

Paragon Semiconductor Lighting Technology

PSLT

ParagonLED

Specifications

Product Type : CBAV-12-30124-12V-40

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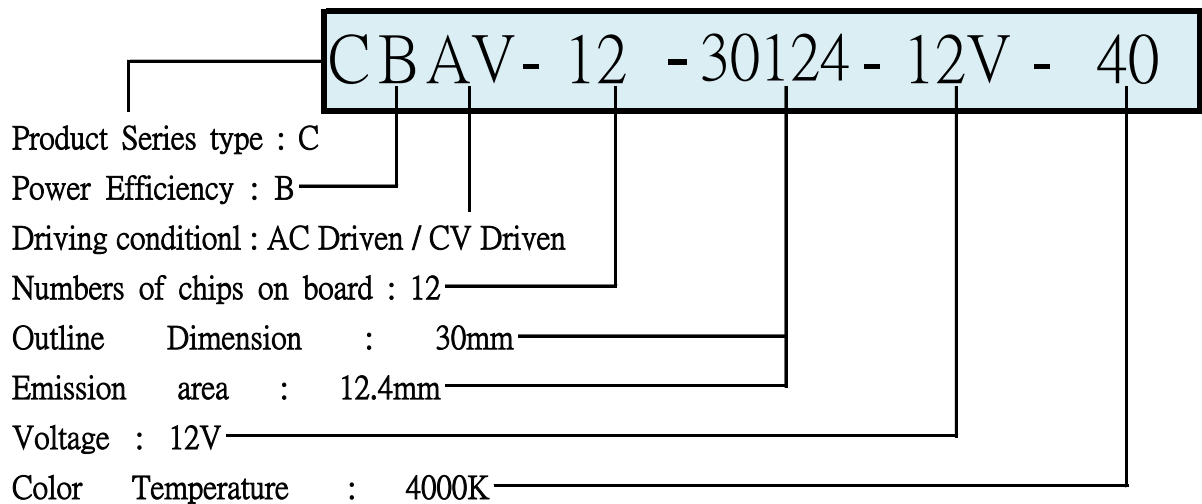
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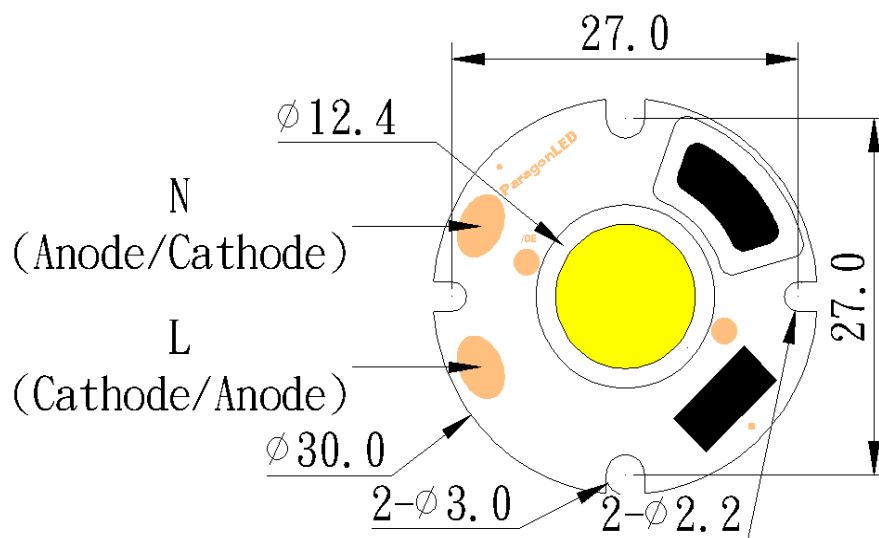
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1. General Description

(1) Naming rule



(2) Outline Dimensions (Unit : mm / Tolerance: 0.2mm)



Thickness : 1.0 ± 0.1 mm

2. Electro-Optical Characteristics

(1) Absolute Maximum Rating

Parameter(AC / CV)	Symbol	Value	Unit
Power Dissipation	PD	3 / 4.2	W
Forward Current	IF	-	mA
Forward Voltage	VF	12 ~ 12	V
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Assembly process temperature	Tsol	<300°C , 5 secs	

