No. 3, Gongye E. 3rd Road, Hsinchu Science Park, Hsinchu 30075, Taiwan
TEL：886-3-565-8800

Lextar

75-132W COB LED

Preliminary

Updated on 2013/02/5

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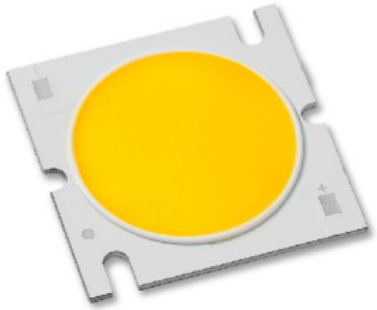
Approval Sheet

75W COB LED

Product Specification- ***Preliminary***

RoHS

Product	COB
Part Number	PB75N01
Customer	
Issue Date	2013/02



Feature

- ✓ LED COB
- ✓ Dice Technology : InGaN
- ✓ High power operation
- ✓ No UV
- ✓ Environmental friendly ; RoHS compliance

Applications

- ✓ Security / garden lighting
- ✓ General lighting
- ✓ Indoor and outdoor commercial lighting

MAKER			CUSTOMER			
Prepared	**Checked**	**Approved**				

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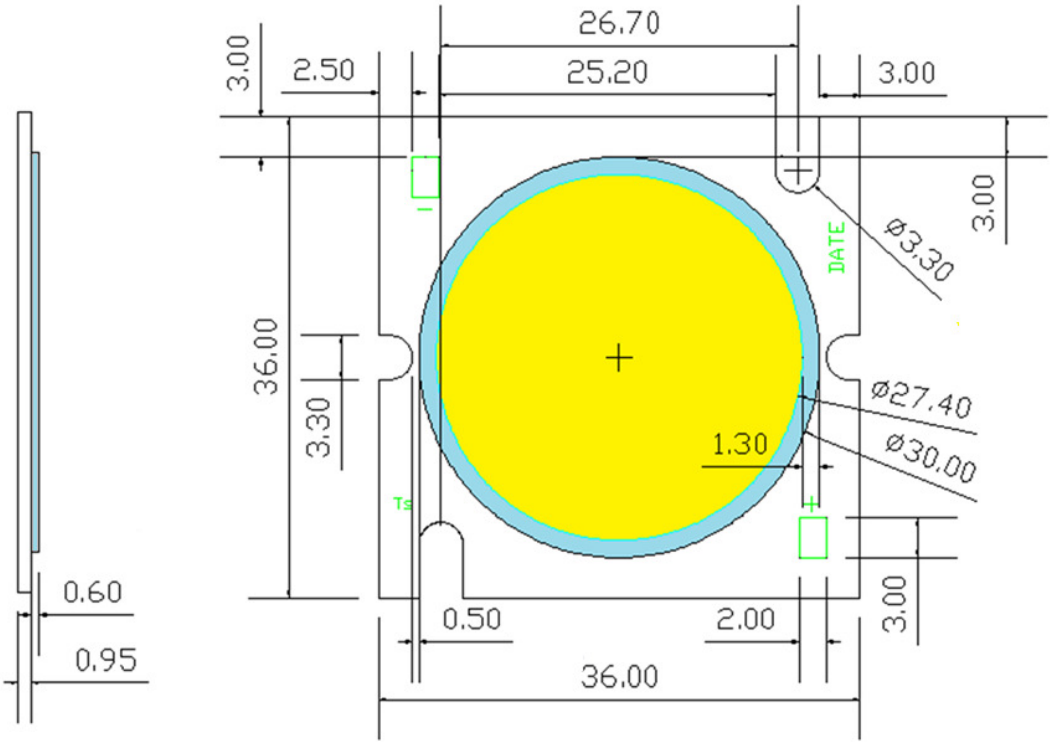
Outline Dimension

