



LSC020110 (10 Watt Round Series)

Absolute Maximum Ratings

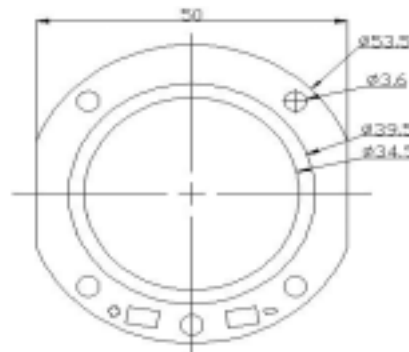
(Ta=25 )

Parameter	Symbol	Typ	Unit
DC Forward Voltage	V <sub>F</sub>	33	V
DC Forward Current	I <sub>F</sub>	300	mA
Power Dissipation	P <sub>D</sub>	10	W
Operation Temperature Range	Tope	-40 ~ +60	
Storage Temperature Range	Tsto	-40 ~ +80	
Junction Temperature	T <sub>j</sub>	110	

Electrical / Optical Characteristics

(Ta=25 )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
DC Forward Voltage	V <sub>F</sub>	32	33	35	V	I <sub>F</sub> =300mA
Color Temperature Cool White	CCT	5000	5500	6000	K	I <sub>F</sub> =300mA
Color Temperature Natural White	CCT	4300	4500	4700	K	I <sub>F</sub> =300mA
Color Temperature Warm White	CCT	2700	3000	3500	K	I <sub>F</sub> =300mA
Luminous Flux *Cool White	Flux	680	850	/	LM	I <sub>F</sub> =300mA
Luminous Flux *Natural White	Flux	560	700	/	LM	I <sub>F</sub> =300mA
Luminous Flux *Warm White	Flux	600	750	/	LM	I <sub>F</sub> =300mA
Viewing Angle	2θ <sub>1/2</sub>	/	130	/	Deg	*



Ø53.5x2.5mm

Part No :

- LSC02011055-0A00 (Cool White)
- LSC02011045-0A00 (Natural White)
- LSC02011030-0A00 (Warm White)

Note :

1. All dimensions are in millimeters.
2. Tolerances are ±0.2 mm, unless otherwise noted.
3. Specifications are subject to change without prior notice.

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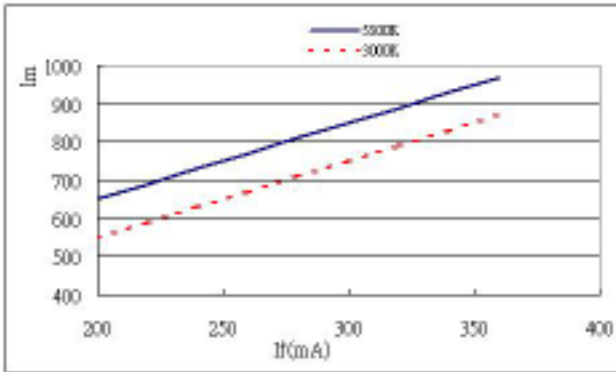
248:台北縣五股鄉中興路一段176巷2號. Tel: 886-2-2980-9000. Fax: 886-2-29803000.



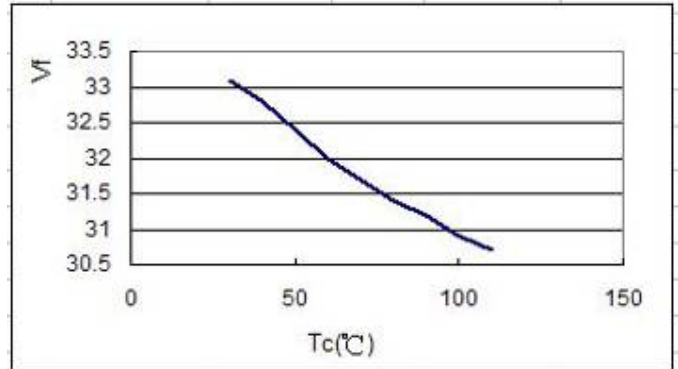
## Characteristics

( $T_a = 25^\circ\text{C}$ )

