

**LSC020110 (10 Watt Round Series)**
**Absolute Maximum Ratings**
**(Ta=25°C)**

Parameter	Symbol	Typ	Unit
DC Forward Voltage	V <sub>F</sub>	34	V
DC Forward Current	I <sub>F</sub>	300	mA
Power Dissipation	P <sub>D</sub>	10	W
Operation Temperature Range	T <sub>ope</sub>	-30 ~ +60	°C
Storage Temperature Range	T <sub>sto</sub>	-30 ~ +80	°C
Junction Temperature	T <sub>j</sub>	110	°C

**Electrical / Optical Characteristics**
**(Ta=25°C)**

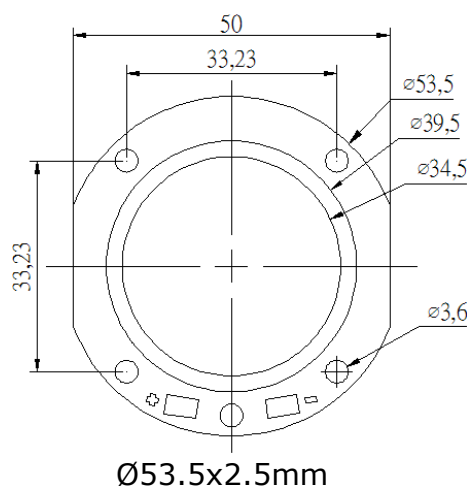
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
DC Forward Voltage	V <sub>F</sub>	33	34	35	V	I <sub>F</sub> =300mA
Color Temperature Cool White	CCT	5000	5500	6000	K	I <sub>F</sub> =300mA
Color Temperature Warm White	CCT	2700	3000	3500	K	I <sub>F</sub> =300mA
Luminous Flux *Cool White	Flux	/	850	/	LM	I <sub>F</sub> =300mA
Luminous Flux *Warm White	Flux	/	750	/	LM	I <sub>F</sub> =300mA
Color Rendering Index	CRI	/	80	/	%	I <sub>F</sub> =300mA
Viewing Angle	2θ1/2	/	130	/	Deg	*



Part No :

LSC02011055-0A00 (Cool 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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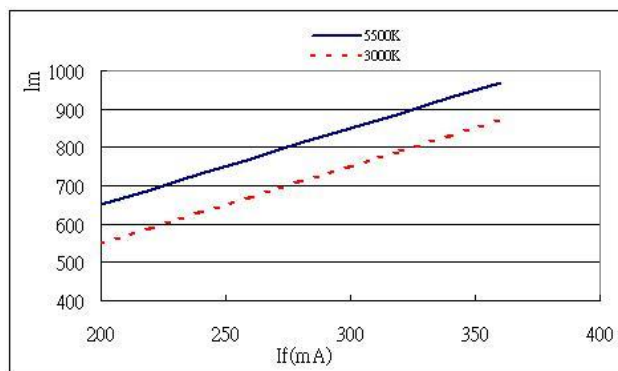
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Tel: +44 (0)1635 294606 Fax: +44 (0)1635 869200 Email: info@i-led.co.uk www.i-led.co.uk

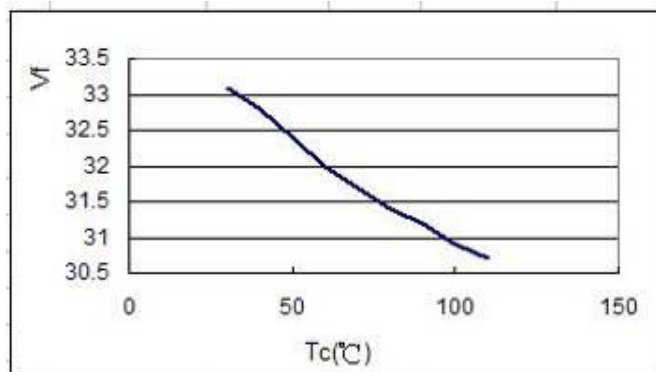
## ◆Characteristics

(Ta=25°C)

