

**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

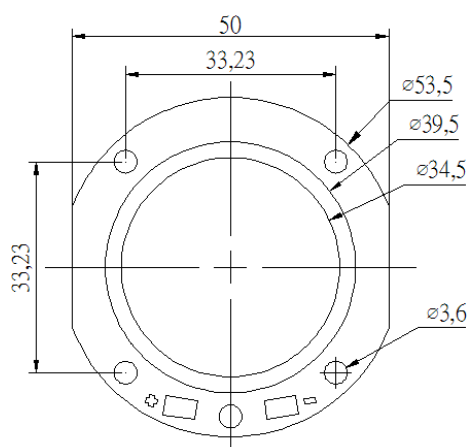
**Electrical / Optical Characteristics**
**(Ta=25°C)**

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 Natural White	CCT	4300	4500	4700	K	I <sub>F</sub> =300mA
Luminous Flux *Natural White	Flux	/	700	/	LM	I <sub>F</sub> =300mA
Color Rendering Index	CRI	/	80	/	%	I <sub>F</sub> =300mA
Viewing Angle	2θ1/2	/	130	/	Deg	*



Part No :

LSC02011045-0A00 (Natural White)



Ø53.5x2.5mm

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.

Rev.C

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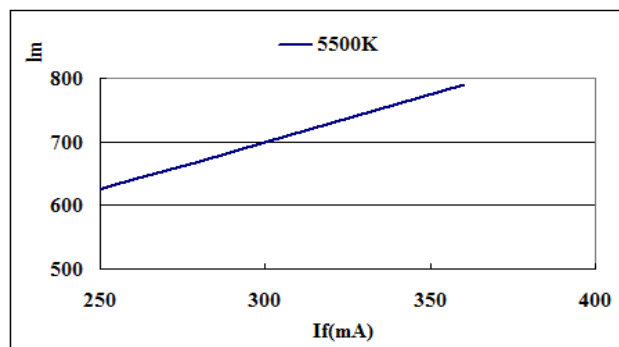
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Tel: +44 (0)1635 294606 Fax: +44 (0)1635 869200 Email: info@i-led.co.uk www.i-led.co.uk

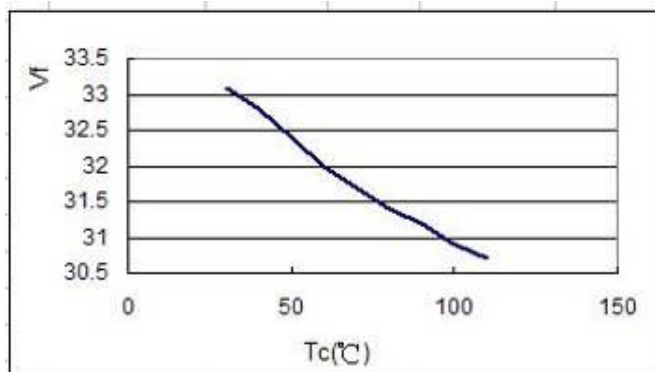
## ◆Characteristics

(Ta=25°C)

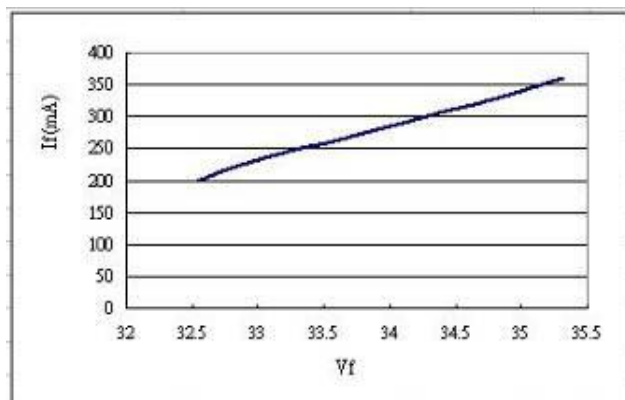
### ★Forward Current vs Relative luminous Flux



