LUSTROUS®
GREEN TECHNOLOGY OF LIGHTINGS

Technical Datasheet LS 100

High Power Solid-State LED Light Source

CORAL C620

Introduction

For a brighter solid-state light source, Lustrous Technology is proud to release the new **CORAL C620**. Ideal for your high lumen output design, **CORAL C620** has the ability to generate extremely high lumen output from 1600 to 2,500 lm on one single LED product. The **CORAL C620** is energy efficient, and provides high efficiency while performing its high lumen for all types of Commercial and Architectural applications

CORAL C620 Part Number Matrix

Table.1

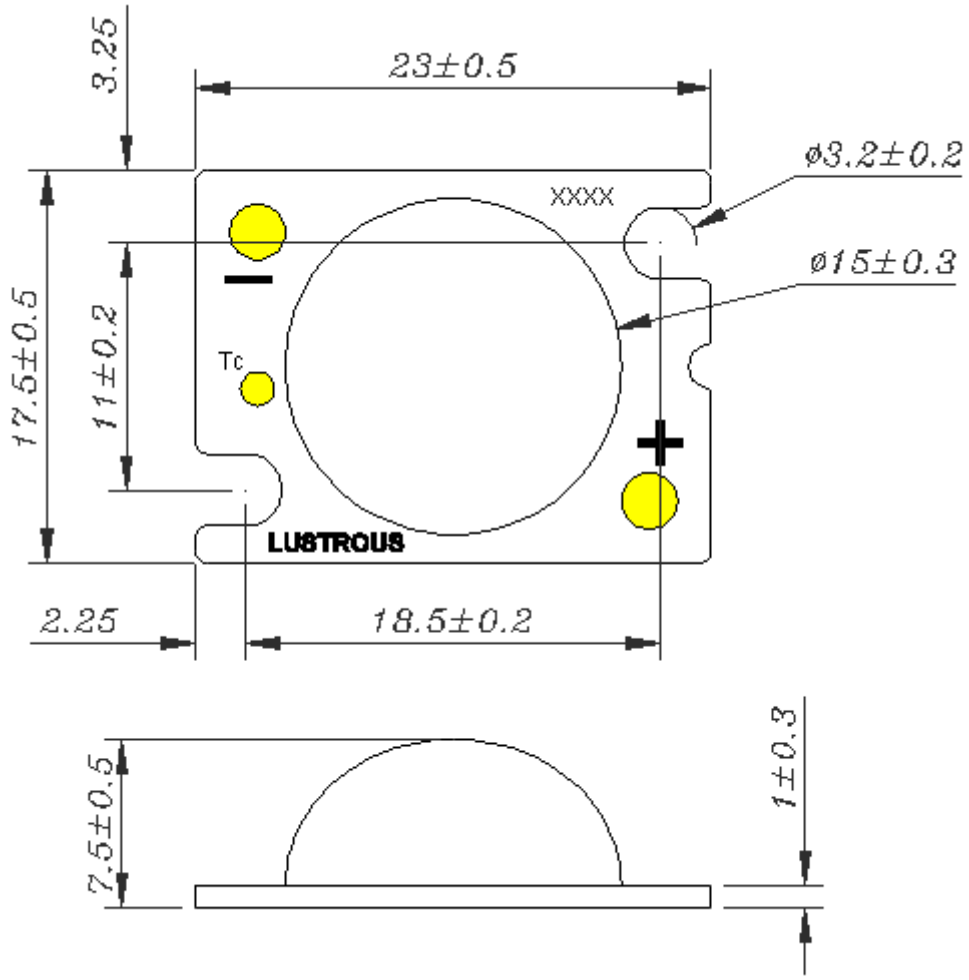
Color		P/N
Warm White	（3000K）	C620CLPIBA
Neutral White	（4000K）	C620MWPIBA
Cool White	（5700K）	C620NWPIBA