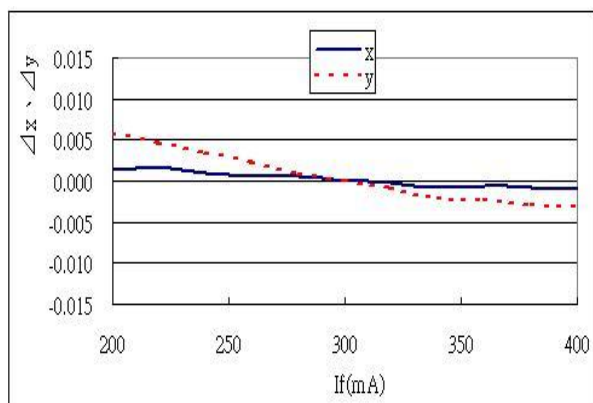
### ★Forward Current vs Relative luminous Flux



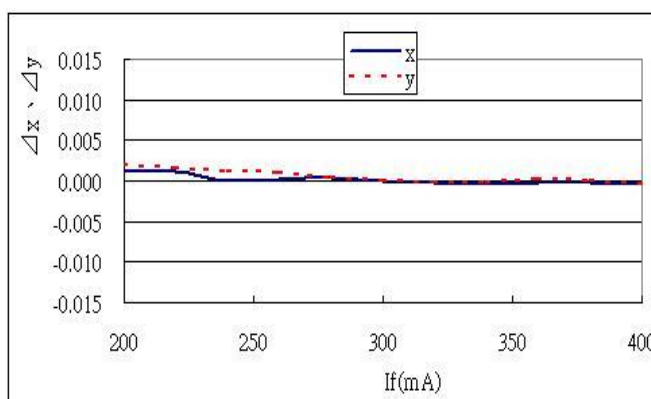
### ★Temperature vs Forward Voltage



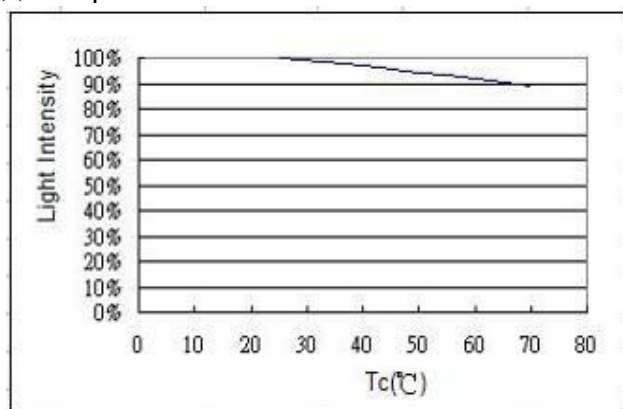
### ★(Cool White)Forward Current vs CIE



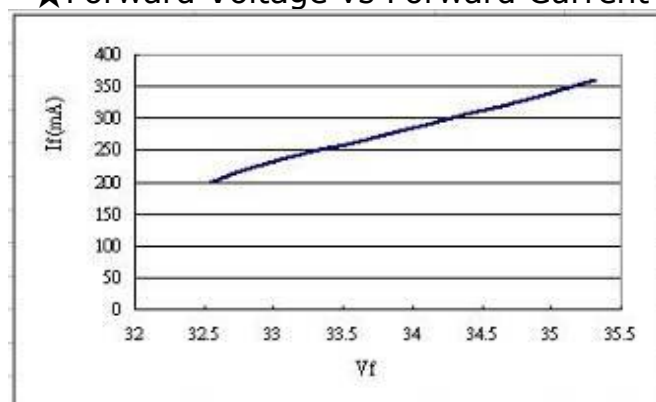
### ★(Warm White)Forward Current vs CIE



### ★Temperature vs Relative Luminous Flux



### ★Forward Voltage vs Forward Current



Note :