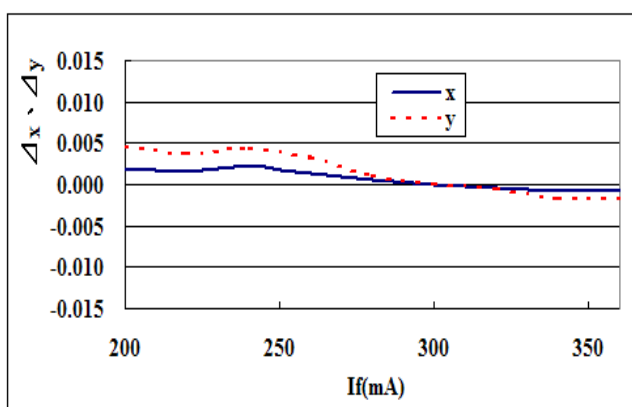
### ★Temperature vs Forward Voltage



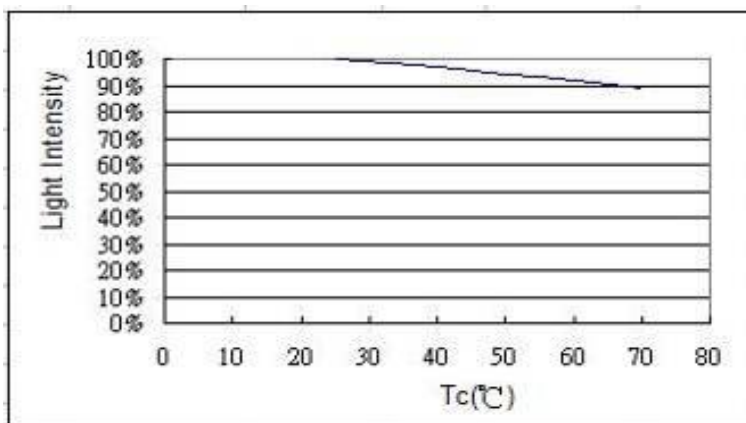
### ★Forward Voltage vs Forward Current



### ★Forward Current vs CIE



### ★Temperature vs Relative Luminous Flux



Note :

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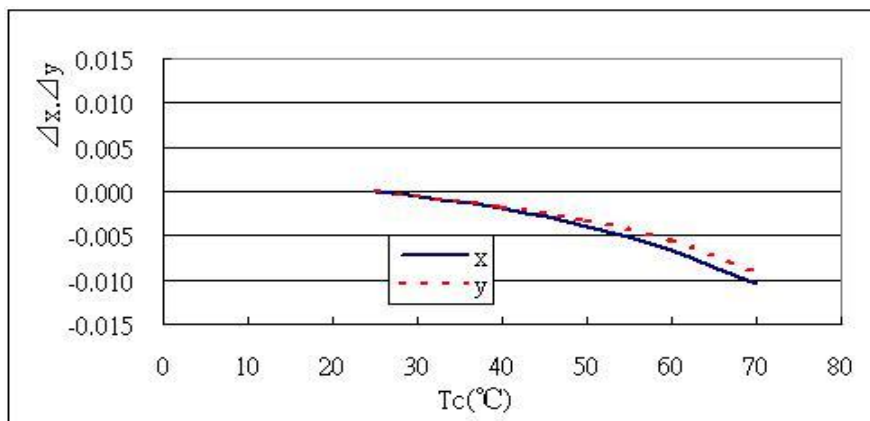
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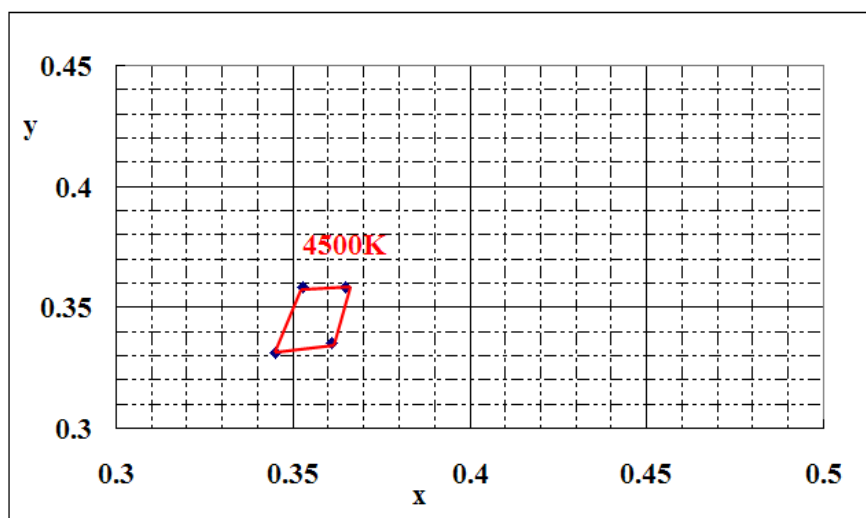
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### ★Temperature vs CIE