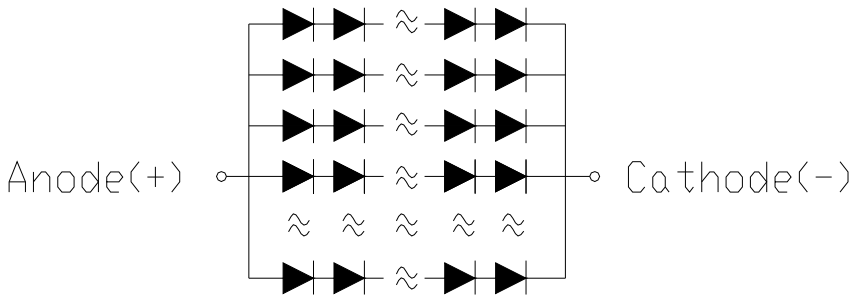
75W COB LED

Product Specification *Preliminary*



Unit:mm

Tolerance : ±0.15mm



Note: Circuit layout is 12 series and 14 parallels

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Performance

75W COB LED
Product Specification *Preliminary*

Electro-Optical Characteristics

Parameter	Symbol	Condition	Min.	Typical	Max.	Unit
Forward Voltage(1)	V_F		36	40	44	V
Color Temperature(2)	CCT		4757	5000	5243	K
Color Rendering Index	Ra	I_F =1960mA	65	70		
View Angle	θ			120		deg
Thermal Resistance	Rth			0.4		℃/W

(1) The Forward Voltage tolerance is ±3%.

(2) Correlated Color Temperature is derived from the CIE 1931Chromaticity diagram.

Luminous Flux(1) (Ta=25℃)

CCT	Condition	Lumen			Unit
		Min.	Typical	Max.	
5000K	IF =1960mA	8775	9750		Lm

(1) The luminous flux tolerance is ± 10%

Absolute Maximum Ratings

Parameter	Symbol	PB75N01	Unit
DC Forward Current(1)	I_F	3000	mA
Power Dissipation	Pd	132	W
Storage Temperature	Ts	-40 ~ 100	°C
Junction Temperature	T_J	150	°C
Substrate Temperature	T_{sub}	85	°C
Manual Soldering Time at 300 °C(Max)	T_{sol}	60	sec

(1) Proper current rating must be observed to maintain junction temperature below maximum at all time.

(2) Thermal resistance is calculated from junction to substrate.

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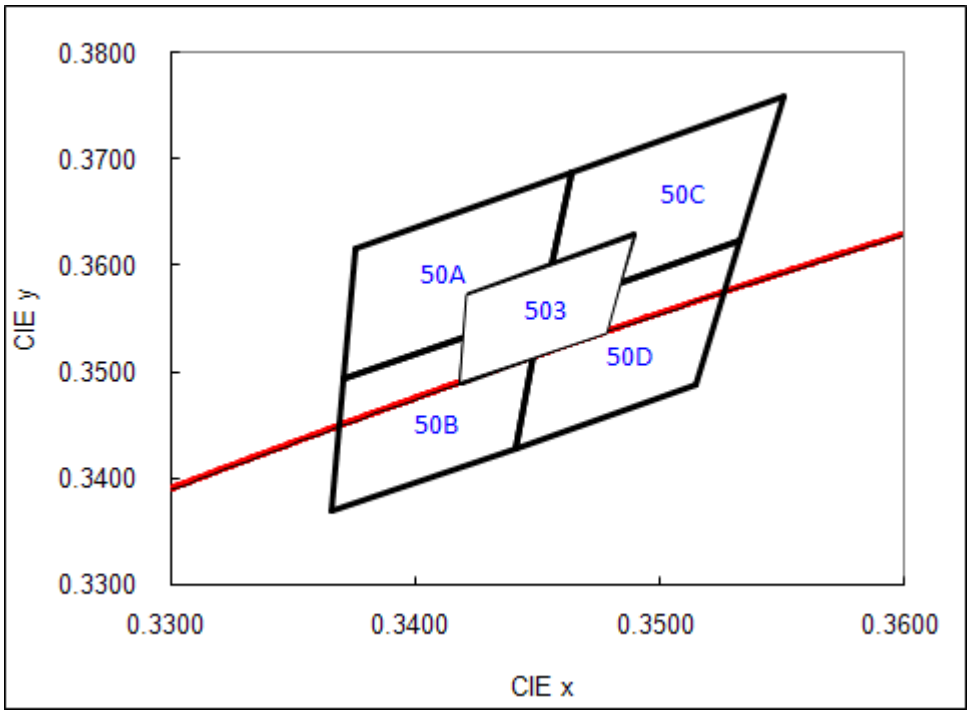
Chromaticity Coordinates