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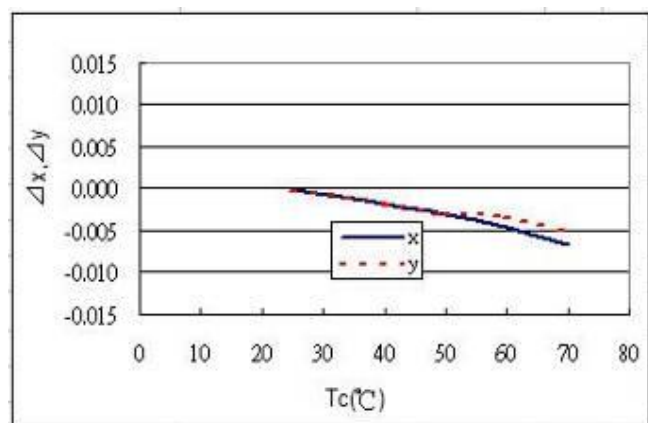
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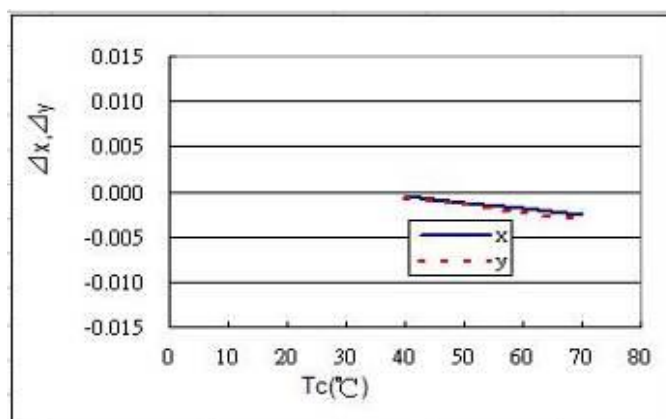
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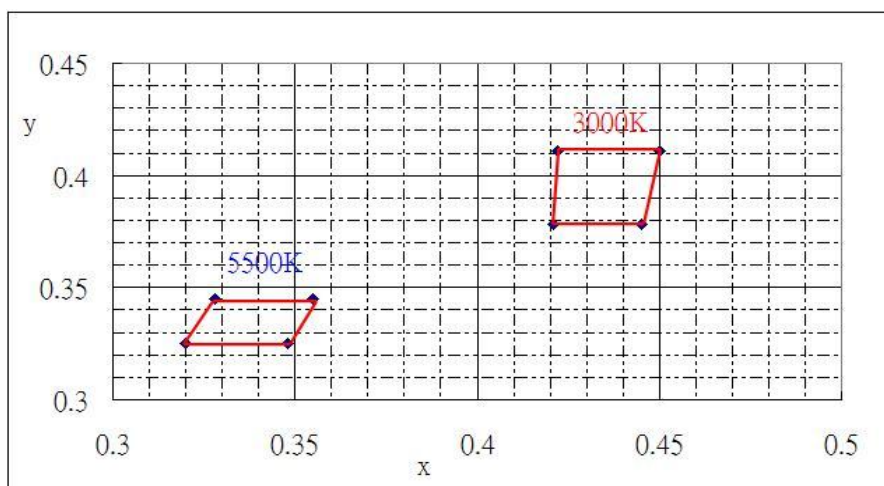
## ★Temperature vs CIE


Cool White

## ★Temperature vs CIE


Warm White

## ◆Chromaticity Coordinate


**Chromaticity coordinates (Condition : If=300mA,Ta=25°C)**

Color Rank	x	y	Color Rank	x	y
Cool White 5500K	0.320	0.325	Warm White 3000K	0.421	0.378
	0.328	0.345		0.422	0.411
	0.348	0.325		0.445	0.378
	0.353	0.345		0.450	0.411

Note :

