

Paragon Semiconductor Lighting Technology

PSLT

ParagonLED

Specifications

Product Type : EBCC-48-30185-36V-3065

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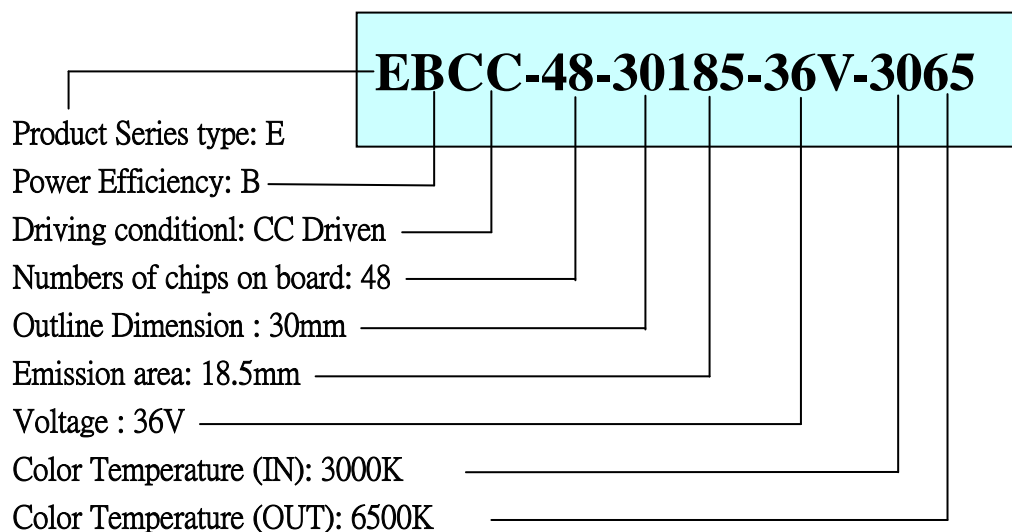
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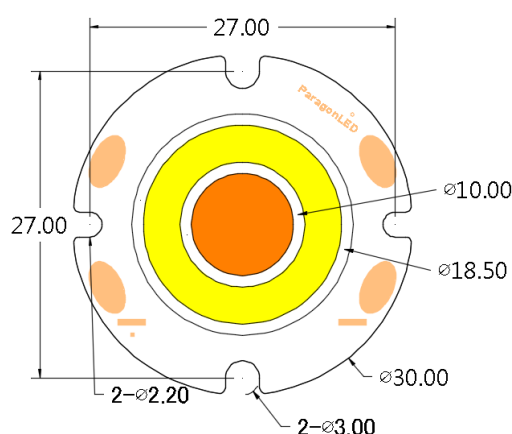
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1. General Description

(1) Naming rule



(2) Outline Dimensions (Unit : mm / Tolerance: 0.1mm)



Thickness: 1.0±0.1mm

2. Electro-Optical Characteristics

(1) Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	9 + 9	W
Forward Current	I_F	0.25	A
Forward Voltage	V_F	33~39	V
Operating Temperature	T_{opr}	-40 ~ +60	°C
Storage Temperature	T_{stg}	-40 ~ +80	°C
Assembly process temperature	T_{sol}	<300°C , 5 secs	

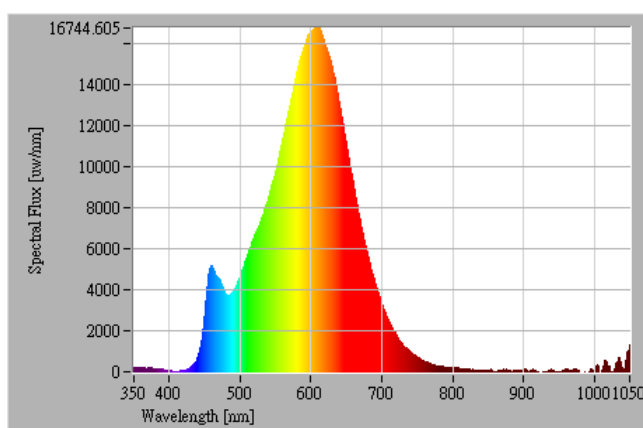
(2) Electro-Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=0.25A$	33	36	39	V
Reverse Current	I_R	$V_R=36V$	–	–	100	μA
Luminous Intensity (I-3000K)	Φ_v	$I_F=0.25A$	–	770	–	Lm
Luminous Intensity (O-6500K)	Φ_v	$I_F=0.25A$	–	950	–	Lm
Color rendering (I-3000K)	Ra	$I_F=0.25A$	–	80	–	CRI
Color rendering (O-6500K)	Ra	$I_F=0.25A$	–	70	–	CRI