5000K



5000K 3-Step	
x	y
0.3489	0.3630
0.3422	0.3573
0.3419	0.3491
0.3477	0.3539

5000K (50A)		5000K (50B)		5000K (50C)		5000K (50D)	
x	y	x	y	x	y	x	y
0.33760	0.36160	0.33710	0.34930	0.34640	0.36880	0.34520	0.35580
0.34640	0.36880	0.34520	0.35580	0.35510	0.37600	0.35330	0.36240
0.34520	0.35580	0.34410	0.34280	0.35330	0.36240	0.35150	0.34870
0.33710	0.34930	0.33660	0.33690	0.34520	0.35580	0.34410	0.34280

(1) Tolerance of measurement is Chromaticity (x,y) ± 0.005

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Binning

(I_F=1960mA, Ta=25℃)

CCT	Step	CRI	Lumen	V_F
50	7	6	X5	DG

CCT Bin Code	CCT
503	5000K-3step
50A/50B/50C/50D	5000K-7step

CRI Bin Code	CRI
6	>65

Lumen Bin Code	Lumen Range	
	From	To
X5	8604	9020
Y1	9020	9562
Y2	9562	10104
Y3	10104	10646
Y4	10646	11188
Y5	11188	11730

V_F Bin Code	V_F Range	
	From	To
DG	36	44

Color range Bin Code	Range
A/B/C/D	<7 step
3	<3 step

Note:

(1) Correlated color Temperature is derived from the CIE 1931Chromaticity diagram.

(2) The CRI tolerance is 3

(3) The Forward Voltage tolerance is ±3%.

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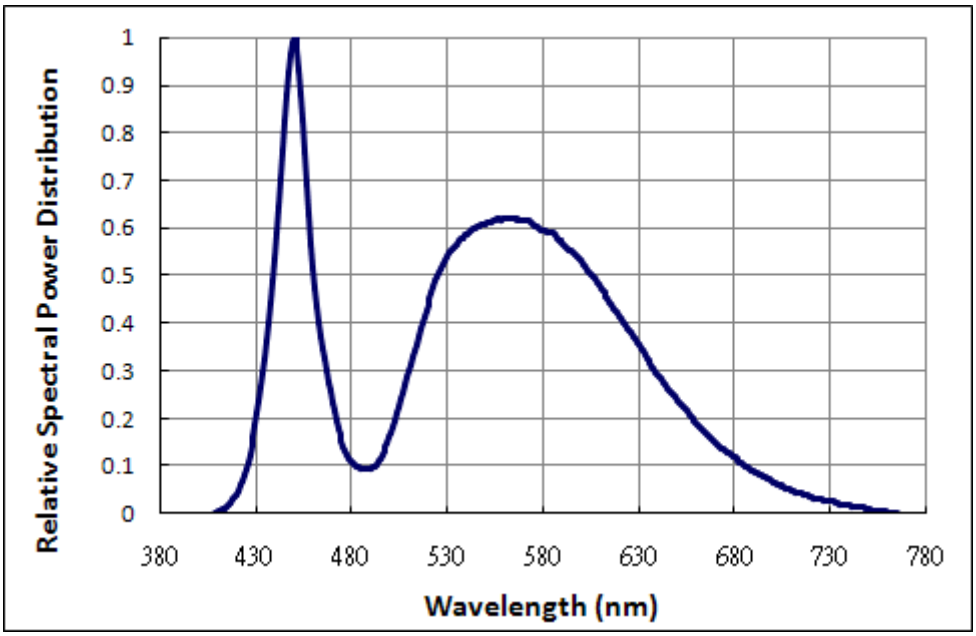
Spectrum (I_F=1960mA, Ta=25^{0}C)

