Paragon Semiconductor Lighting Technology

PSLT

ParagonLED

Specifications

Product Type : CBAV-48-36185-12V-30

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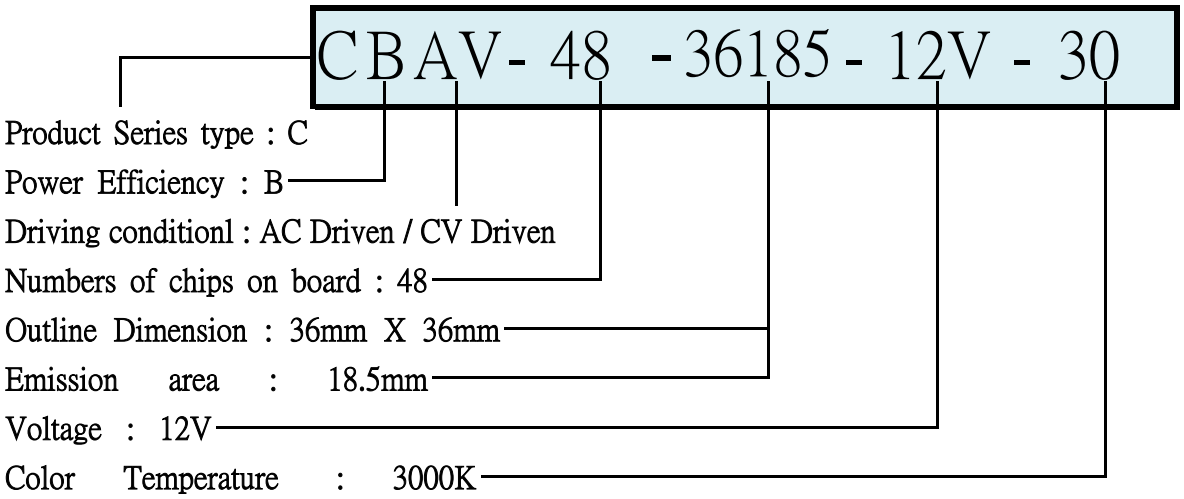
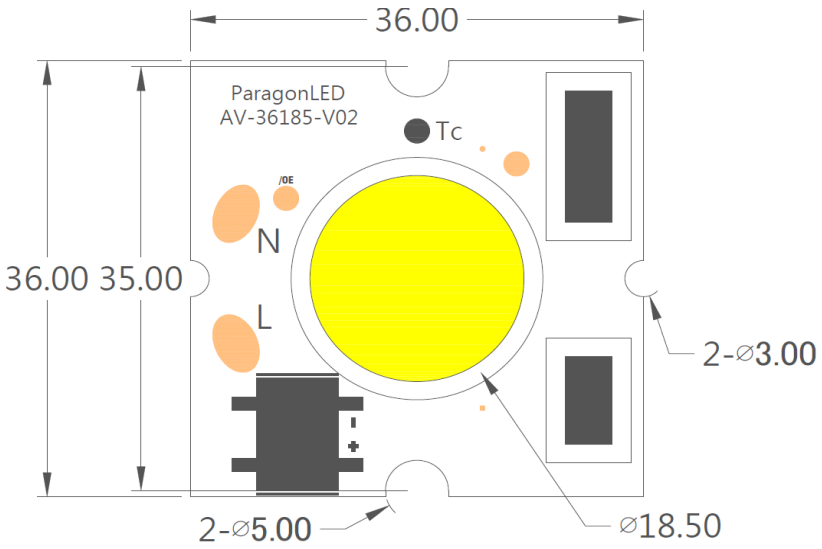
Contents

1. General Description

(1) Naming rule



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



Thickness : 1.0±0.1mm

2. Electro-Optical Characteristics

(1) Absolute Maximum Rating

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

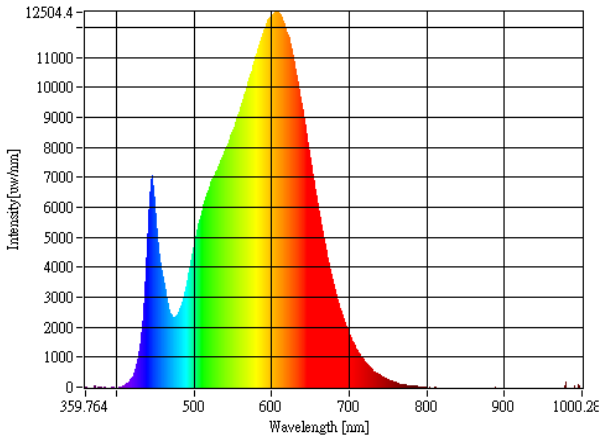
(2) Electro-Optical Characteristics

Parameter(AC / CV)	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	VF	-	12	12	12	V
Reverse Current	IR	VR=12V	-	-	100	μA
Luminous Intensity	Φv	VF=12V	-	840	-	Lm
Color rendering	Ra	VF=12V	90	-	-	