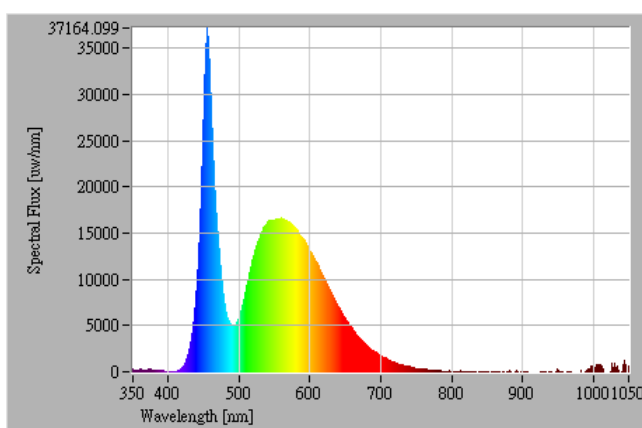
Notice: Operating current of EBCC-48 product varies from 0.25A · users must keep the temperature of solder joint point under 70 °C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

(3) Characteristics

Spectrum

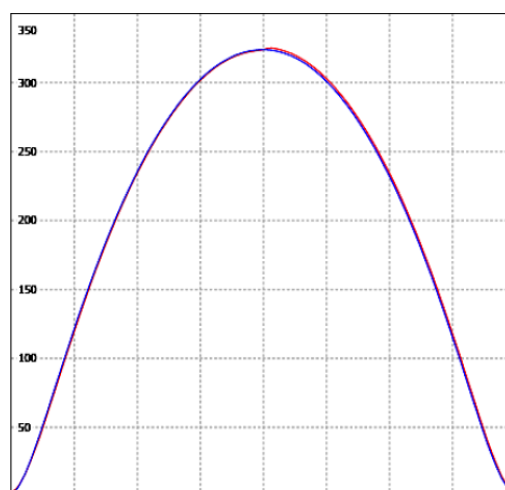
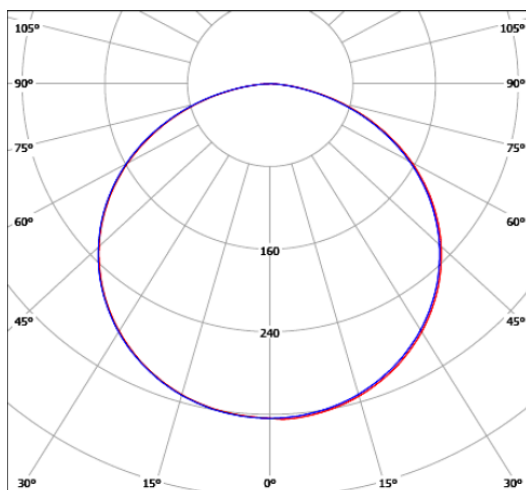


