

*Paragon Semiconductor Lighting Technology*

*PSLT*

**ParagonLED**

## Specifications

**Product Type : ParaLED-A-084230V-12W3000B-BB**

**Issued Date : 12/01/2015**

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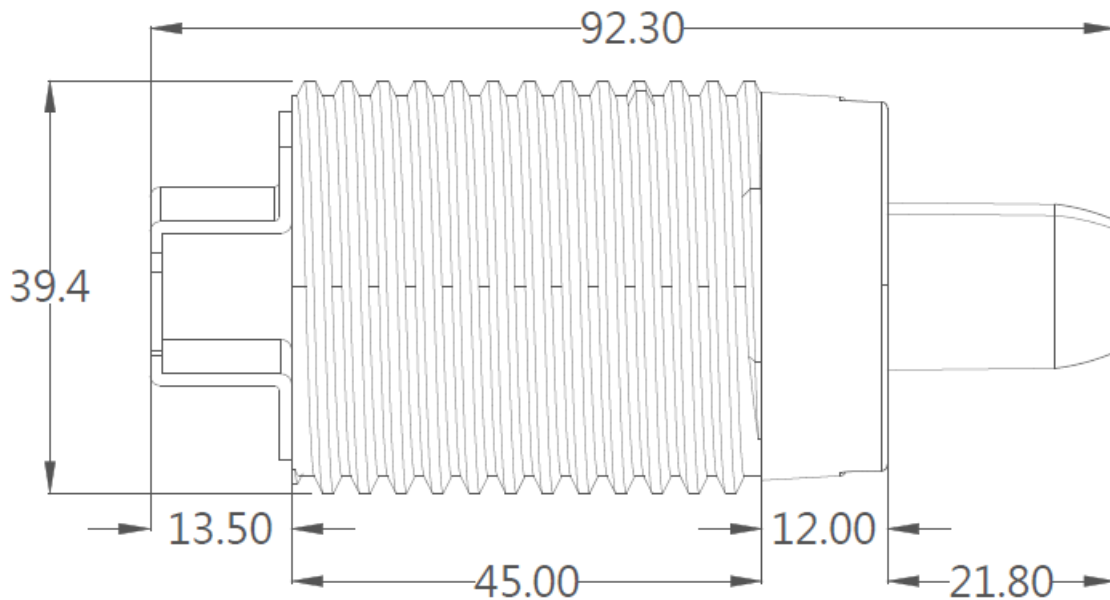
# 1.General Description

## (1)Naming rule

**ParaLED-A-084-230V12W3000B-BB**

- Product Series type : ParaLED
- Dimming Type : Dimmable
- Numbers of chips on board : 84
- Voltage : 230VAC
- Power Dissipation : 12W
- Color Temperature : 3000K
- Color Rendering : RA80~89
- Appearance : Fixing Iron piece(13.5mm) + socket(45mm)
- Optical parts : Light Guide Lens

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



## 2. Electro-Optical Characteristics

### (1) Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Power Dissipation	$P_D$	12	W
Forward Voltage	$V_F$	230	V
Operating Temperature	$T_{opr}$	-40 ~ +105	°C
Storage Temperature	$T_{stg}$	-40 ~ +105	°C
Power Factor	Pf	>0.95	
THDi		<20%	
Dimming		available	
Assembly process temperature	$T_{sol}$	<325°C , 5 secs	