CORAL C620 Material

Chip Material	GaN Base

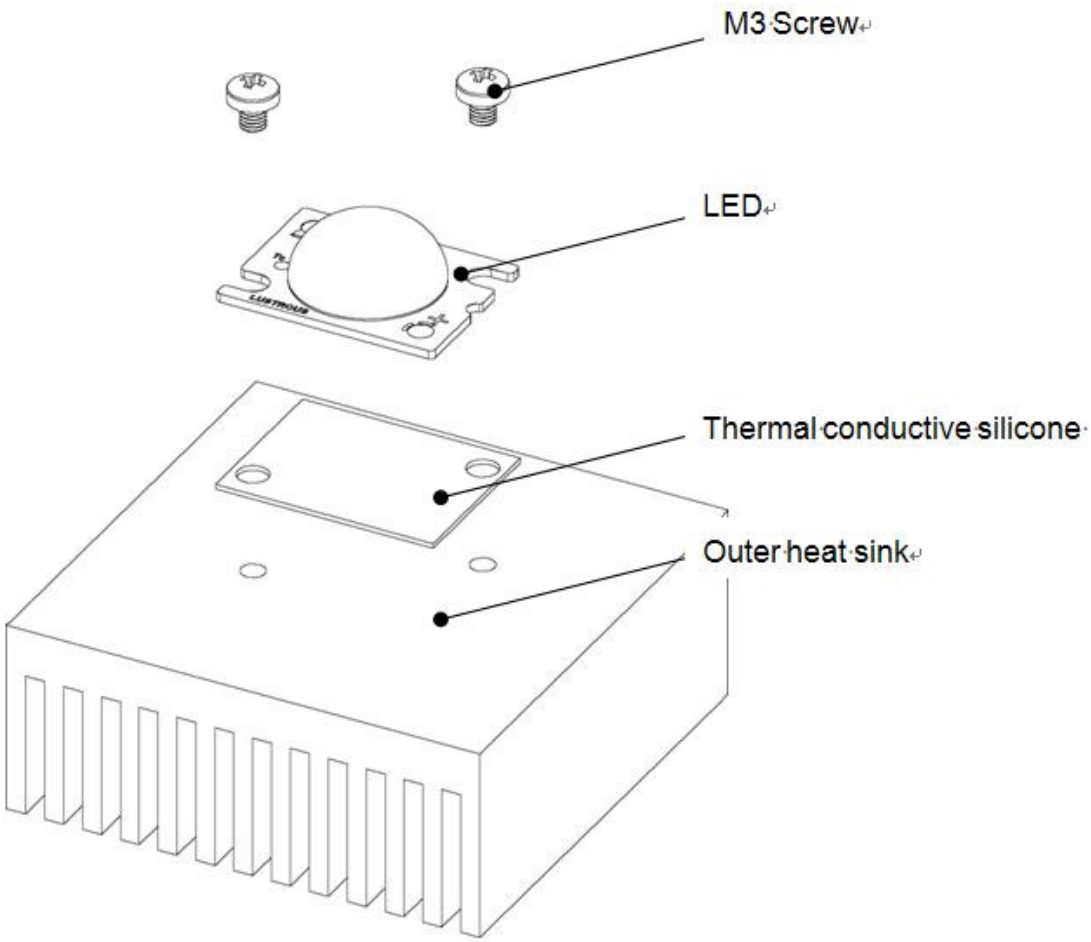
Mechanical Dimensions

CORAL C620



Note1：These drawings are not for scale.　All dimensions are in millimeters.

Recommended installation screw pitch



Warning:

Do not touch the lighting surface area during installation.

Flux Characteristics at 480mA, Junction Temperature T_j = 25°C

Table.2

Color		Luminous Flux（lm）	
		Min	Typ.
Warm White	（3000K）	1600	1800
Neutral White	（4000K）	1700	1900
Cool White	（5700K）	1800	2000

Note1：Luminous flux is measured in total power with a tolerance rate of ±10%. Minimum luminous flux performance is guaranteed from the above data.

Note2：Luminous binning information can be found in Table.7.

Optical Characteristics

Table.3

Color	CCT（K）	Viewing Angle（degrees）	CRI
Warm White	3000	~140	80
Neutral White	4000		
Cool White	5700		

Note1：CRI value is measured with a tolerance rate of ±5%.

Electrical Characteristics

Table.4

Color	Forward Voltage（V）for 480mA forward current		
	Min	Typ.	Max
Warm White	34.8	36.6	42
Neutral White			
Cool White			

Note1：Lustrous Technology allows a tolerance of each LED for voltage measurements.

Note2：Measurements are taken under typical forward current.