5000K



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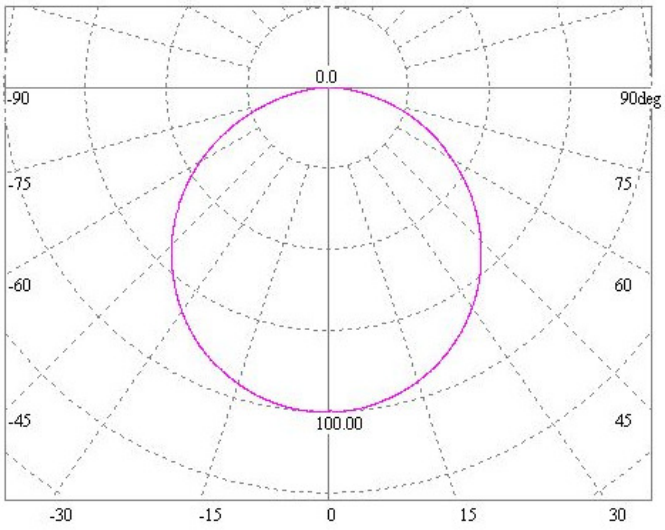
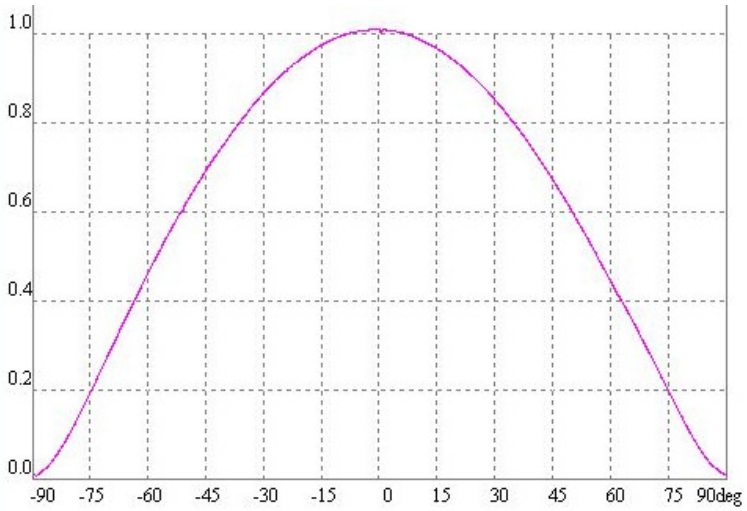
Radiation Pattern (I_F=1960mA, Ta=25^{0}C)





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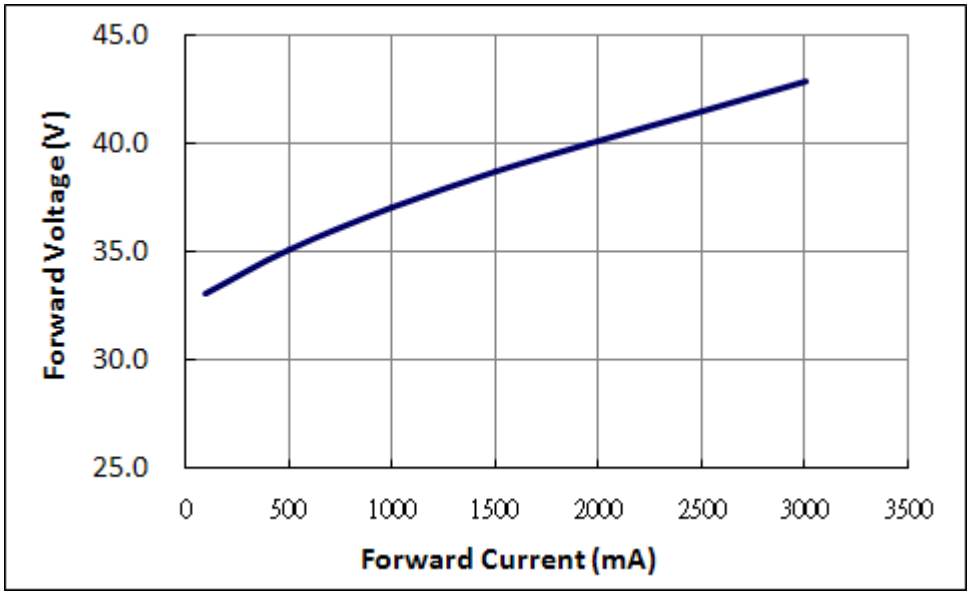
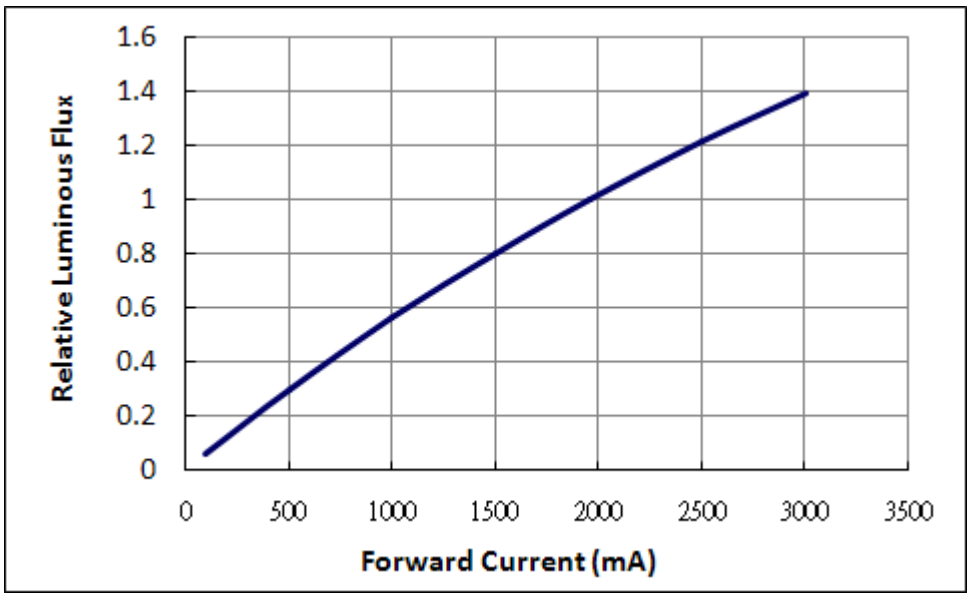
Forward Current vs. Forward Voltage (Ta=25^{0}C)



