

*Paragon Semiconductor Lighting Technology*

*PSLT*

**ParagonLED**

## Specifications

**Product Type : SBAC-84-5050-120V-57**

**Issued Date : 06/25/2012**

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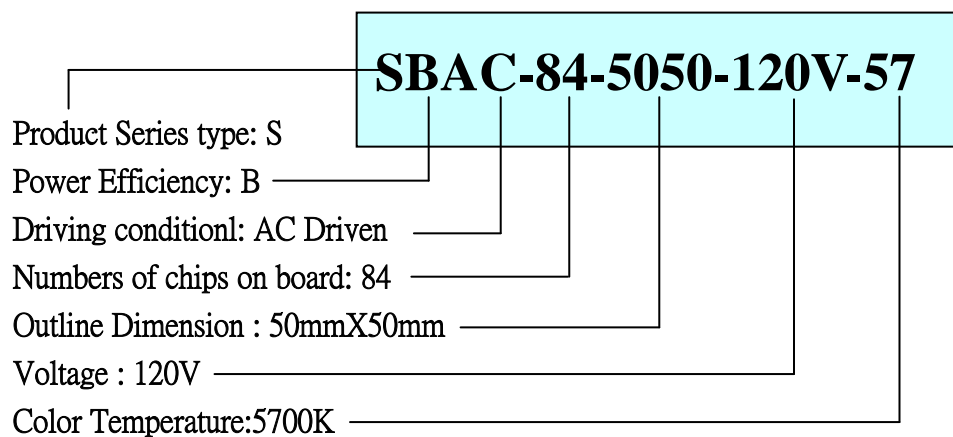
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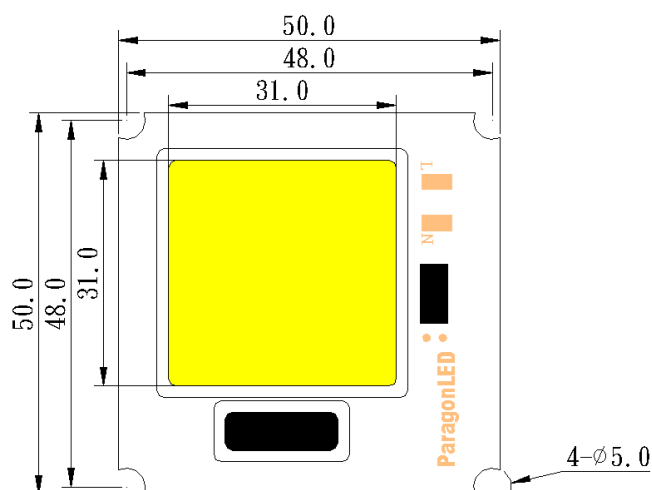
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## 1. General Description

### (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	$P_D$	22	W
Forward Current	$I_F$	—	A
Forward Voltage	$V_F$	120V	V
Operating Temperature	$T_{opr}$	-40 ~ +60	°C
Storage Temperature	$T_{stg}$	-40 ~ +80	°C
Assembly process temperature	$T_{sol}$	<300°C , 5 secs	

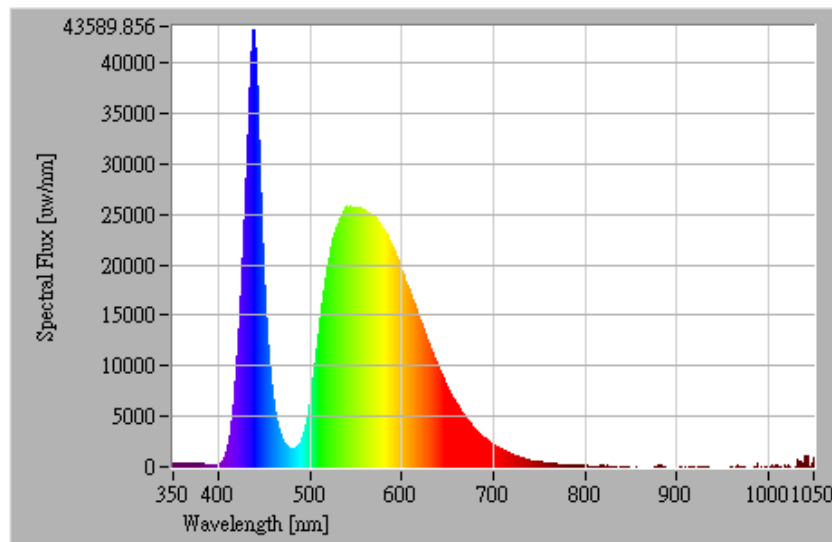
## (2) Electro-Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	$V_F$	–	110	120	140	V
Luminous Intensity	$\Phi_v$	$V_F=120V$	–	1760	–	Lm
Color rendering	Ra	$V_F=120V$	–	65	–	CRI