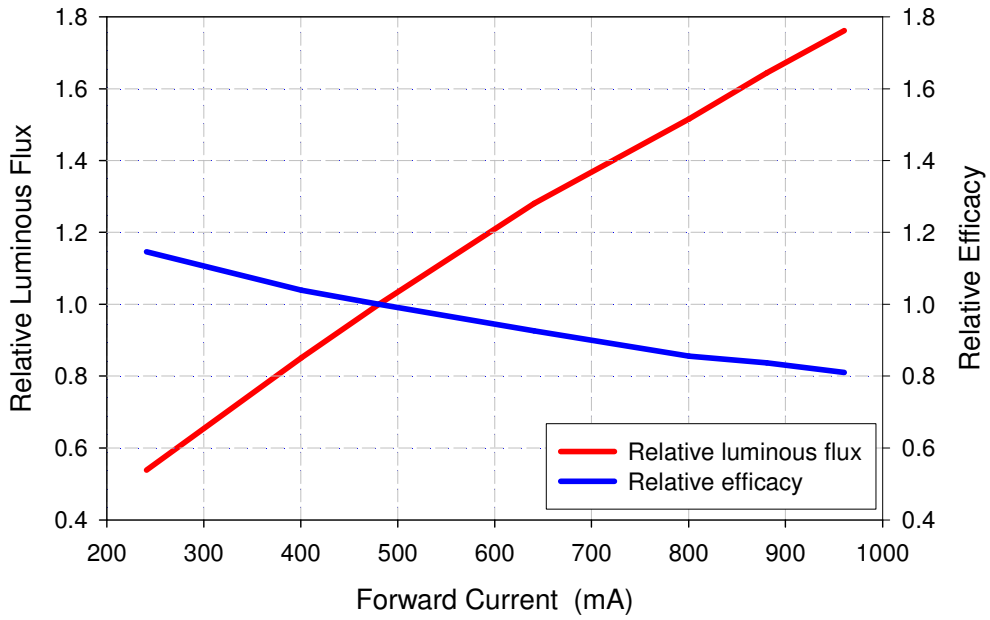
Absolute Maximum Ratings

Table.5

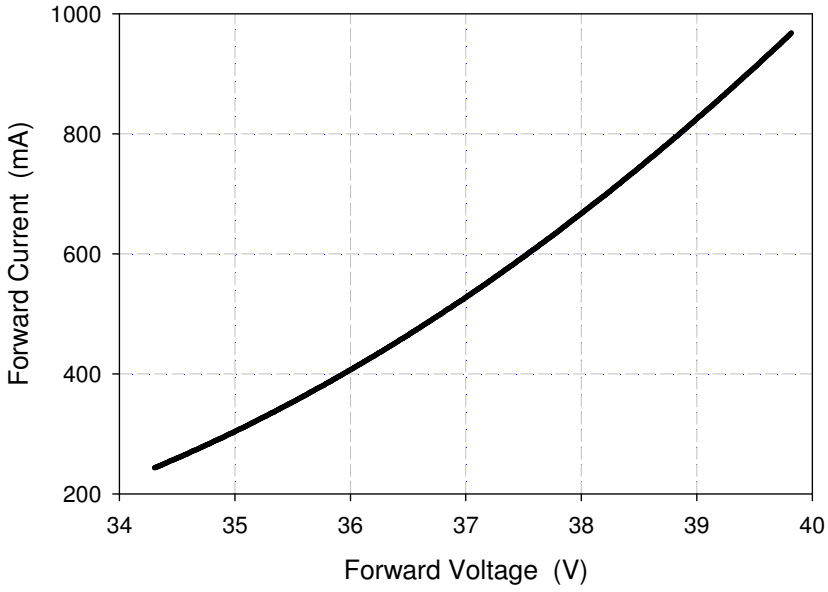
Parameters	For 480mA forward current
	Warm White/ Neutral White/ Cool White
Advised DC Forward Current（mA）	480
Max. DC Forward Current （mA）	960
LED Junction Temperature （℃）	< 125
ESD Sensitivity	+4kV （HBM）
Thermal Resistance （℃/W）	~1.2
LED Case Temperature, T_c （℃）	< 85
Storage Temperature （℃）	-20 ~ +50

Note1：Proper current operating must be observed to maintain junction temperature below the maximum.

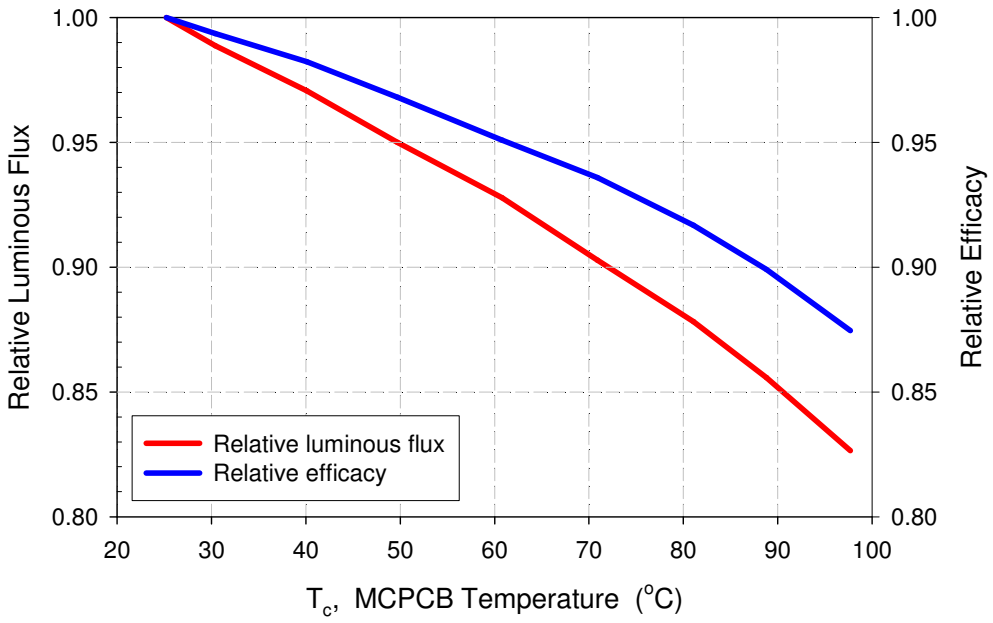
Relative Intensity vs. Current （T_j = 25˚C）



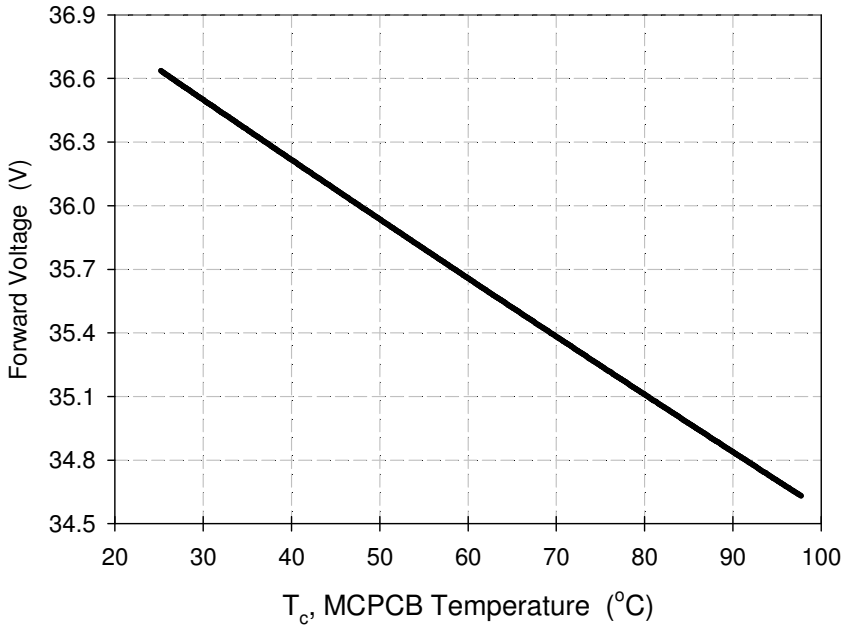
Forward Voltage vs. Current （T_j = 25˚C）