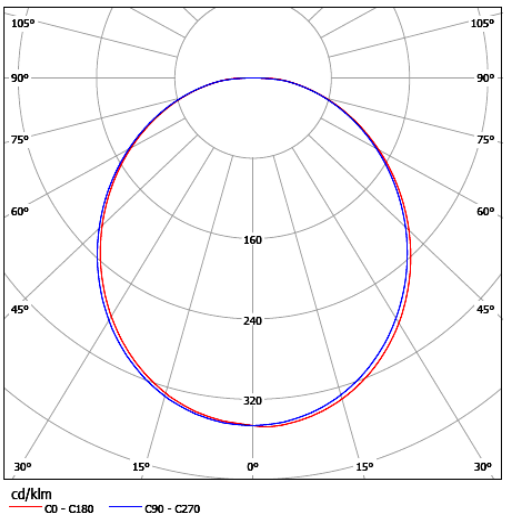
Notice: The output voltage of CV driver should not exceed 12V，users must keep the temperature of solder joint point under 75℃ (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

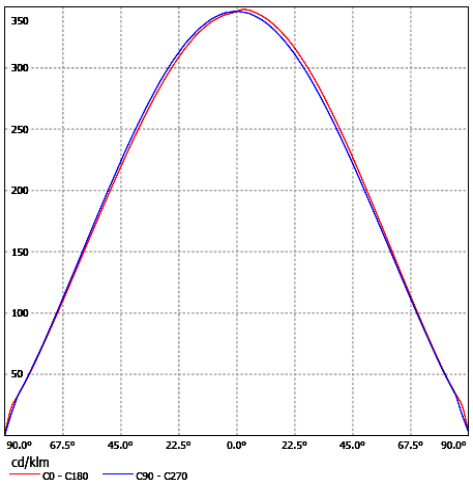
(3) Characteristics

Spectrum

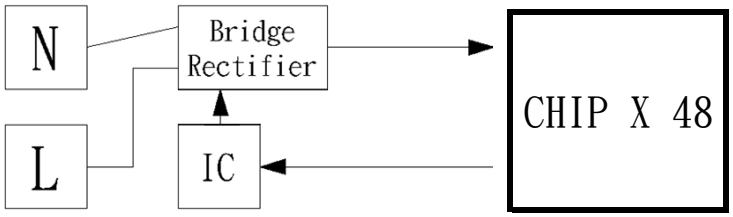


Candle Power Distribution & Cartesian Coordinate



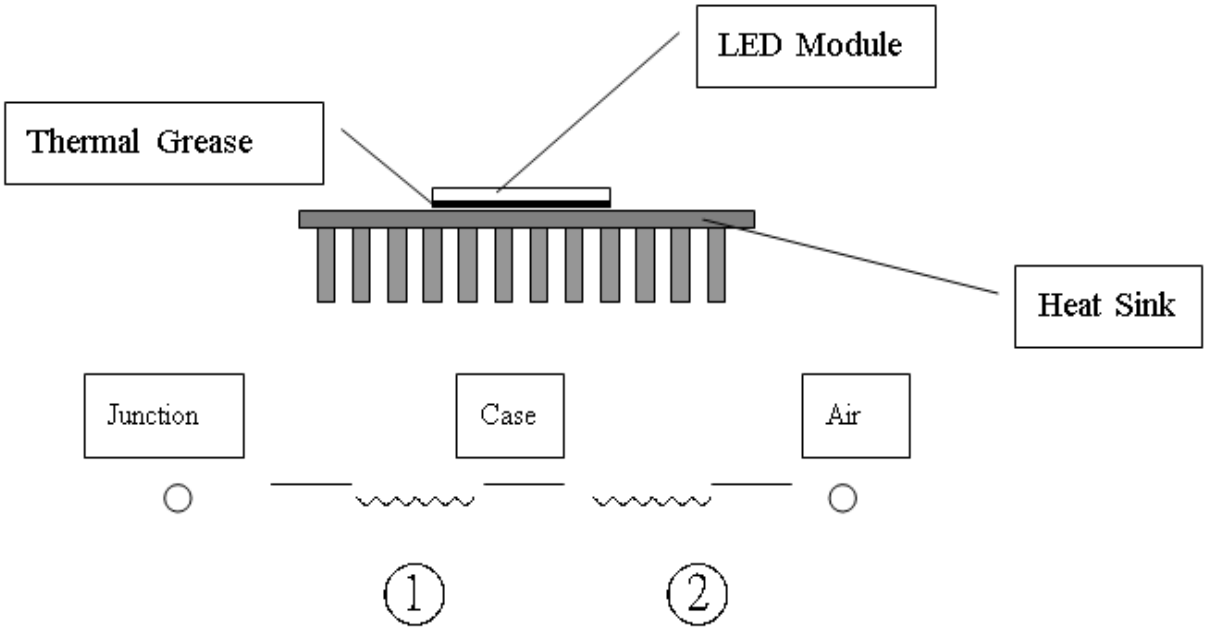


(4) Layout



3 series x 16 parallel = 48 LED Chips

3. Junction Temperature Measurement



①Thermal resistance of Junction to Case without heat sink : 10(℃/W)〔Reference Value〕

②Thermal 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 1~2 ℃/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.