

Paragon Semiconductor Lighting Technology

PSLT

ParagonLED

Specifications

Product Type : CBCV-24-30124-12V-57

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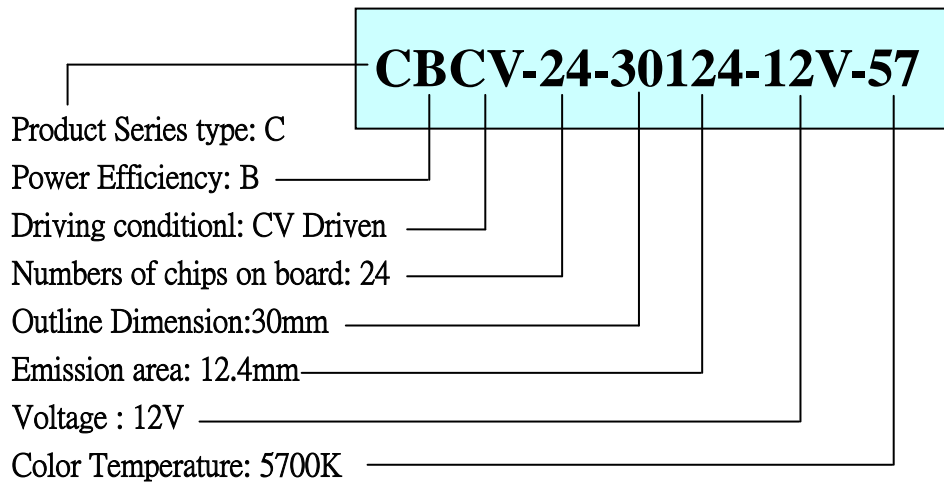
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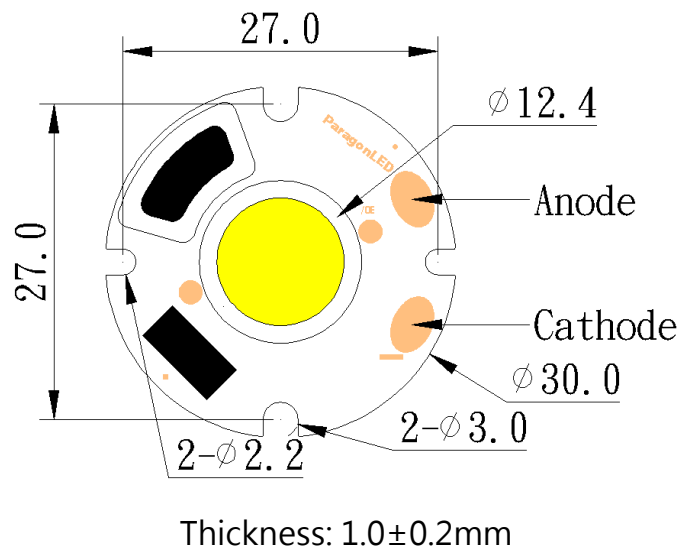
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1. General Description

(1) Naming rule



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



2. Electro-Optical Characteristics

(1) Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	8.4	W
Forward Current	I_F	—	A
Forward Voltage	V_F	12	V
Operating Temperature	T_{opr}	-40 ~ +60	°C
Storage Temperature	T_{stg}	-40 ~ +80	°C
Assembly process temperature	T_{sol}	<325°C , 5 secs	

(2) Electro-Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	–	–	12	–	V
Reverse Current	I_R	$V_R=12V$	–	–	20	μA
Luminous Intensity	Φ_v	$V_F=12V$	–	675	–	Lm
Color rendering	Ra	$V_F=12V$	–	75	–	CRI

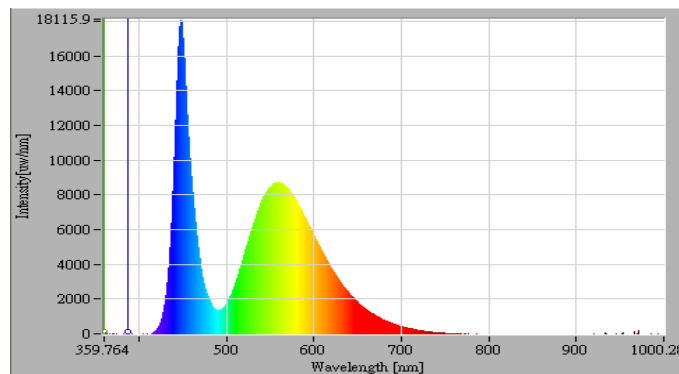
Notice: The output voltage of CV driver should not exceed 12V · users must keep the temperature of solder joint point under 60 °C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