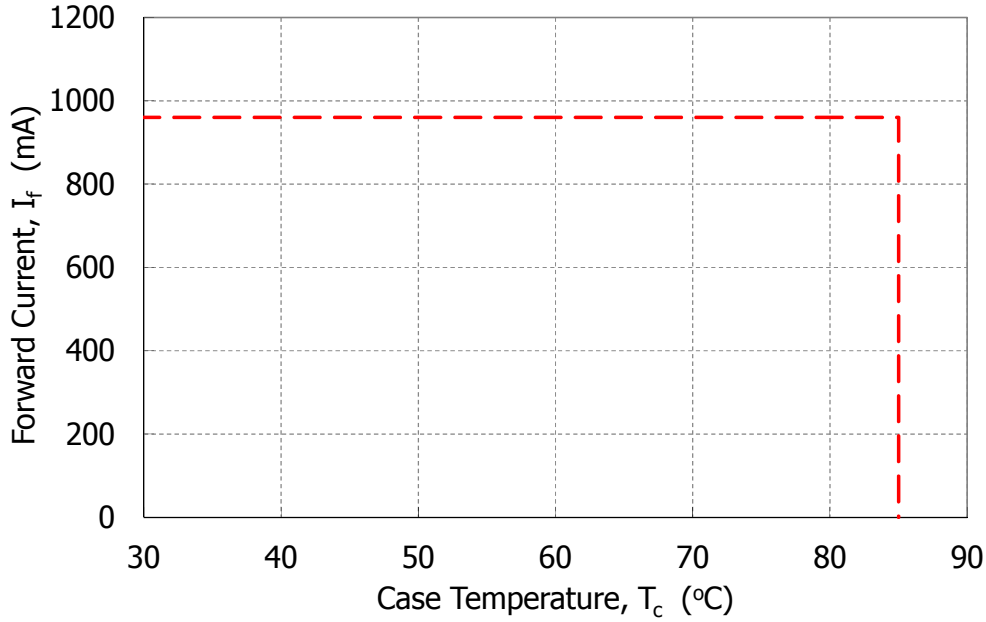
Photometric Output vs. Case Temperature （I_f = 480mA）



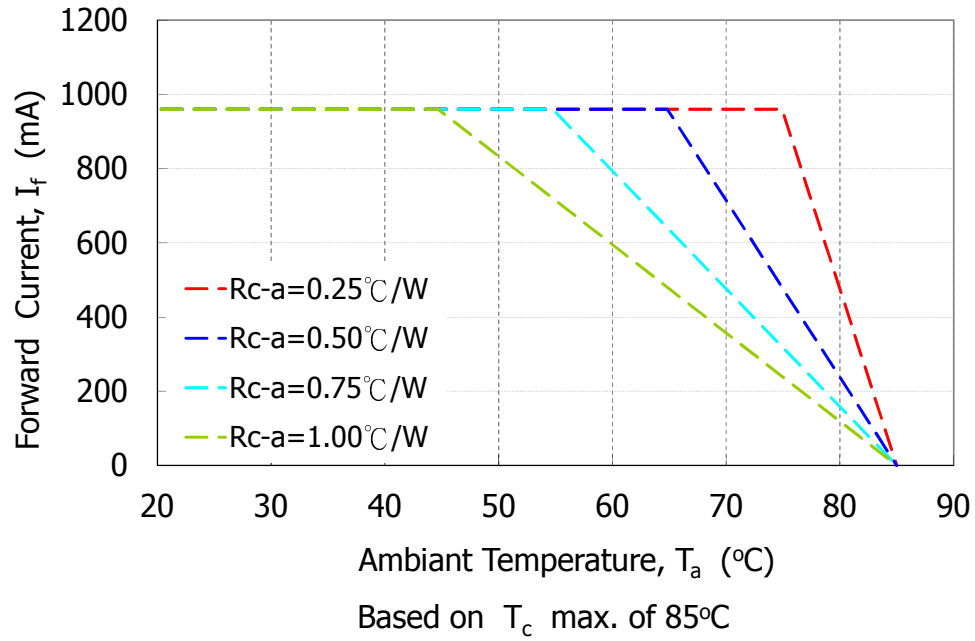
Forward Current vs. Case Temperature （I_f = 480mA）



