



# Technical Data Sheet

## 5463SURD/S400-A8/MS

### Features

- High luminous intensity output
- Oval Shape
- Well defined spatial radiation
- Wide viewing angle (2<sub>1/2</sub>) : 110° / 50°
- UV resistant epoxy
- Pb free

### Descriptions

- This precision optical performance oval LED is specifically designed for passenger information signs
- This lamp has matched radiation patterns with yellow, blue Or green color mixing color applications
- Superior performance in outdoor environment



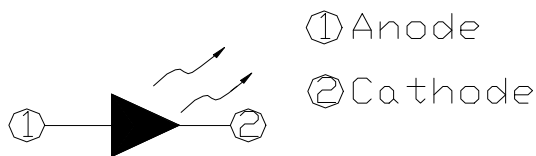
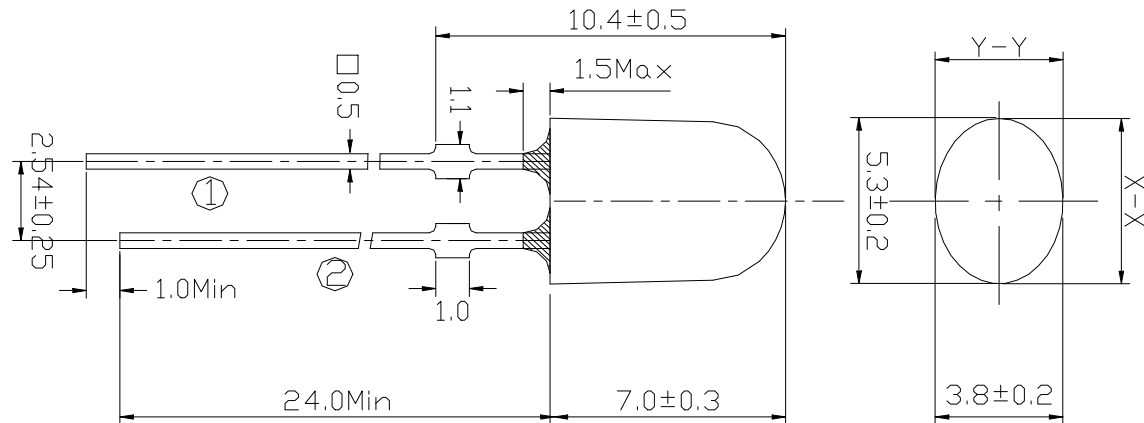
### Applications

- Full color/video signs
- Message boards
- Variable message signs (VMS)
- Commercial outdoor advertising

### Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
5463SURD/S400-A8/MS	AlGaInP	Hyper red	Red Diffused

**Package Dimensions**



**Notes:**

- \* Other dimensions are in millimeters, tolerance is 0.25mm except being specified.
- \* Protruded resin under flange is 1.5mm Max LED.
- \* Bare copper alloy is exposed at tie-bar portion after cutting.

**Absolute Maximum Rating (T<sub>a</sub>=25 °C)**

Parameter	Symbol	Absolute Maximum Rating	Unit
Forward Current	I <sub>F</sub>	50	mA
Pulse Forward Current (Duty 1/10@ 1KHz)	I <sub>FP</sub>	100	mA
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	
Electrostatic Discharge	ESD	2000	V
Soldering Temperature	T <sub>sol</sub>	260 ±5	
Power Dissipation	P <sub>d</sub>	115	mW
Reverse Voltage	V <sub>R</sub>	5	V

Notes: Soldering time 5 seconds.

**Electro-Optical Characteristics (T<sub>a</sub>=25 )**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I <sub>v</sub>	360	450	--	mcd	I <sub>F</sub> =20mA
Viewing Angle	2 <sub>1/2</sub>	--	X:110Y:50	--	deg	
Peak Wavelength	λ <sub>p</sub>	--	632	--	nm	
Dominant Wavelength	λ <sub>d</sub>	--	624	--		
Spectrum Half width		--	20	--		
Forward Voltage	V <sub>F</sub>	--	2.0	2.3	V	
Reverse Current	I <sub>R</sub>	--	--	10	μA	V <sub>R</sub> =5V