(3) Characteristics

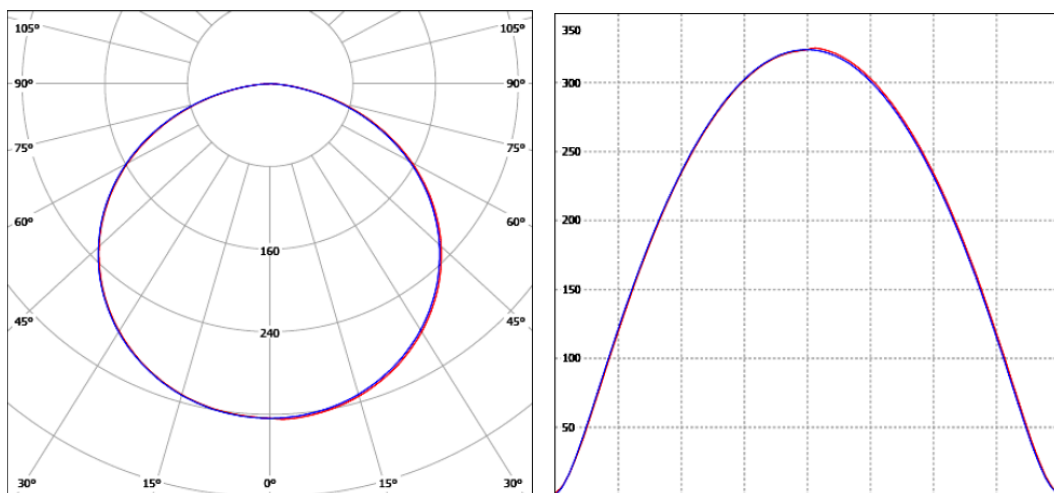
CV series can be driven by constant voltage drivers directly.

Lumens and wattages depend on the voltage delivers

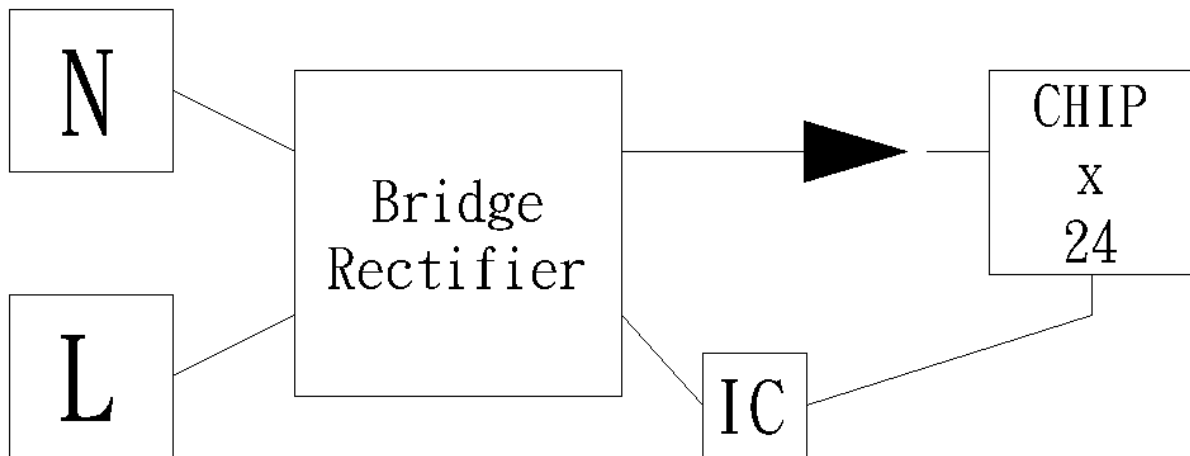
Spectrum



Candle Power Distribution & Cartesian Coordinate

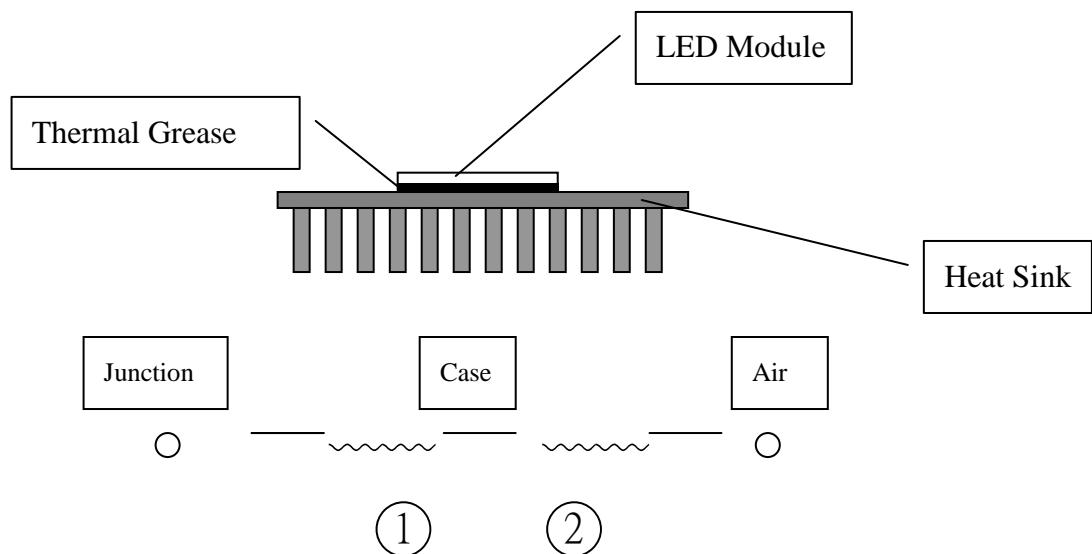


Layout



3 in series x 8 in parallel=24 LED Chips

3. Junction Temperature Measurement



② Thermal resistance of Junction to Case without heat sink : 10°C/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 $1\sim 2^{\circ}\text{C/W}$.

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	$I_F = 12V$	$> 0 \times 1.1$
Total Luminous Flux	$I_F = 12V$	$< L \times 0.7$