Forward Current vs. Related Luminous Flux (Ta=25^{0}C)



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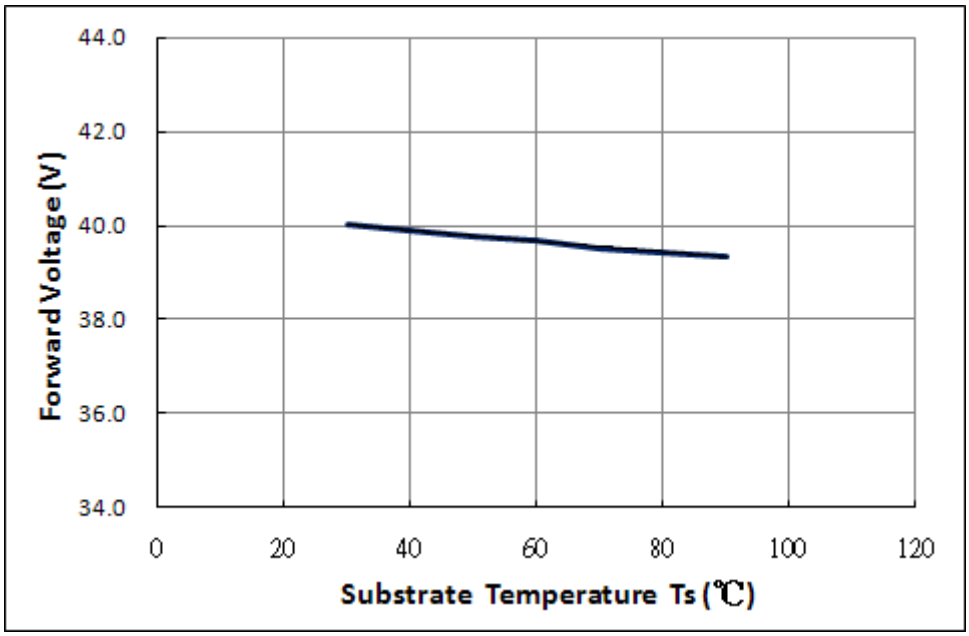
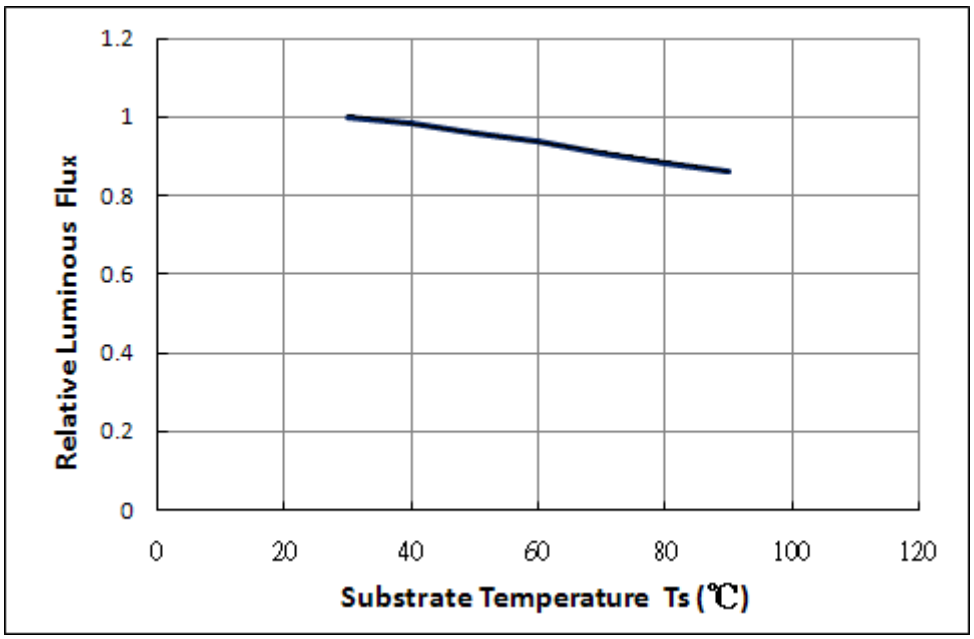
Substrate Temperature vs. Forward Voltage (I_F=1960mA)