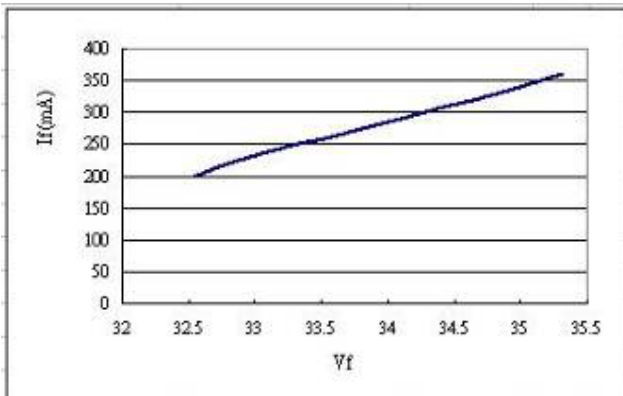
Forward Current vs Relative luminous Flux



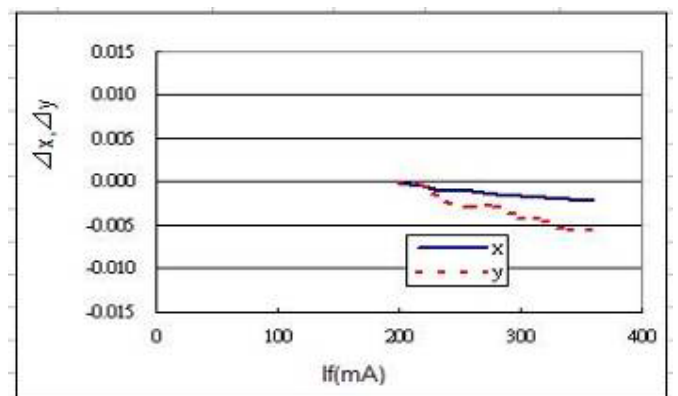
Temperature vs Forward Voltage



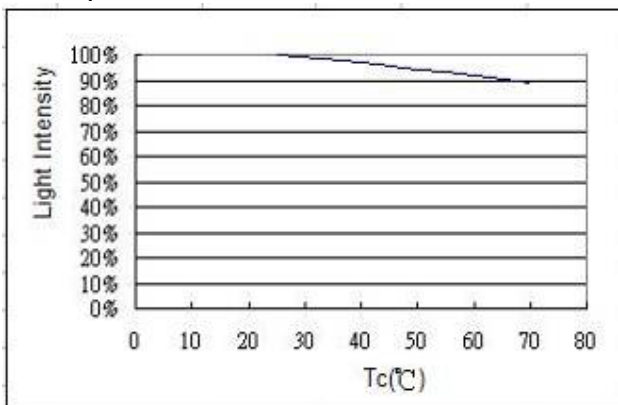
Forward Voltage vs Forward Current



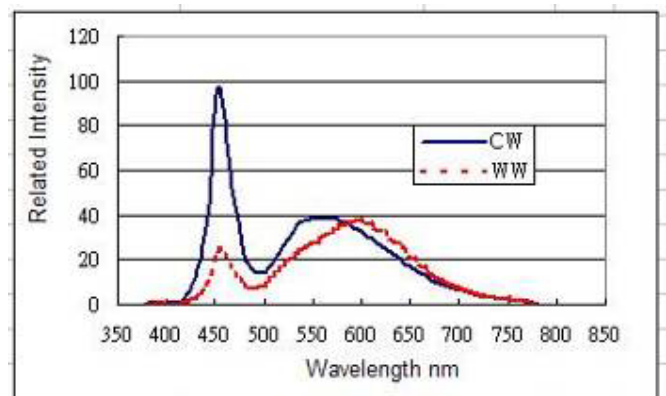
Forward Current vs Chromaticity Coordinate



Temperature vs Relative Luminous Flux



Spectrum



Note :