Max Forward Current vs. Case Temperature

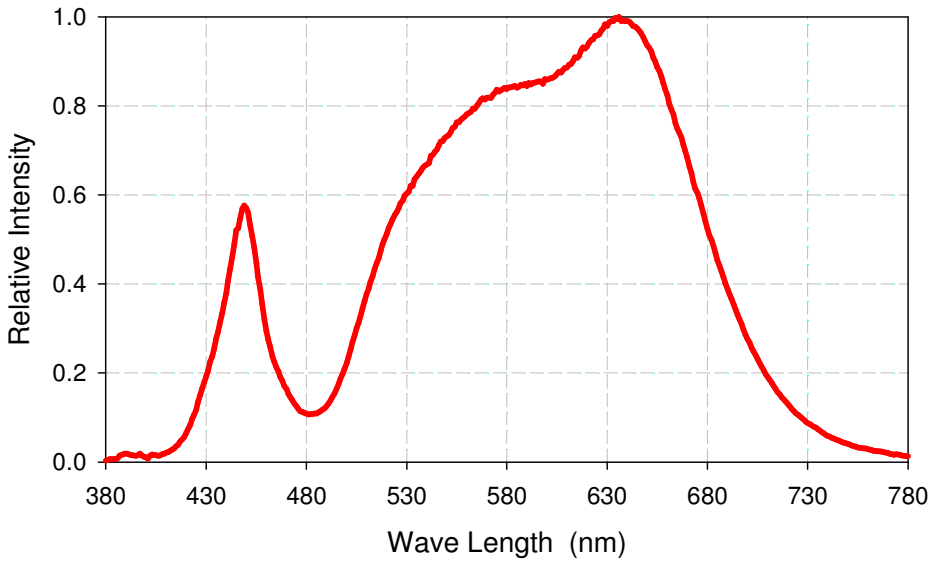


Max Forward Current vs. Ambient Temperature for Different Thermal Resistance of Heatsink