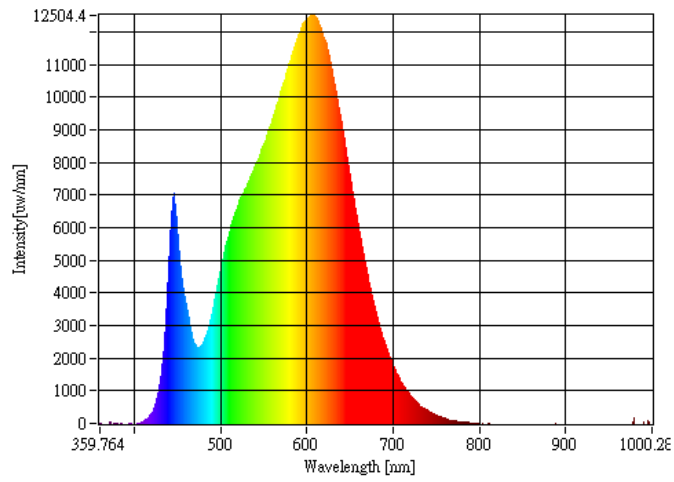
### (2) Electro-Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	$V_F$	-	-	230	-	V
Luminous Intensity	$\Phi_v$	$V_F=230V$	-	780	-	Lm
Color rendering	Ra	$V_F=230V$	-	80	-	CRI

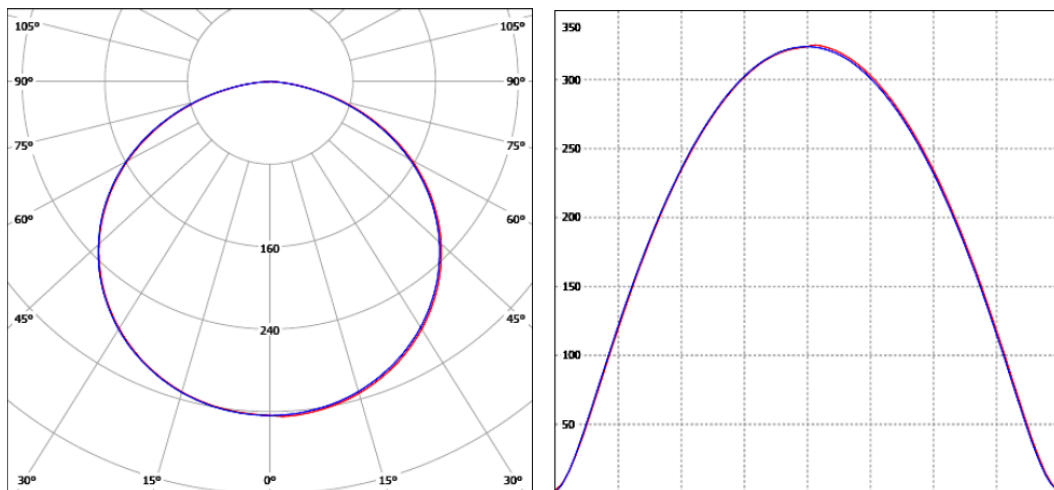
**Notice: Operating Voltage of product varies from 220V~240V · users must keep the temperature of solder joint point under 105 °C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.**

