

*Paragon Semiconductor Lighting Technology*

*PSLT*

**ParagonLED**

## Specifications

**Product Type : SBHT-168-5050-230V-40**

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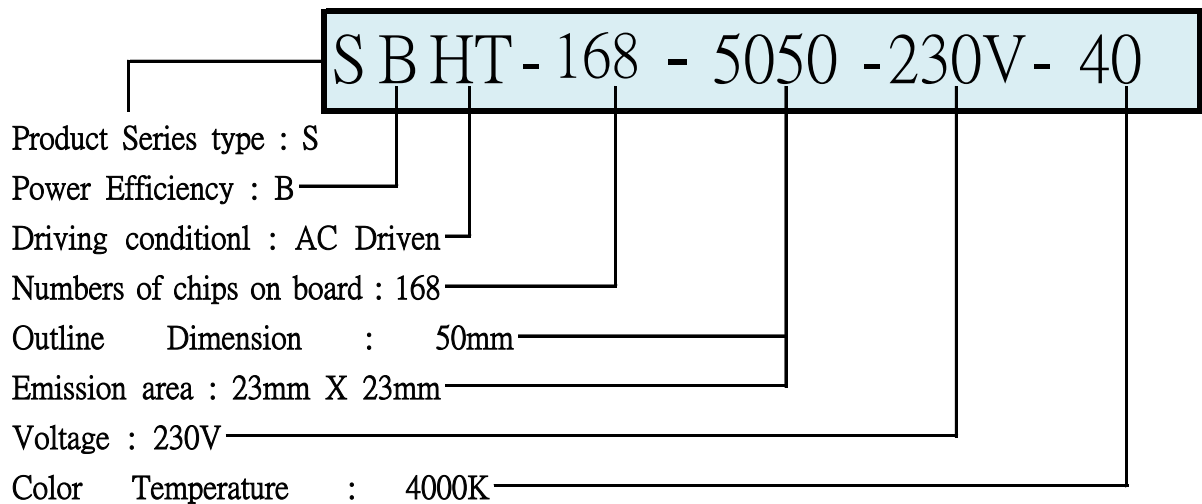
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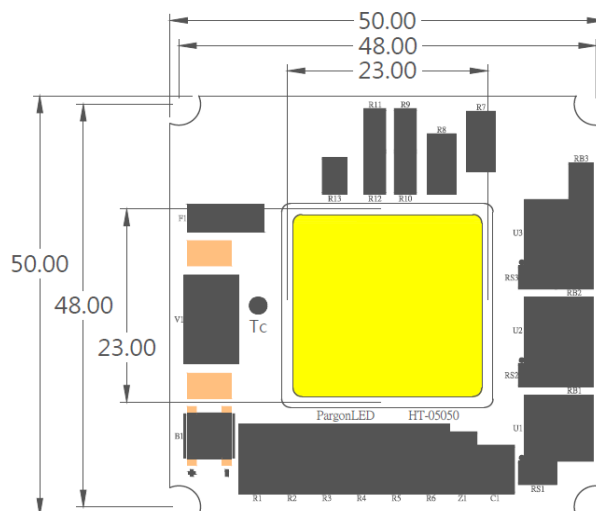
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## 1. General Description

### (1) Naming rule



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



Thickness :  $1.0 \pm 0.2$ mm

## 2. Electro-Optical Characteristics

### (1) Absolute Maximum Rating

| Parameter                    | Symbol | Value           | Unit |
|------------------------------|--------|-----------------|------|
| Power Dissipation            | PD     | 36              | W    |
| Power Factor                 | PF     | 0.95(Min)       |      |
| Forward Voltage              | VF     | 220 ~ 250       | V    |
| Operating Temperature        | Topr   | -40 ~ +85       | °C   |
| Storage Temperature          | Tstg   | -40 ~ +100      | °C   |
| Assembly process temperature | Tsol   | <300°C , 5 secs |      |