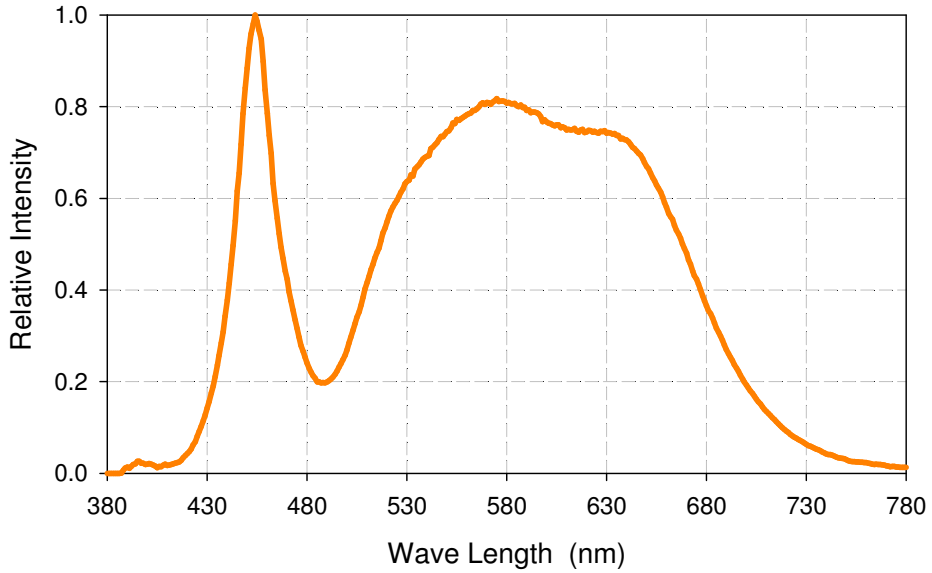


Relative Spectral Power

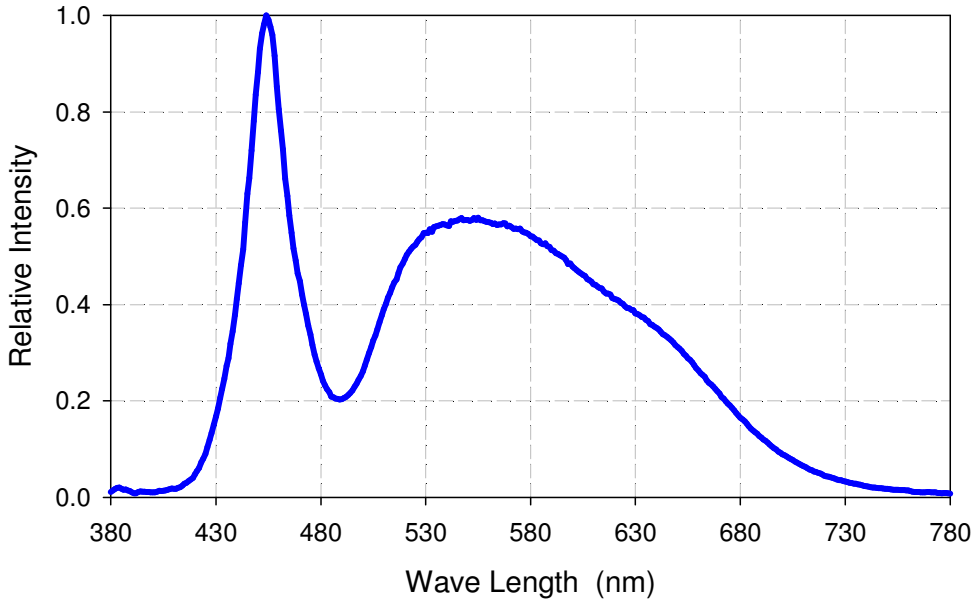
Warm White （3000K）



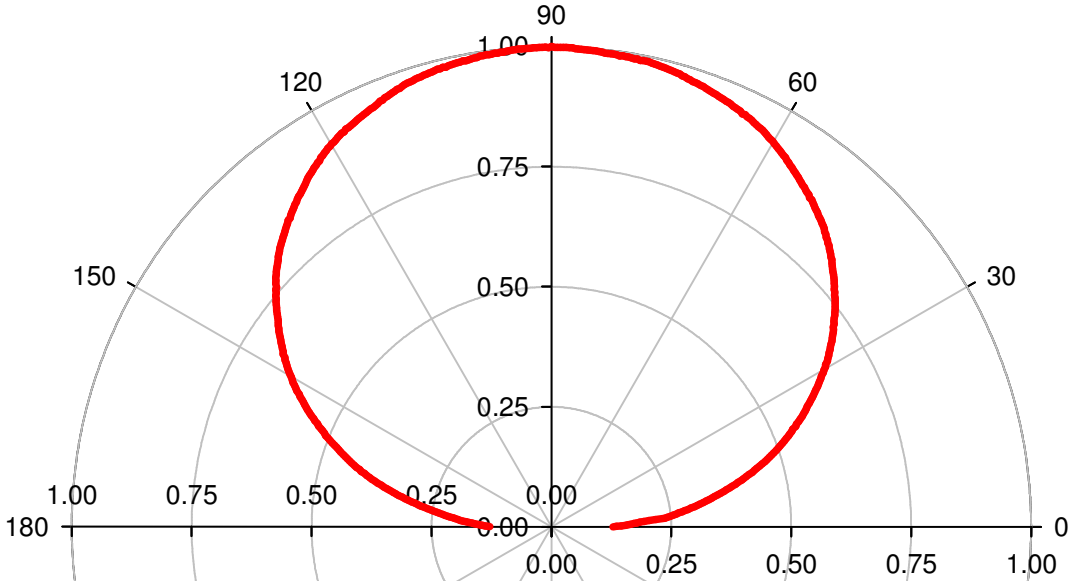
Neutral White （4000K）



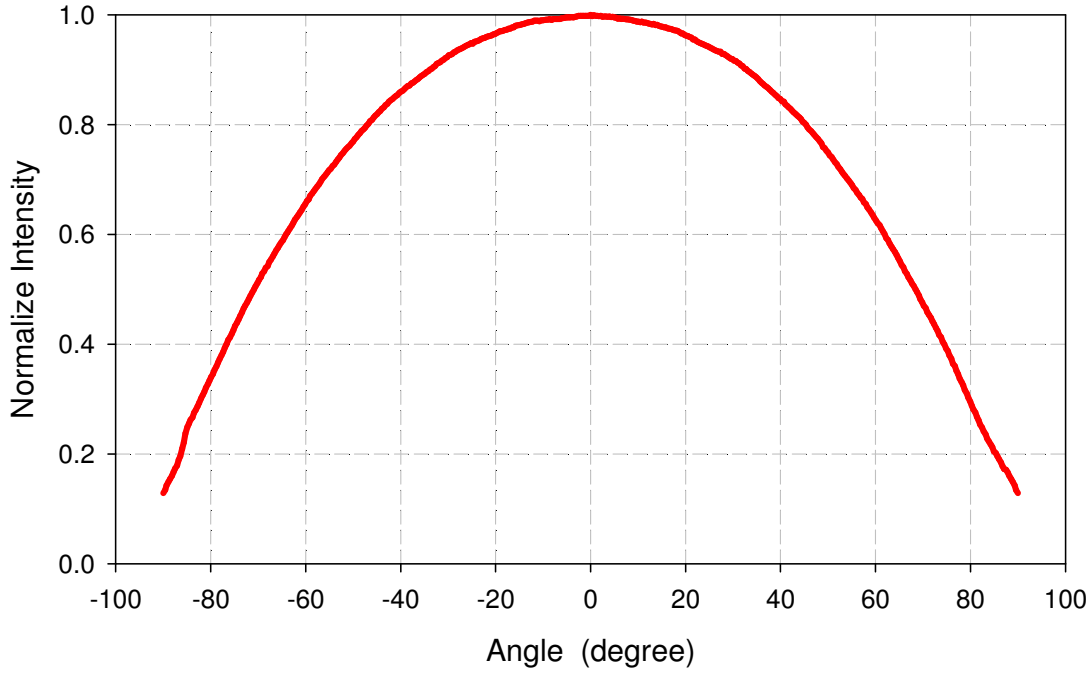
Cool White （5700K）



Typical Angular Beam Profile, T_j = 25 ˚C



View Angle: 140 degree



Note1：Photometrics data is ready on request.

Product Binning

In the manufacturing process, there is a natural variation of specifications between LEDs. In order to minimize variation in the end product of application, Lustrous Technology uses the ANSI C78.377 compliant 3-Step MacAdam Ellipse code binning procedures to measure its products for performance in luminous flux and chromaticity.

