

*Paragon Semiconductor Lighting Technology*

*PSLT*

**ParagonLED**

## Specifications

**Product Type : CBCV-84-5028-24V-57**

**Issued Date : 08/01/2012**

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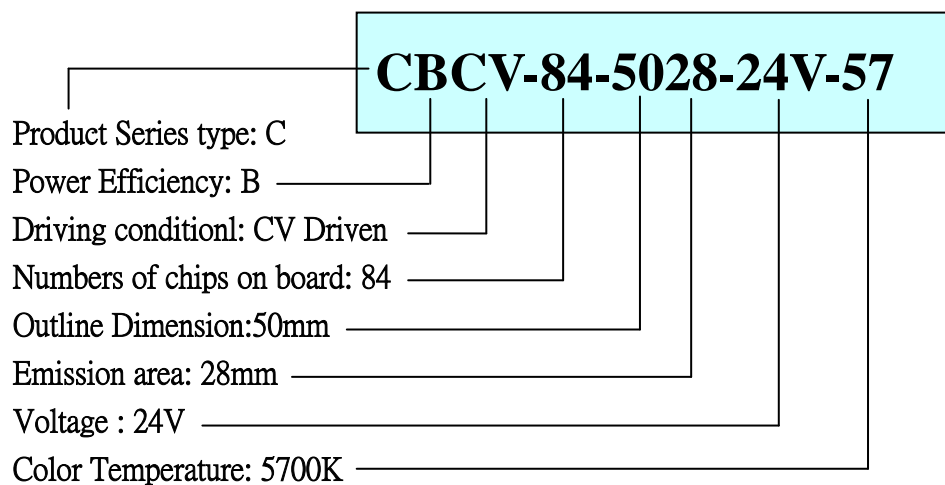
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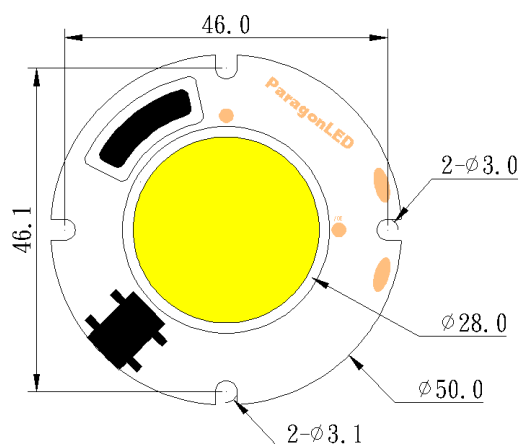
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## 1. General Description

### (1) Naming rule



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



Thickness: 1.6±0.2mm

## 2. Electro-Optical Characteristics

### (1) Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Power Dissipation	$P_D$	18	W
Forward Current	$I_F$	—	A
Forward Voltage	$V_F$	24	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	$V_F$	–	–	24	–	V
Reverse Current	$I_R$	$V_R=24V$	–	–	20	$\mu A$
Luminous Intensity	$\Phi_v$	$V_F=24V$	–	1440	–	Lm
Color rendering	Ra	$V_F=24V$	–	65	–	CRI

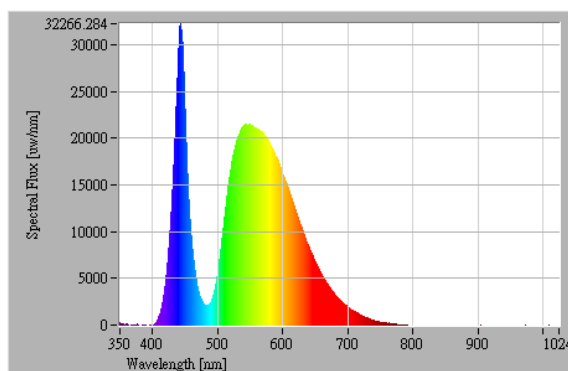
**Notice:** The output voltage of CV driver should not exceed 24V · users must keep the temperature of solder joint point under 60 °C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