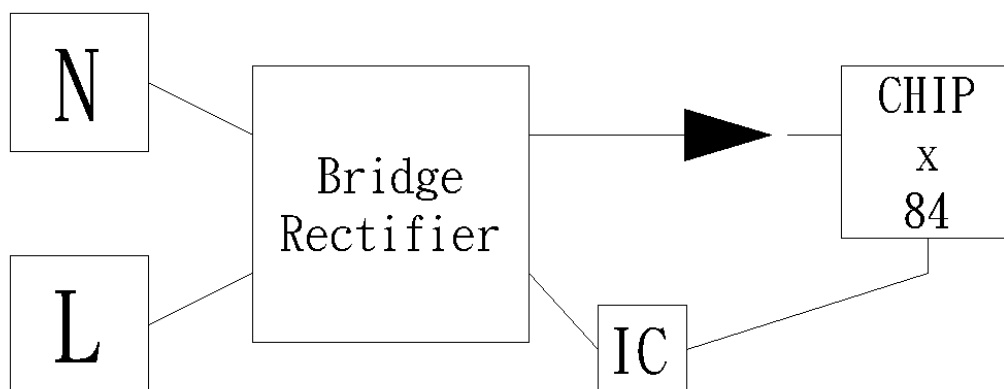
Notice: Operating current of SBAC-84 product varies from 110V~140V · users must keep the temperature of solder joint point under 60 °C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

## (3) Characteristics

### Spectrum

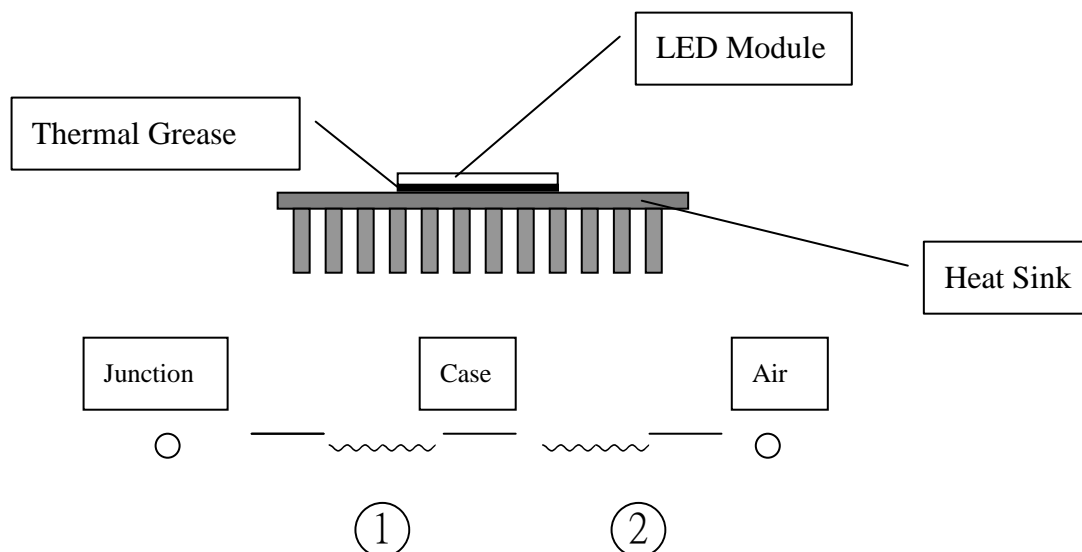


## (4) Layout



42 in series x 2 in parallel=84 LED Chips

### 3. Junction Temperature Measurement



② 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= $+80^{\circ}\text{C}$ , x1,000 hrs	0/20
Low Temperature Storage Test	Tstg= $-40^{\circ}\text{C}$ , x1,000 hrs	0/20
Continous Light-on Test	Ta= $25^{\circ}\text{C}$ , RH=65%, x1,000 hrs	0/20
Boiling Test	Ta= $100^{\circ}\text{C}$ , 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	$V_F = 120$	$> 0 \times 1.1$
Total Luminous Flux	$V_F = 120$	$< L \times 0.7$

## 5. Instruction of ring