### ◆Chromaticity Coordinate



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

Color Rank	x	y
Natural White 4500K	0.353	0.358
	0.361	0.335
	0.365	0.358
	0.345	0.331

Note :

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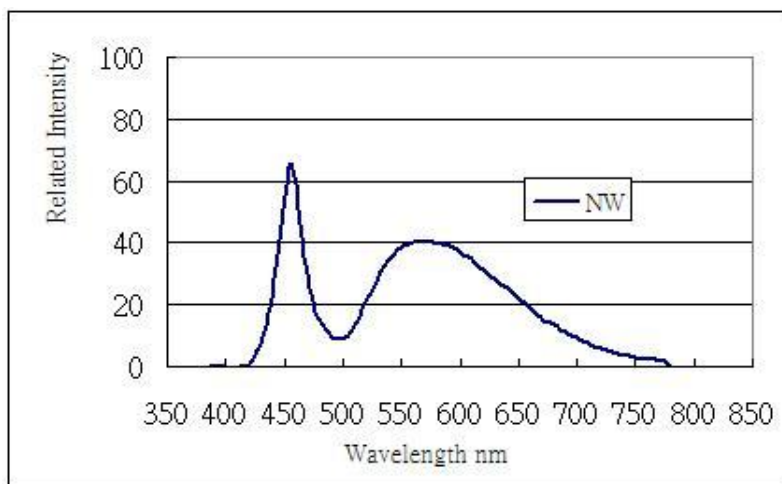
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★Spectrum