### (3) Graphs

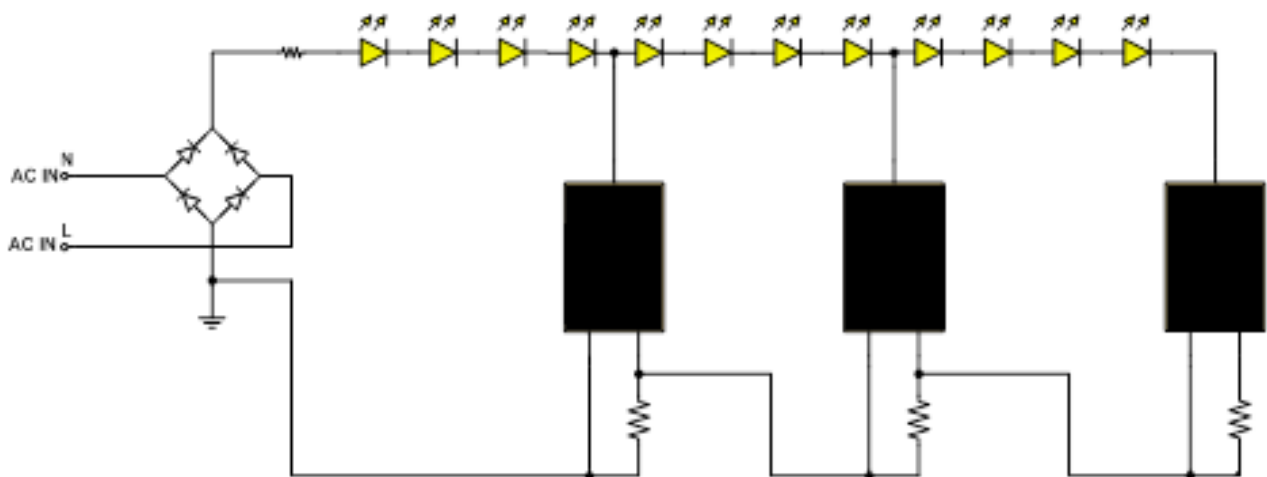
#### Spectrum



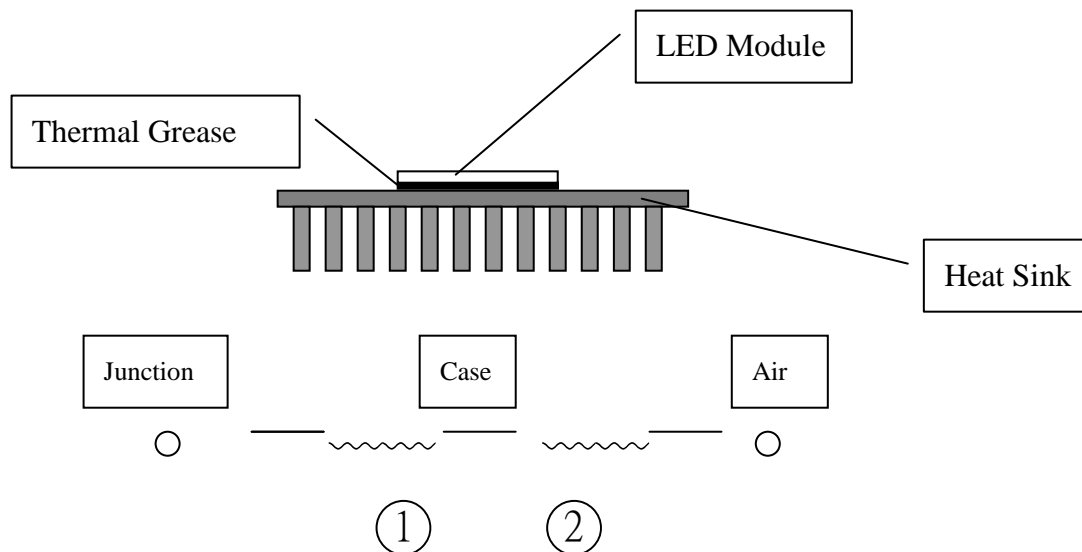
#### Candle Power Distribution & Cartesian Coordinate



### (4) Layout



### 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	$T_{\text{stg}} = +80^{\circ}\text{C}$ , x1,000 hrs	0/20
Low Temperature Storage Test	$T_{\text{stg}} = -40^{\circ}\text{C}$ , x1,000 hrs	0/20
Continous Light-on Test	$T_{\text{a}} = 25^{\circ}\text{C}$ , RH=65%, x1,000 hrs	0/20
Boiling Test	$T_{\text{a}} = 100^{\circ}\text{C}$ , RH=100%, x180mins	0/20
Thermal Cycle Test	$-40^{\circ}\text{C}$ x 30 mins, $80^{\circ}\text{C}$ x 30 mins, 100 cycles	0/20

Measuring Item	Measuring Condition	Judging Criteria of Failure
Forward Voltage	$I_{\text{F}} = 230\text{V}$	$> 0 \times 1.1$
Total Luminous Flux	$I_{\text{F}} = 230\text{V}$	$< L \times 0.7$