Substrate Temperature vs. Relative Luminous Flux (I_F=1960mA)



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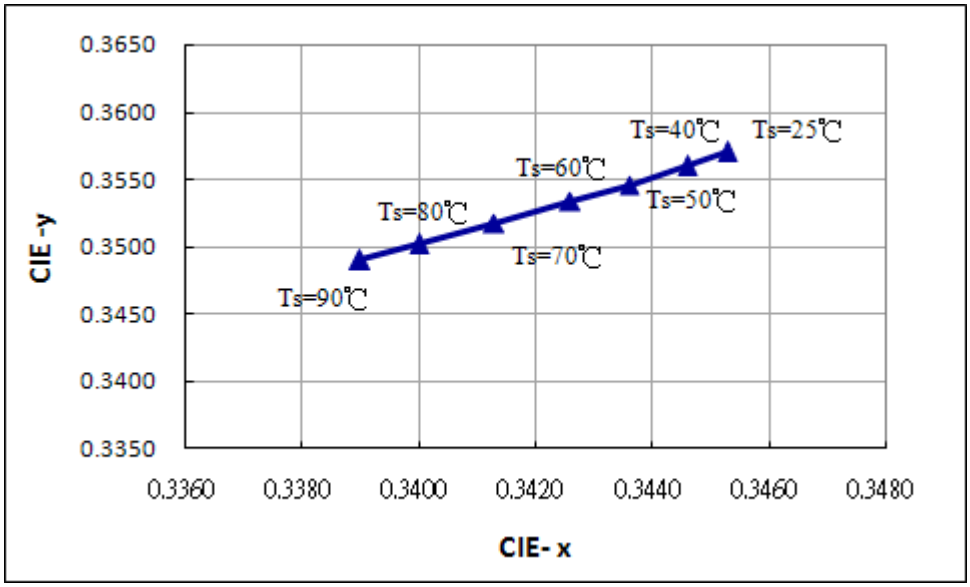
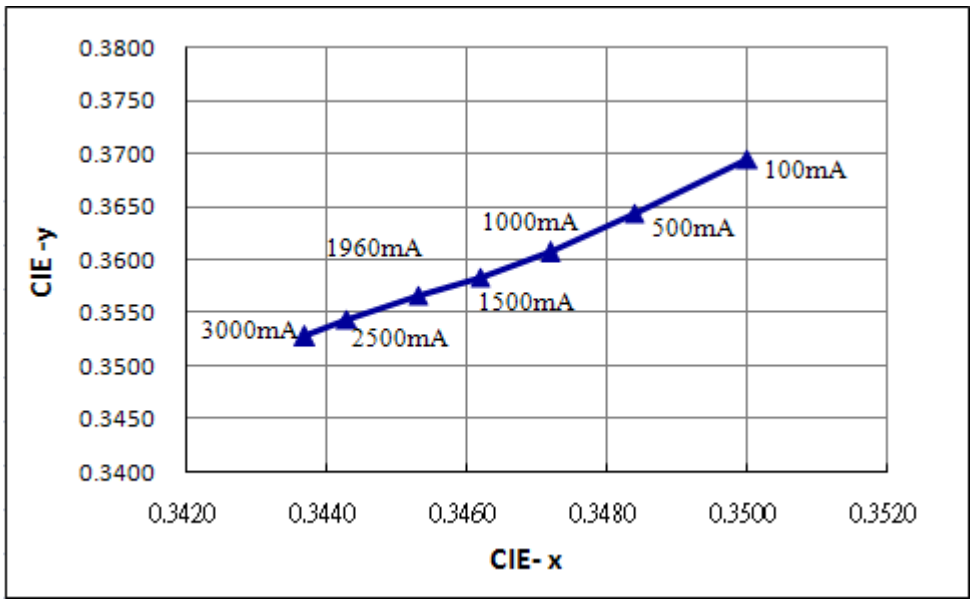
Substrate Temperature vs. Chromaticity Coordinate (I_F=1960mA)