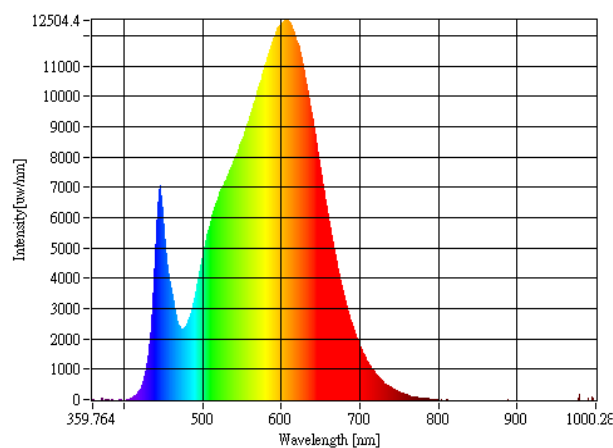
(2) Electro-Optical Characteristics

Parameter(AC / CV)	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	VF	–	12	12	12	V
Reverse Current	IR	VR=12V	–	–	100	μ A
Luminous Intensity	Φ_v	VF=12V	–	180/255	–	Lm
Color rendering	Ra	VF=12V	–	80	–	

Notice: The output voltage of CV driver should not exceed 12V · users must keep the temperature of solder joint point under 75°C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

(3) Characteristics

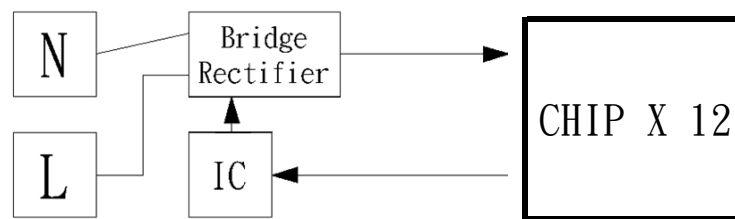
Spectrum



Candle Power Distribution & Cartesian Coordinate

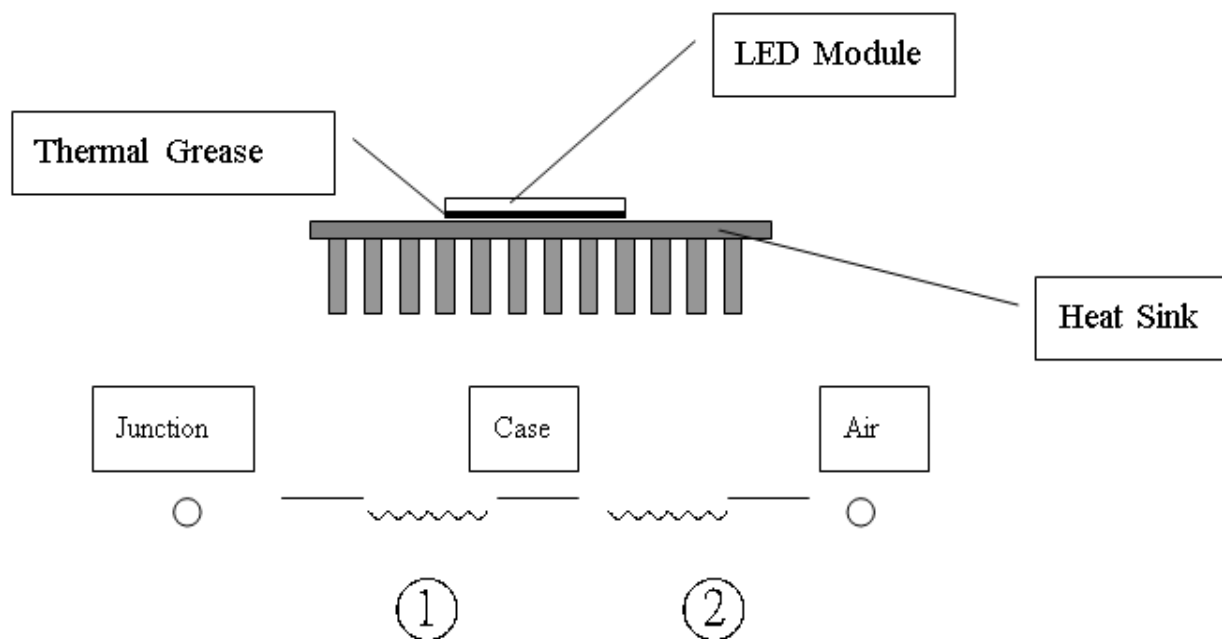


(4) Layout



3 series x 4 parallel = 12 LED Chips

3. Junction Temperature Measurement



① Thermal resistance of Junction to Case without heat sink : $10(^{\circ}\text{C}/\text{W})$ [Reference Value]

② 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
Continous Light-on Test	Ta= 25°C , RH=65% , x1,00 hrs	0/20
Boiling Test	Ta=100°C , RH=100% , X180mins	0/20
Thermal Cycle Test	- 40°Cx30mins , 80°Cx30mins , 100cycles	0/20

Measuring Item	Measuring Condition	Judging Criteria of Failure
Forward Voltage	VF=12V	> 0 x 1.1
Total Luminous Flux	VF=12V	< L x 0.85

Dielectric Breakdown Voltage (Vac) of Thremal Pad must >4 KV

***WARNING : Please ground lighting fixtures while designing lamps.
If any damage or defect of LED caused without grounding, we do not guarantee of improper use.***