**Rank Combination (I<sub>F</sub>=20mA)**

Rank	E	F	G	H
Luminous Intensity	360~450	450~565	565~715	715~900

\*Measurement Uncertainty of Luminous Intensity: ±5% Unit:mcd

Rank	K	L	M
Forward Voltage	1.7~1.9	1.9~2.1	2.1~2.3

\*Measurement Uncertainty of Forward Voltage: ±0.1V Unit:V

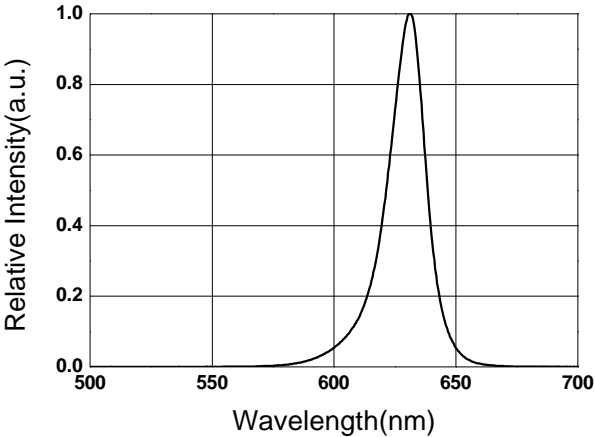
Rank	1	2	3
Dominant Wavelength	618~620	620~624	624~628

\*Measurement Uncertainty of Dominant Wavelength ±0.0nm Unit:nm

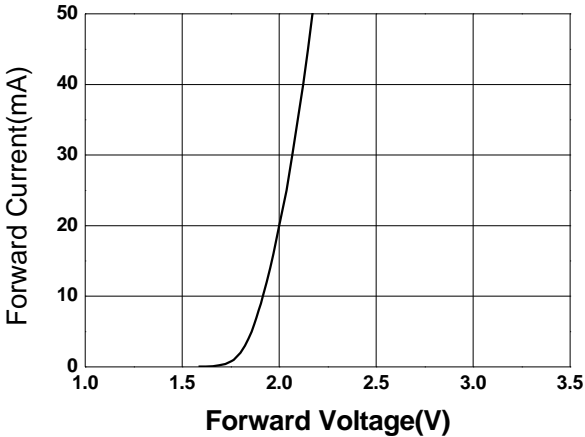
\*The quantity ratio of the ranks is decided by EVERLIGHT.