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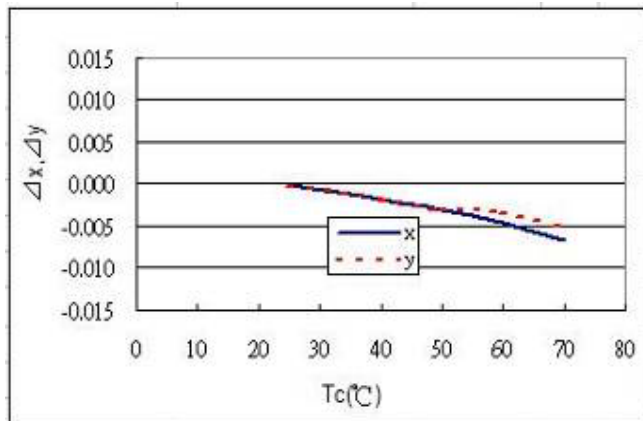
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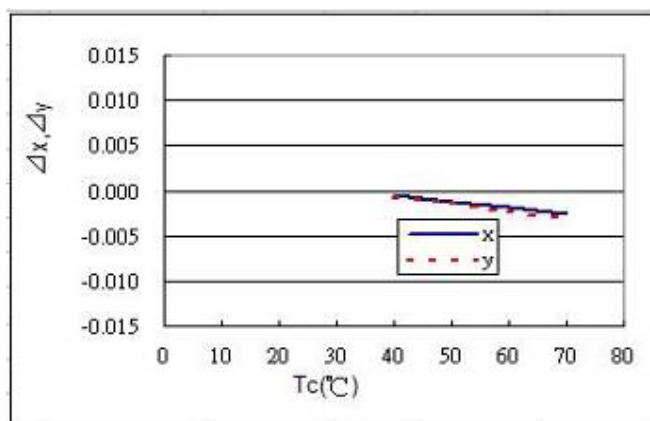
P 2/5

Temperature vs Chromaticity Coordinate



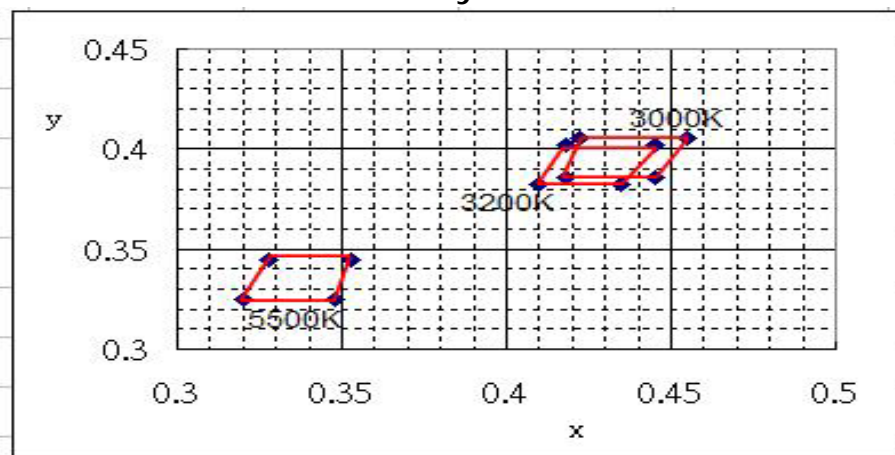
Cool White

Temperature vs Chromaticity Coordinate



Warm White

Chromaticity Coordinate



Chromaticity coordinates (Condition : IF=300mA, Ta=25 )

Color Rank	x	y	Color Rank	x	y	Color Rank	x	y
Cool White 5500K	0.320	0.325	Warm White 3200K	0.410	0.382	Warm White 3000K	0.418	0.386
	0.328	0.345		0.418	0.402		0.422	0.405
	0.348	0.325		0.435	0.382		0.445	0.386
	0.353	0.345		0.445	0.402		0.455	0.405

Note :

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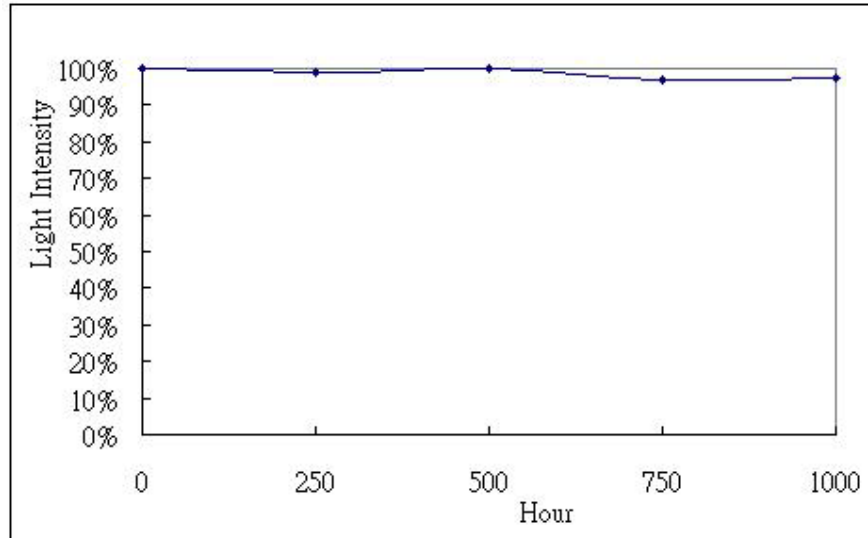
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Reliability Test Data