IN-3000K



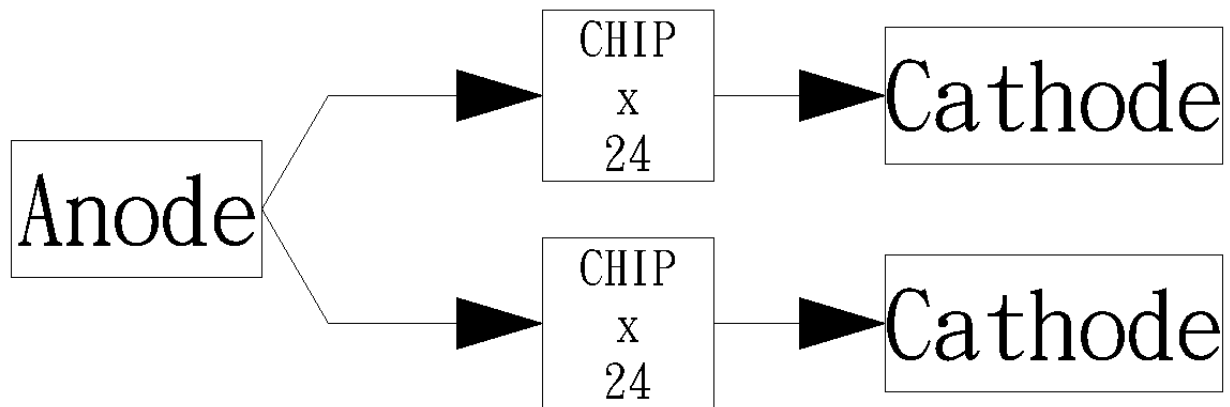
OUT-6500K

Candle Power Distribution & Cartesian Coordinate



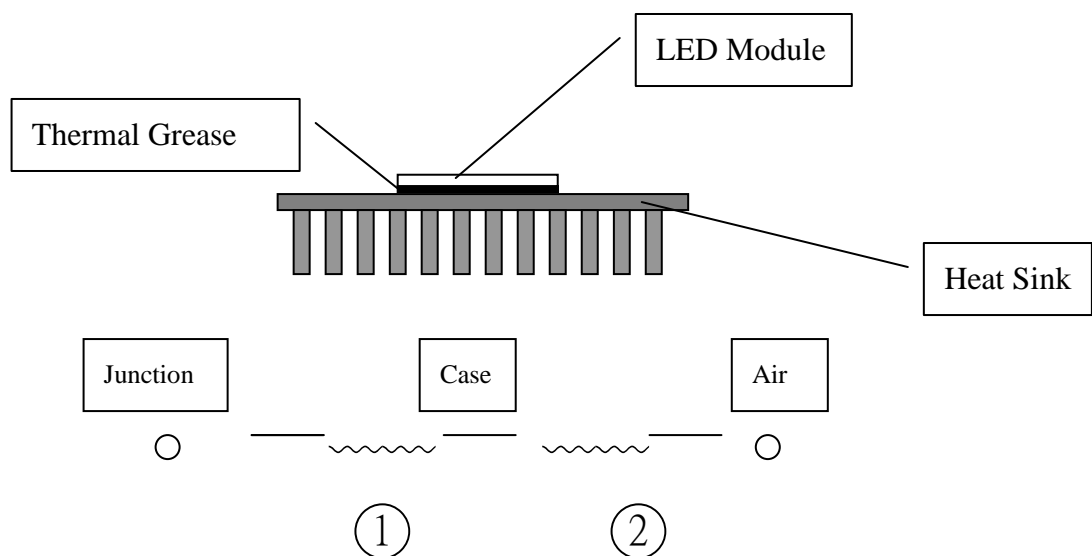
(4) Layout

(LEFT) 12 in series x 2 in parallel = 24 LED Chips



(RIGHT) 12 in series x 2 in parallel = 24 LED Chips

3. Junction Temperature Measurement



Thermal resistance of Junction to Case without heat sink : $10(^{\circ}\text{C}/\text{W})$ [Reference Value]

Thermal resistance of Case to Ambient Air: Depending on what kind of heat sink users

choose. In ideal thermal dissipation situation, the thermal resistance is about $1\sim 2^{\circ}\text{C}/\text{W}$.

4. Reliability Test

Test Item	Test Conditions	Number of failed
High Temperature Storage Test	Tstg= +80°C , x1,000 hrs	0/20
Low Temperature Storage Test	Tstg= -40°C , x1,000 hrs	0/20
Continuous Light-on Test	Ta= 25°C , RH=65%, x1,000 hrs	0/20
Boiling Test	Ta= 100°C , RH=100%, x180mins	0/20
Thermal Cycle Test	-40°C x 30 mins, 80°C x 30 mins, 100 cycles	0/20

Measuring Item	Measuring Condition	Judging Criteria of Failure
Forward Voltage	$I_F = 0.25A$	$> 0 \times 1.1$
Total Luminous Flux	$I_F = 0.25A$	$< L \times 0.7$