**Typical Electro-Optical Characteristics Curves**

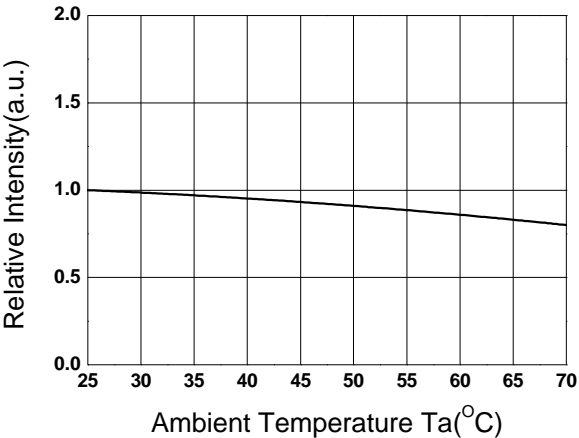
**Relative Intensity vs. Wavelength**



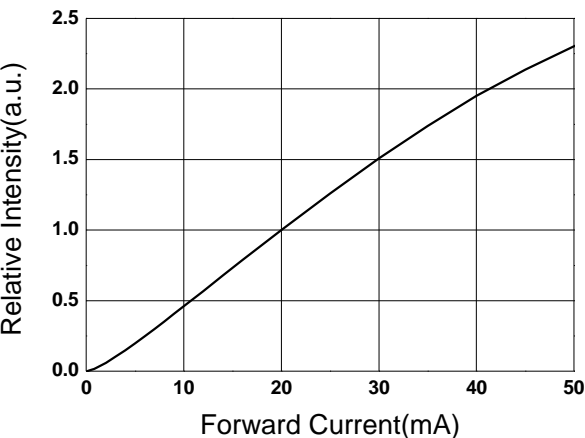
**Forward Current vs. Forward Voltage**



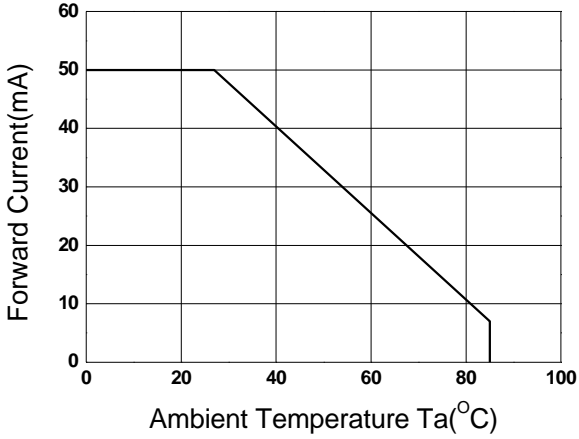
**Relative Intensity vs. Ambient Temp**



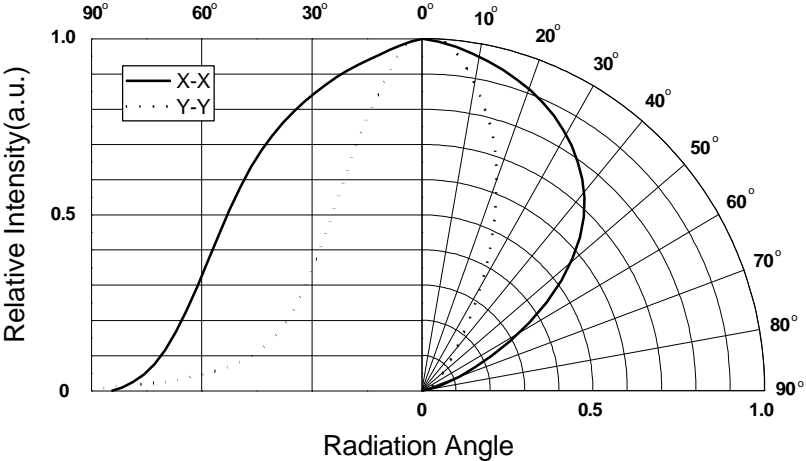
**Forward Current vs. Relative Intensity**



**Forward Current vs. Ambient Temp.**



**Radiation Characteristics**



**Reliability Test Items And Results**

No.	Items	Test Condition	Note	Number of Damaged
1	Temperature Cycle	100 °C => 25 °C => -40 °C => 25 °C 15min. 5min. 15min. 5min.	1000cycles	0/22
2	Thermal Shock	100 °C => 25 °C => -10 °C => 25 °C 5min. 10sec. 5min. 10sec.	1000cycles	0/22
3	Steady State Operating life of High Humidity heat	85 °C /R.H85% , I <sub>F</sub> =20mA	1000hrs.	0/22
4	Steady State Operating life of High Temperature	T <sub>a</sub> =85 °C , I <sub>F</sub> =10mA	1000hrs.	0/22
5	Steady State Operating life of Low Temperature	T <sub>a</sub> =-40 °C , I <sub>F</sub> =10mA	1000hrs.	0/22
6	Steady State Operating life	T <sub>a</sub> =25 °C , I <sub>F</sub> =50mA	1000hrs.	0/22
7	Soldering heat	Temp.260 °C ±5 °C ,5sec	1 time	0/22

Criteria for Judging the Damage

Item	Symbol	Test Conditions	Criteria for Judgement	
			Min	Max
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	---	U ±1.1
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	---	U ±2.0
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =20mA	L ±0.7	---

U :Upper Specification limit

L :Lower Specification limit



## 5463SURD/S400-A8/MS

### Packing Quantity Specification

1.500PCS/1Bag , 5Bags/1Box

2.10Boxes/1Carton

### Label Form Specification

CPN:	
P/N:	
5463SURD/S400-A8/MS	
QTY :	CAT:
LOT NO :	HUE:
	REF:
MADE IN TAIWAN	

CPN: Customer's Production Number  
P/N : Production Number  
5463SURD/S400-A8/MS:Production name  
QTY: Packing Quantity  
CAT: Ranks of Luminous and Forward Voltage  
HUE: Ranks of Dominant 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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