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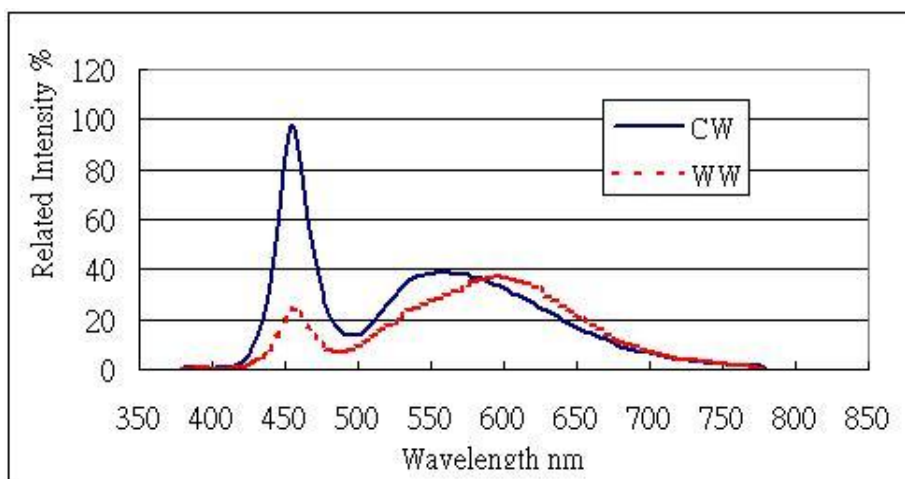
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★Spectrum



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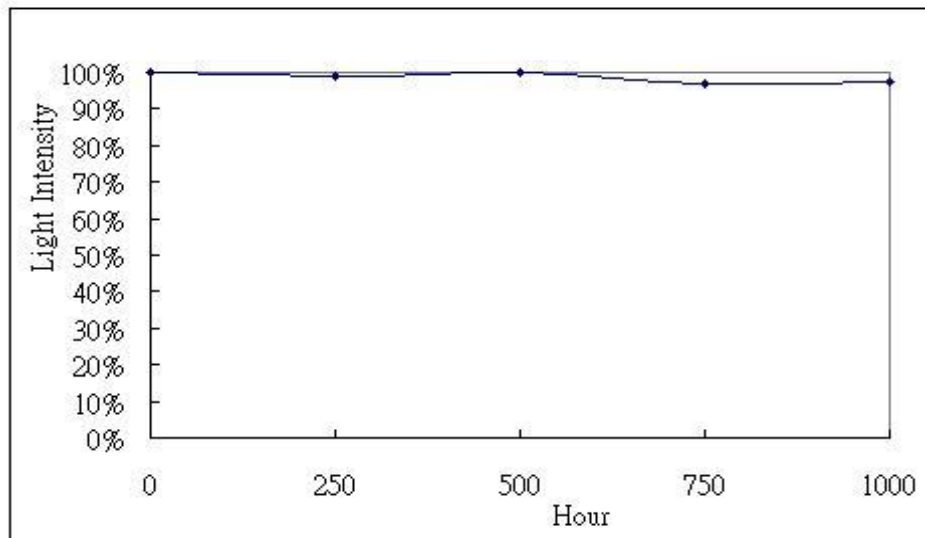
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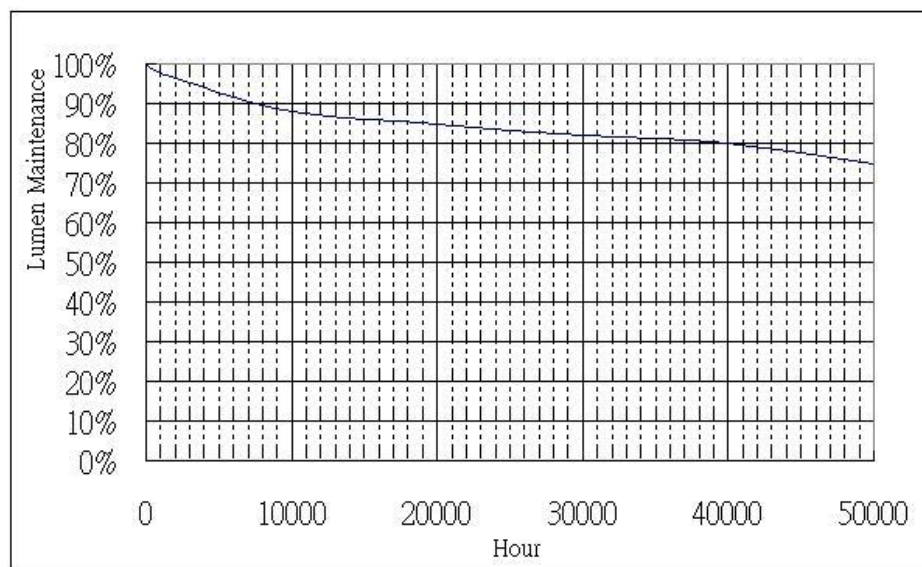
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## ★Reliability Test Data