The tables below list the standard photometric bins for Lustrous LED products (tested and binned at the indicated test current). **Product availability in a particular bin varies by product and production run. Please contact your Lustrous sales representative for further information regarding product availability.**

Binning Condition

Table.6

Color	Forward Current （mA）
Warm White	480
Neutral White	
Cool White	

Luminous Flux Binning Information

Table.7

BIN Code	Lv （lm）	
	min.	max.
A	5	20
B	20	40
C	40	60
D	60	80
E	80	110
F	110	140
G	140	170
H	170	200
I	200	240
J	240	280
K	280	320
L	320	360
M	360	400
N	400	450
O	450	500

BIN Code	Lv （lm）	
	min.	max.
P	500	580
Q	580	660
R	660	740
S	740	860
T	860	980
U	980	1100
V	1100	1300
W	1300	1600
X	1600	2000
Y	2000	2500
Z	2500	3000
A1	3000	3600
A2	3600	4200
A3	4200	5000
A4	5000	5800

Note1：Luminous flux is measured in total power with a tolerance rate of ±10%.

Chromaticity Binning Information

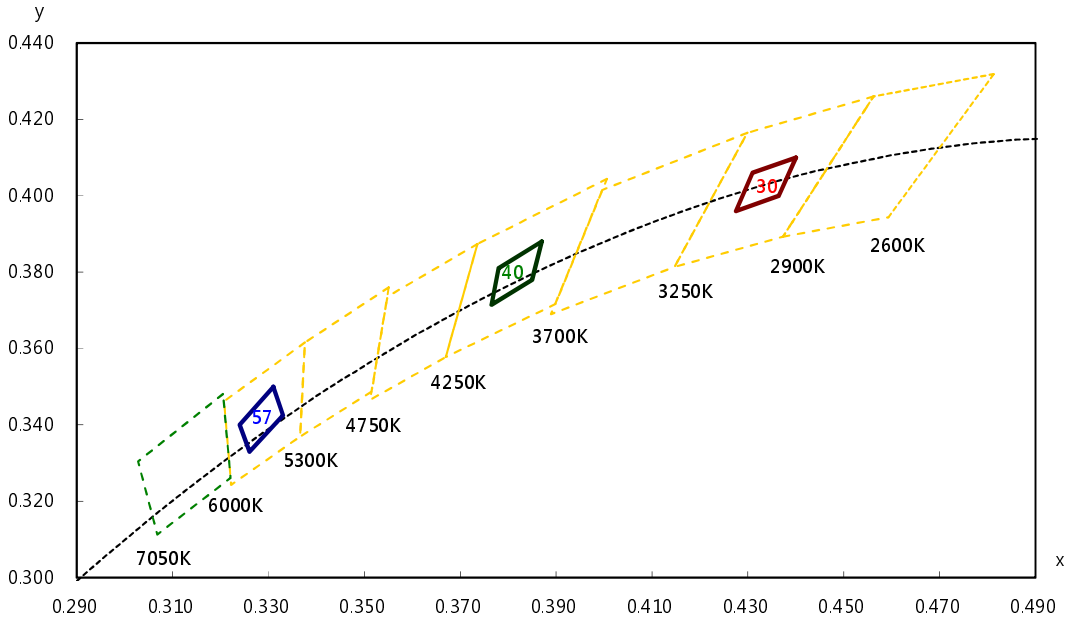


Table.8

BIN CODE	CCT (K)	Chromaticity Coordinate (CIE 1931-xy)									
		x1	y1	x2	y2	x3	y3	x4	y4	Center	
30	3000	**0.4400**	**0.4100**	**0.4310**	**0.4060**	**0.4275**	**0.3960**	**0.4365**	**0.4000**	**0.4338**	**0.4030**
40	4000	**0.3870**	**0.3880**	**0.3780**	**0.3810**	**0.3765**	**0.3715**	**0.3850**	**0.3780**	**0.3818**	**0.3797**
57	5700	**0.3310**	**0.3500**	**0.3240**	**0.3400**	**0.3260**	**0.3330**	**0.3330**	**0.3425**	**0.3287**	**0.3417**

Note1：Chromaticity is measured in Chromaticity Coordinate （CIE 1931-xy） with tolerance rate of ±0.005.