5000K



Forward Current vs. Chromaticity Coordinate (Ta=25^{0}C)

5000K



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No	Item	Condition	Time/Cycle
1	High Temp. Operation Life Test	Tc=85℃, IF=1960mA	1000 Hrs
2	Low Temp. Operation Life Test	Ta=-40℃, IF=1960mA	1000 Hrs
3	High Temp. and High Humidity Operation Life Test	85℃, 85%RH IF=1960mA	1000 Hrs
4	High Temp. Storage	85℃	1000 Hrs
5	Low Temp. Storage	-40℃	1000 Hrs
6	High Temp. High Humidity Storage	85℃, 85 % RH	1000 Hrs
7	Temperature Cycle Storage	-40℃~100℃(20min dwell) /<5min transfer	300 Cycles

Judgment Criteria

Item	Symbol	Test Condition	Judgment Criteria
Forward Voltage	Vf	Note1	Δ% < 10 %
Luminous Flux	Iv	Note1	Decay < 20 %

Notes:

1. Refer to operating Current and Luminous Flux Characteristics for different value operating current regarding each type of Light Engine Series.

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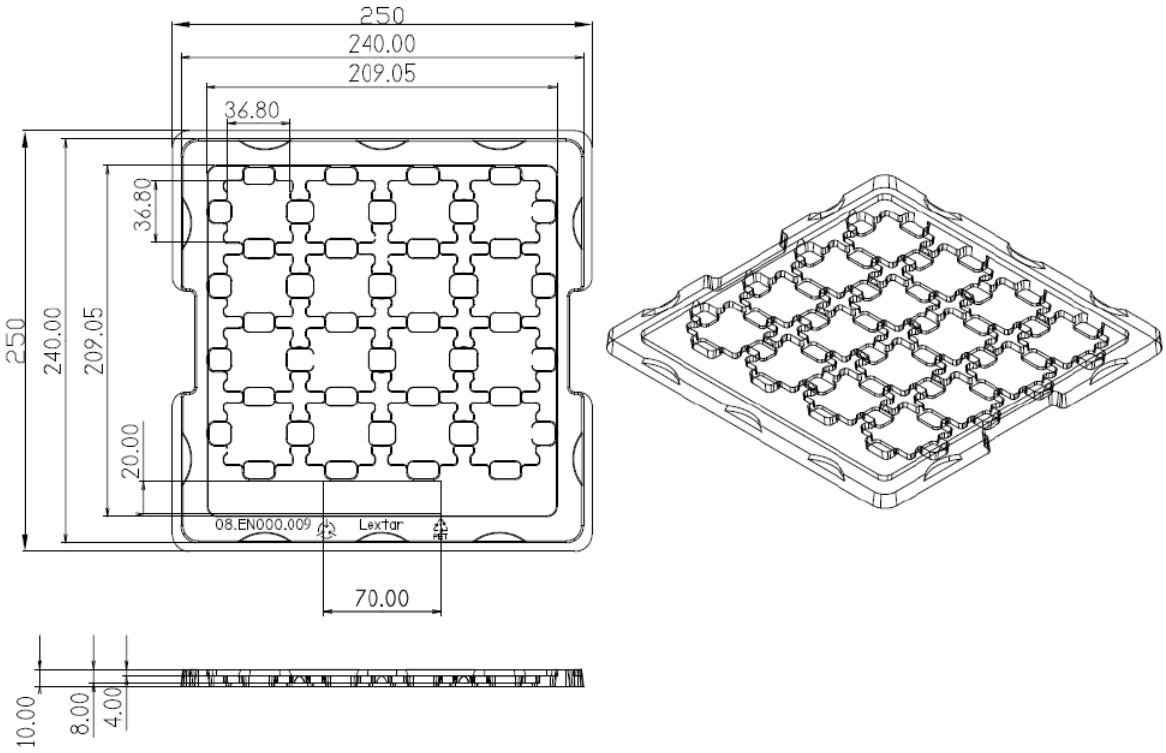
Packing