$T_a=25^{\circ}\text{C}$ ,  $T_c=60^{\circ}\text{C}$ ,  $I_F=300\text{mA}$

## ★Lifetime Prediction



**Note :**  
 The above lifetime prediction is the estimated values, not the guaranteed values.  
 Lifetime prediction is subject to change since the life test is on going.  
 The above chart is based on actual measured values in the burning test performed up to 1000hrs.  
 The above values are calculated using the MTBF. (Mean time between failures)  
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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 , 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, 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°C.
- Note: use ethyl alcohol to clean solder pad before soldering.

Thermal conductive area: ( Ta = 25°C)

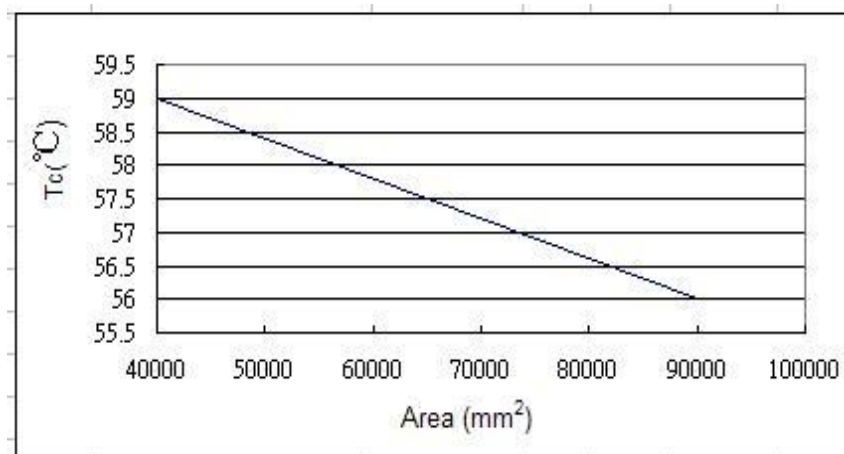
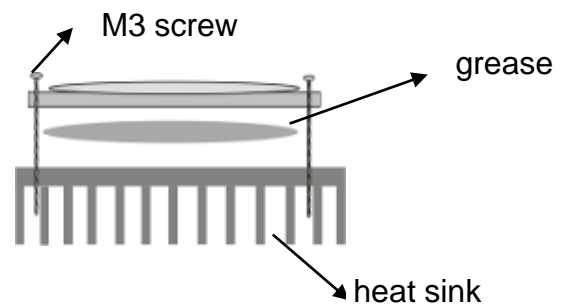
1. Material: Aluminum, Lot No: 5052
2. Grease conductive factor (3~5W/m.K)
3. Thickness : 1 mm
4. Detected position: Center of heat sink
5. Test condition: Natural Convection
6. Recommended operating temperature is under 60°C
7. Testina Size ( mm<sup>2</sup> ) : 200x200mm ,300x300mm

Operating Area : 40000mm<sup>2</sup>. Chip Temperature 59°C.Edge of material 34°C

90000mm<sup>2</sup>. Chip Temperature 56°C.Edge of material 29°C

Thermal Resistance : 1.2°C/W

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



Total area space required for heat dissipation.

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### Lumen Bin Code

Rank	Min	Typ	Max
A	45	~	55
B	55	~	65
C	65	~	85
D	85	~	105
E	105	~	125
F	125	~	155
G	155	~	195
H	195	~	235
I	235	~	285
J	285	~	345
K	345	~	425
L	425	~	515
M	515	~	625
N	625	~	765
<b>O</b>	<b>765</b>	~	<b>935</b>
P	935	~	1145
Q	1145	~	1400
R	1400	~	1710
S	1710	~	2090
T	2090	~	2550
U	2550	~	3120
V	3120	~	3810
W	3810	~	4660
X	4660	~	5700
Y	5700	~	6970
Z	6970	~	8520

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