Print Code Guideline

C6	20	NW	P	I	B	A
1	2	3	4	5	6	7

XXXXXXXXXXXXX
8

V 0	–Y	– 57	XX	XX	XX
9	10	11	12	13	14

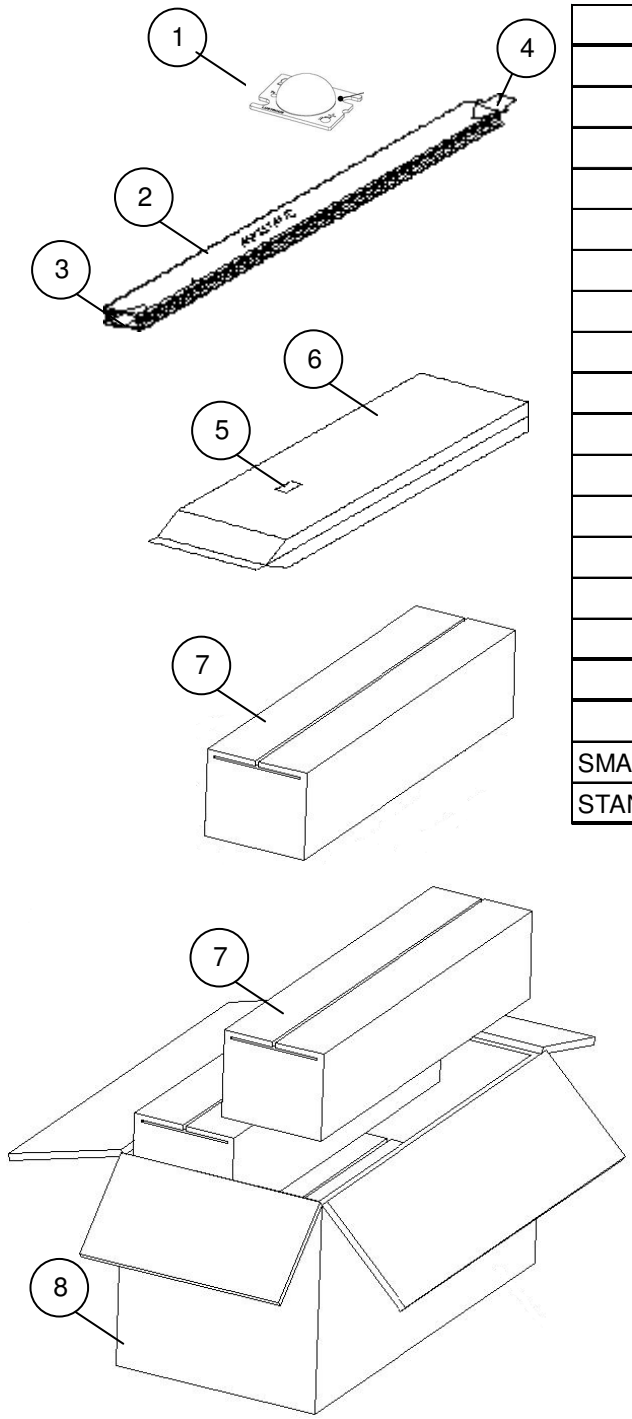
Table.9

1 Type	2 Power	3 Color	4 V_f	5 Current	6 CRI
C6	**20** : 20W	**NW** : Cool White **MW** : Neutral White **CL** : Warm White	**P** : 42 V	**I** : 480 mA	**B** : 80~90

7 Customer Code	8 Internal Code	9 Bin V_f	10 Luminous Flux	11 Chromaticity
		V0 : Without Binned	See Bin Code Definition	See Bin Code Definition

12 Year	13 Month	14 Week
13 : 2013 **14** : 2014	**01** : January **05** : May **10** : October	**01** : 01st Week **20** : 20th Week **45** : 45th Week

Standard Packaging



ITEM	DESCRIPTION	
①	LED	
②	PLASTIC TUBE	
③	END-PLUG WHITE	
④	END-PLUG BLACK	
⑤	ADHESIVE MAIN LABEL	
⑥	MOISTURE BARRIER BAG	
⑦	SMALL BOX	
⑧	STANDARD BOX	
STACKING METHOD		
	PCS/TUBE	20
	TUBE/BAG	20
	BAG/SMALL BOX	1
	PCS/SMALL BOX	400
	SMALL BOX/STANDARD BOX	4
	PCS/STANDARD BOX	1600
SIZE AND WEIGHT		
	SIZE(mm^3)	WEIGHT(kg)
SMALL BOX	440×130×130	1.54±0.5
STANDARD BOX	460×280×280	6.91±0.5

Precaution for Use

Installation

1. Do not touch the lighting surface area during installation.
2. If the product might to be used under the following conditions, the customer must evaluate its appropriateness them. This product is not designed for use under the following conditions. In places where the product might:
   - get wet due to rain.
   - suffer from damage caused by salt.
   - be exposed to corrosive gas such as Cl, S, H_2S, NH_3, SO_2, NO_x and so on.
   - be exposed to dust, fluid or oil.

Over-current Proof

1. Do not reverse current the LEDs we suggest current limit resistors for extra protection.
2. The maximum overshot current should be limited to 960mA.
3. The ripple of driving current should not exceed +/-10% of normal driving current.
4. When driving the products, the clamp voltage must be set at 48V in driver.

Storage

1. Do not open the Moisture Barrier Bag (MBB) before you are ready to install the LEDs.
2. Storage Condition （before opening the MBB）:
   - Storage Temperature:-20~50℃.
   - Relative Humidity: <60% RH.
   - Please re-seal the MBB when storing longer than 3 weeks.
   - The products should be used within half a year.
3. Storage Condition （after opening the MBB）:
   - Storage Temperature:-20~50℃.
   - Relative Humidity: <60% RH.
   - The products should be used or installed as soon as possible after opening the MBB. Otherwise, the LED product must be baked at 80+/-5℃, 24 hours before installation.

Company Information

Lustrous Technology, founded in 2004, endeavors to bring a new era of solid-state lighting. Our R&D development center and production facilities are based in Taiwan, a famous island for IT technology in the world. Our products are well designed in both performance and reliability. Lustrous is one of the leading high-power LED manufacturer and solution provider in the world.

**Lustrous Technology may make process and material changes affecting performance and characteristics of our products without further notice. These products supplied after changes will continue to meet published specifications, but may not be identical to products supplied as samples or under prior orders.

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