Tray



Tray contains 16 units (minimum order: 1pcs)

Label information

WO：Working number
EQP ID：Equipment ID
P/N：Part number

SHIP ID：Shipment IS
BIN CODE：BIN CODE
M/N：Model Name
QTY：Quantity

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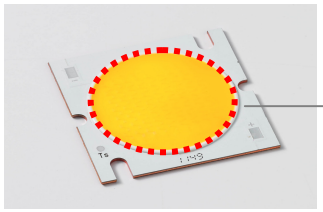
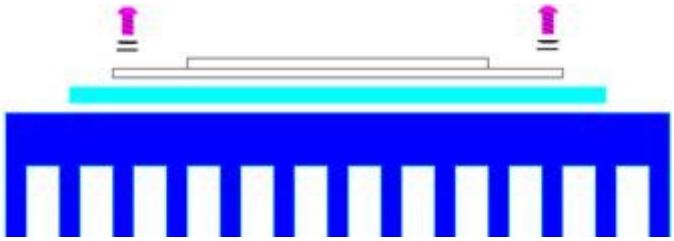
Precautions

1. Avoid the application of any stress to the resin portion (lighting area).
2. Avoid any contact by a sharp metal nail or other materials with the resin portion (lighting area).



Resin portion (lighting area)

3. This product should be secured firmly by fastening screws on both sides of the product.
   Please be careful not to apply any stress to the product during the clamping operation.



4. For fixing this product to the outer heat sink, thermal pad or thermal glue should be applied between backside of substrate and heat sink so that the product can dissipate heat completely. Please avoid product deformation when fixing the clamping operation.
5. Handling of static electricity
   - These products are sensitive to static electricity charge. Please prevent any static electricity within the assembling process.
   - All devices, equipment and machinery must be properly grounded. It is recommended that precautions be taken against surge voltage to the equipment that mounts the LEDs.
   - ESD sensitivity of this product is 1000V (HBM, based on JEITA ED-4701/304).
   - It is easy to find static-damaged LEDs by a light-on test.
6. Before open the package, should kept at room temperature, 90% RH environment or less. The LED should be used within 6 months.
7. After open the package, the LED should be kept at room temperature, 60% RH environment or less. The LED should be soldered within 168 hours (7 days) after opening the package. If unused LEDs remain, they should be stored in moisture proof packages, such as sealed containers with packages of moisture absorbent material (silica gel).
8. Applying proper resistor for the circuit design is recommended. Otherwise slight voltage shift may cause big current change and the LED may be burn out.
9. Please ensure that heat and electronic generation is not in excess of the absolute maximum rating.

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Lextar

Smart Lighting
Amazing Life

Lextar Electronics Corp. is the leading LED (Light Emitting Diode)
maker integrating upper stream epitaxial, middle stream chip, and downstream package,
SMT and LED lighting applications. Founded in May, 2008, Lextar is a subsidiary of AU Optronics,
the leading TFT-LCD and solar PV manufacturer. Lextar's product applications include lighting and LCD backlight.
Lextar's manufacturing sites include Hsinchu and Chunan in Taiwan, and Suzhou in China.
The company turnover in 2010 is 266 million USD.