Ta=25 , Tc=60 , If=300mA

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### Precautions

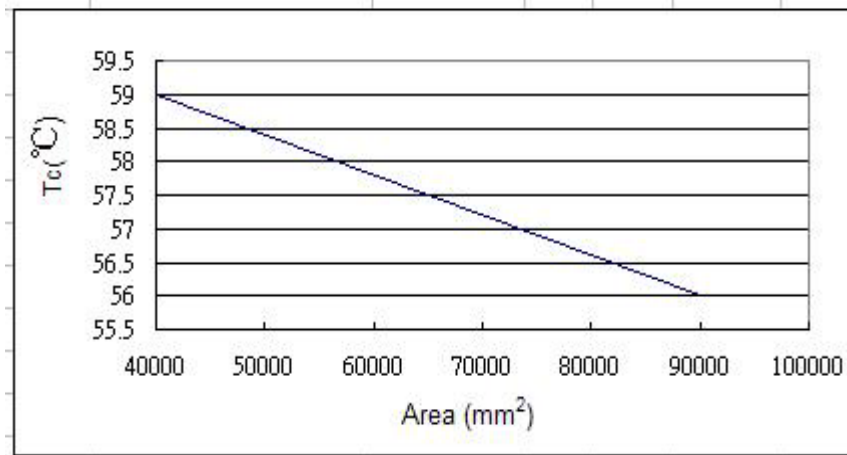
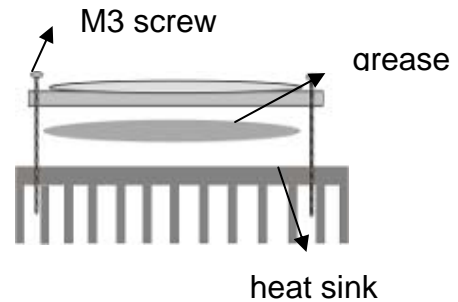
1. Avoid the application of external stress or any contact by a sharp metal to the resin .
  2. Fastened by an M3 screw on both sides of the product. While clamping operation , please be careful not to apply any stress to the product.
  3. To dissipate heat efficiently, heat radiating grease should be applied to the whole rear surface.
  4. To keep damages away from static electricity, wearing a wristband gloves is recommended.
  5. Constant current circuit is recommended as a drive circuit, And when two or more LED packages are connected, the series connection between each package is recommended.  
Please design a circuit that prevents any reverse voltage (excess current) from being applied to this product instantaneously when the circuit is ON or OFF.
  - 6 The design of the heat release must consider both ambient temperature conditions and power dissipation .
  7. Using a 60W soldering iron is recommended. The temperature of a soldering iron should be adjusted to above 260 .
- Note: use ethyl alcohol to clean solder pad before soldering.

Thermal conductive area: ( Ta = 25 )

1. Material: Aluminum, Lot No: 5052
2. The Grease conductive of factor (3~5W/m.K)
3. Thickness : 1 mm
4. Detected position: Center of heat sink
5. Test condition: Natural Convection
6. Recommended operating temperature is under 60
7. Testing Size ( mm<sup>2</sup> ) : 200x200mm ,300x300mm

Operating Area : 40000mm<sup>2</sup>, Chip Temperature 59 ,Edge of material 34  
 90000mm<sup>2</sup>, Chip Temperature 56 ,Edge of material 29  
 Thermal Resistance : 1.2 /W

Above test result are provided for lamp fixture design reference only.



Total area space required for heat dissipation.

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