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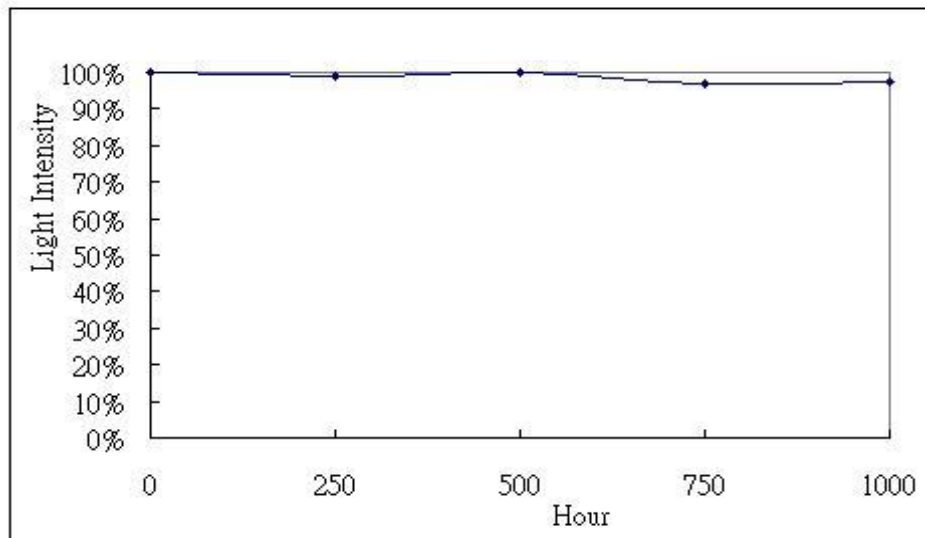
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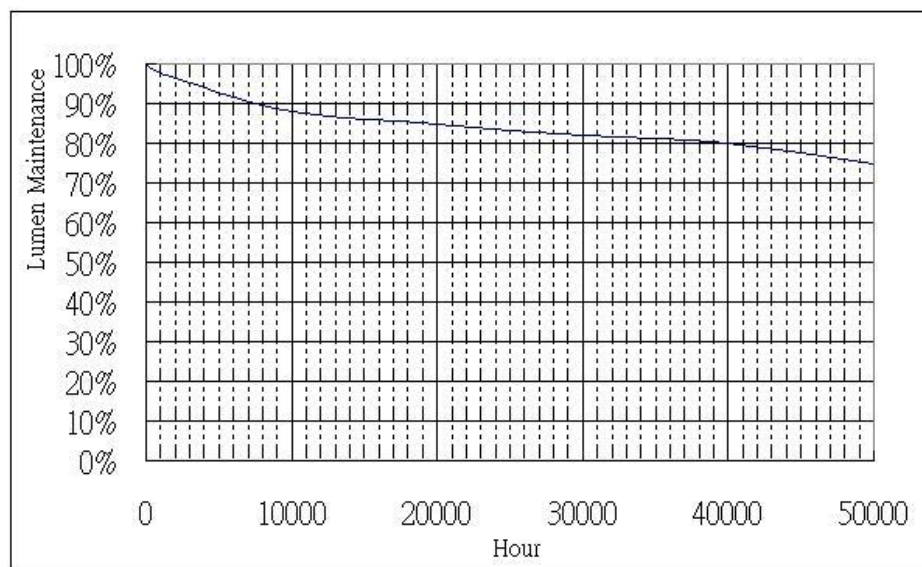
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## ★Reliability Test Data



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

## ★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 )

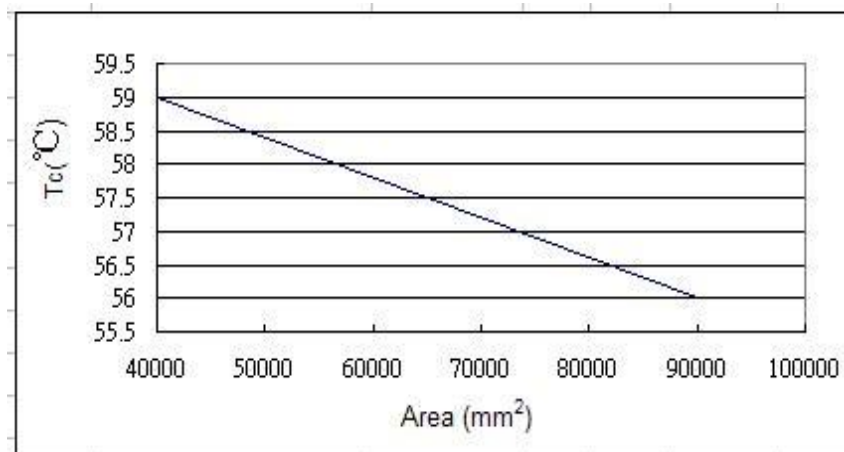
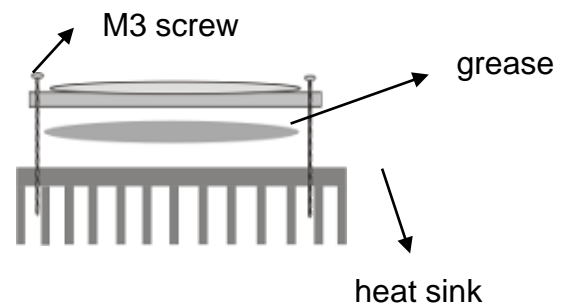
1. Material: Aluminum, Lot No: 5052
2. The Grease conductive factor (3~5W/m.K)
3. Thickness : 1 mm
4. Detected position: Center of heat sink
5. Test condition: Natural Convection
6. Recommended operating temperature is under 60°C
7. Testina Size ( mm<sup>2</sup> ) : 200x200mm ,300x300mm

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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