_{sol}	260		
Electrostatic Discharge	ESD	SR	2000	V
		SUB	150	
Power Dissipation	P_d	SR	110	mW
		SUB	130	
Reverse Voltage	V_R	5		V

Note: *1: I_{FP} Conditions --Pulse Width 1msec and Duty 1/10.

*2: Soldering time 5 seconds.



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Electro-Optical Characteristics (Ta=25 °C)

Parameter	Symbol		Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	SR	16	32	/	mcd	IF= 20 mA
		SUB	25	50	/		
Viewing Angle	2 θ 1/2		/	70	/	deg	IF= 20 mA
Peak Wavelength	λ p	SR	/	660	/	nm	IF= 20 mA
		SUB	/	466	/		
Dominant Wavelength	λ d	SR	/	643	/	nm	IF= 20 mA
		SUB	/	470	/		
Spectrum Radiation Bandwidth	λ	SR	/	20	/	nm	IF= 20 mA
		SUB	/	35	/		
Forward Voltage	VF	SR	/	1.7	2.4	V	IF= 20 mA
		SUB	/	3.4	4		
Reverse Current	IR	SR	/	/	10	μ A	VR= 5 V
		SUB	/	/	10		



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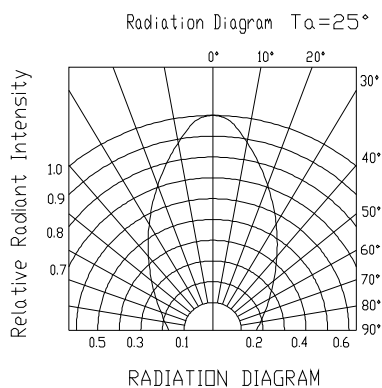
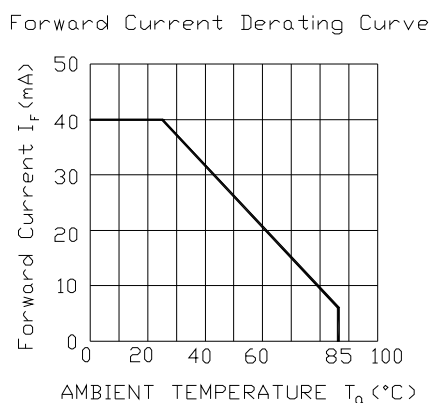
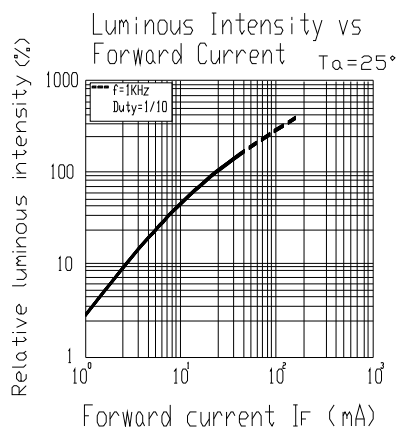
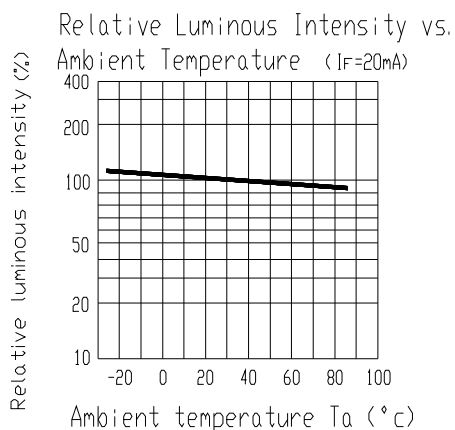
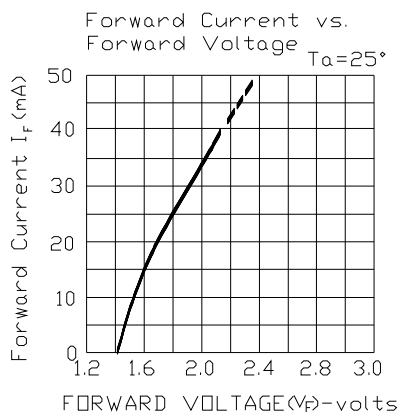
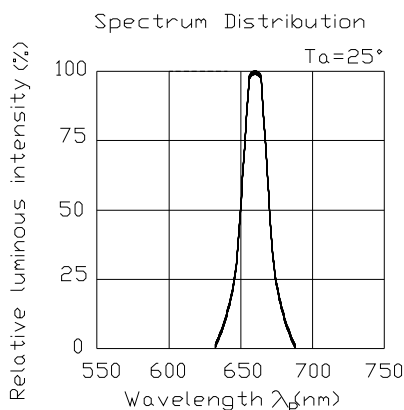
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Typical Electro-Optical Characteristic Curves:

(SR)





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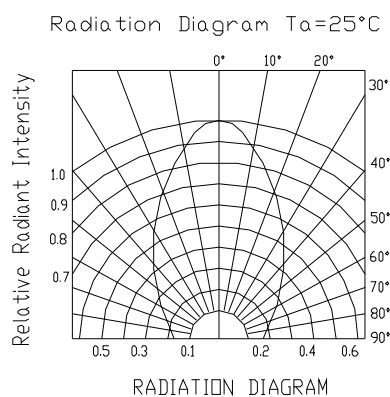
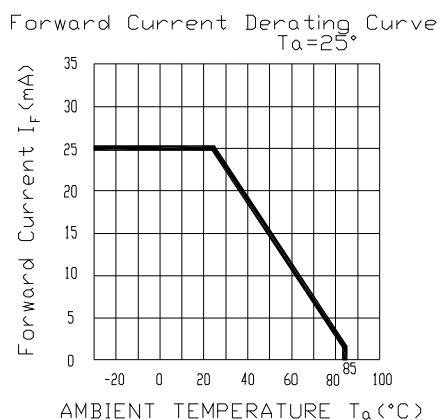
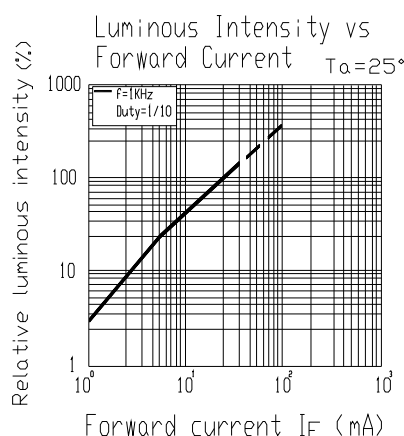
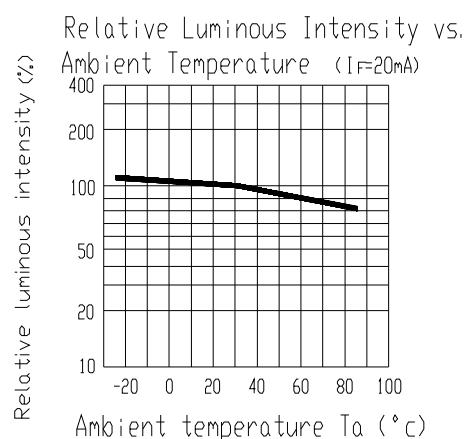
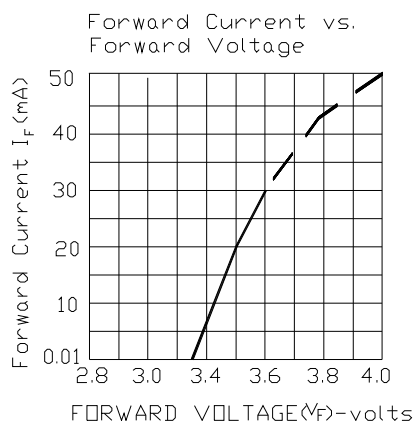
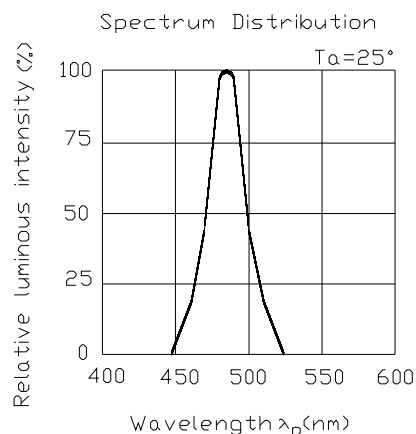
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Typical Electro-Optical Characteristic Curves:

SUB





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■ Reliability test items and conditions:

NO	Item	Test Conditions	Test Hours/Cycle	Size	Failure Judgment Criteria	Ac/Re
1	Solder Heat	TEMP : 260 ± 5	10 SEC	76 PCS	Iv Ivt*0.5 or Vf U or Vf L	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

Note : Ivt : To test Iv value of the chip before the reliability test

Iv : The test value of the chip that has completed the reliability test

U : Upper Specification Limit

L : Lower Specification Limit



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Packing Quantity Specification

1. 500PCS/1Bag, 4Bags/1Box
2. 10Boxes/1Carton

Label Form Specification

	EVERLIGHT	
CPN: P/N:		
	RoHS	
209-3SRSUBW/S400-A6/R2		
QTY:	CAT:	
	HUE:	
LOT NO:	REF:	
Reference:		

CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Dominant Wavelength

REF: Reference

LOT No: Lot Number

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.
3. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.

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