## (3) Characteristics

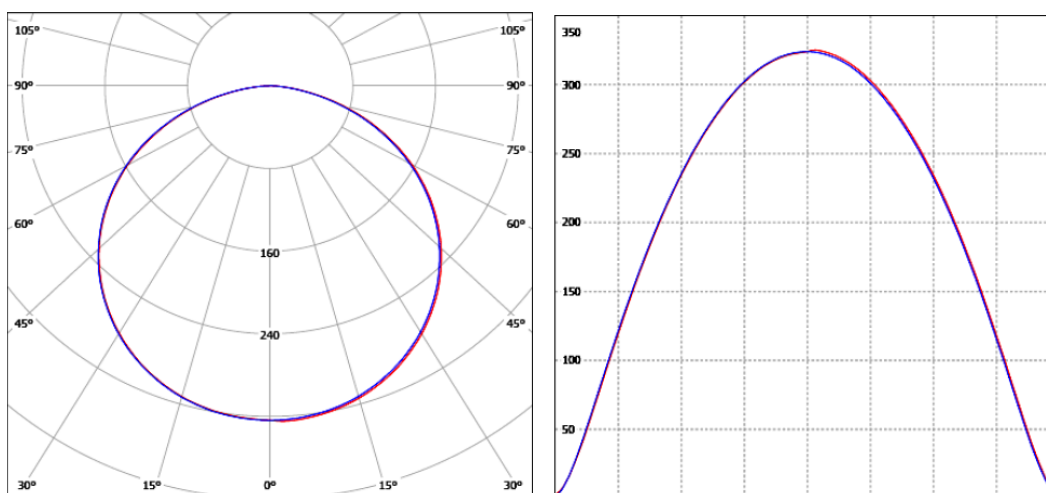
CV series can be driven by constant voltage drivers directly.

Lumens and wattages depend on the voltage delivers

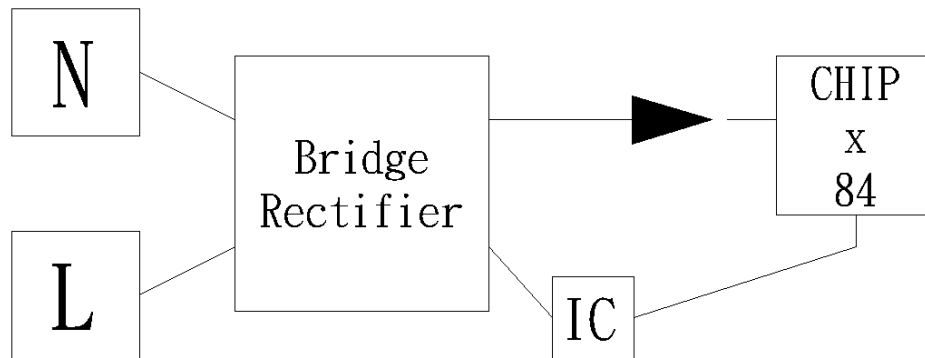
### Spectrum



### Candle Power Distribution & Cartesian Coordinate

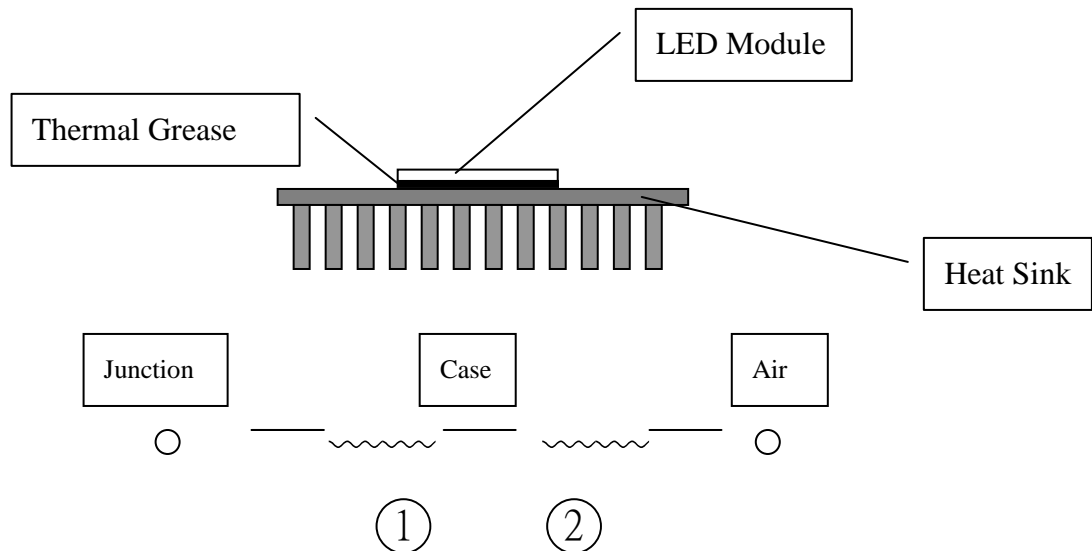


## Layout



7 in series x 12 in parallel=84 LED Chips

## 3. Junction Temperature Measurement



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

[ 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
Continous 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	$I_F = 24V$	$> 0 \times 1.1$
Total Luminous Flux	$I_F = 24V$	$< L \times 0.7$