## (2) Electro-Optical Characteristics

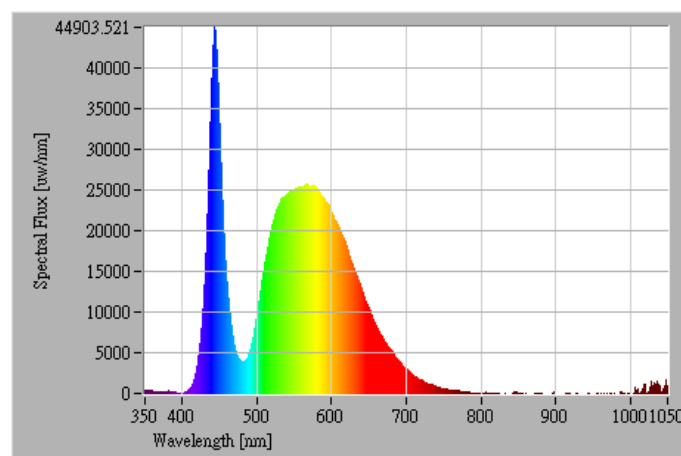
| Parameter                 | Symbol   | Condition | Min | Typ  | Max | Unit          |
|---------------------------|----------|-----------|-----|------|-----|---------------|
| Forward Voltage           | VF       | –         | 220 | 230  | 250 | V             |
| Reverse Current           | IR       | –         | –   | –    | –   | $\mu\text{A}$ |
| Luminous Intensity        | $\Phi_v$ | VF=230V   | –   | 2845 | –   | Lm            |
| Color rendering           | Ra       | VF=230V   | –   | 85   | –   |               |
| Total Harmonic Distortion | THD      | VF=230V   | –   | 15   | –   | %             |

### ※ support TRIAC DIMMING

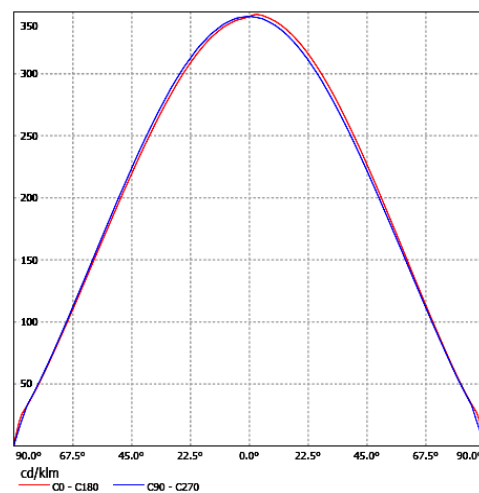
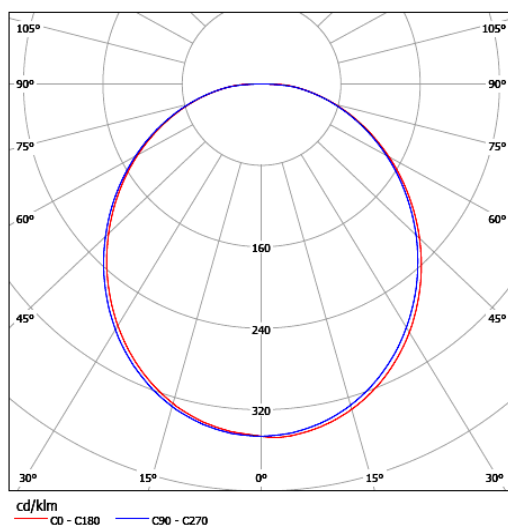
**Notice:** Operating voltage of SBHT-168 product varies from 120V~250V · users must keep the temperature of solder joint point under 85°C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

## (3) Characteristics

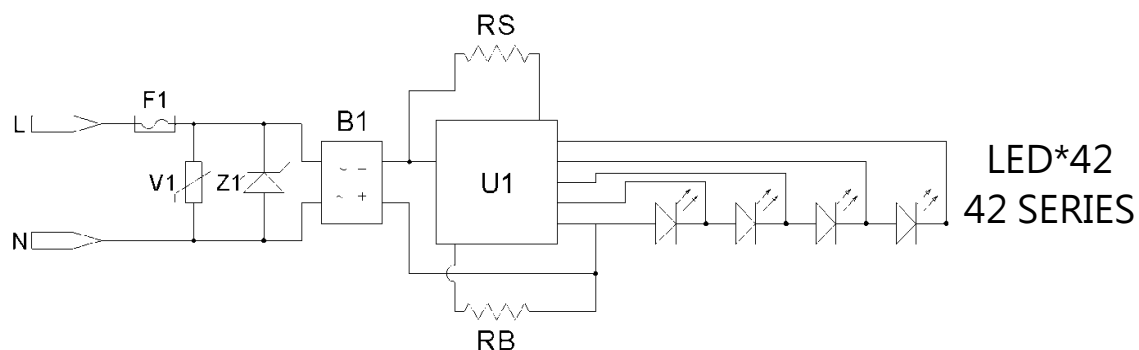
### Spectrum



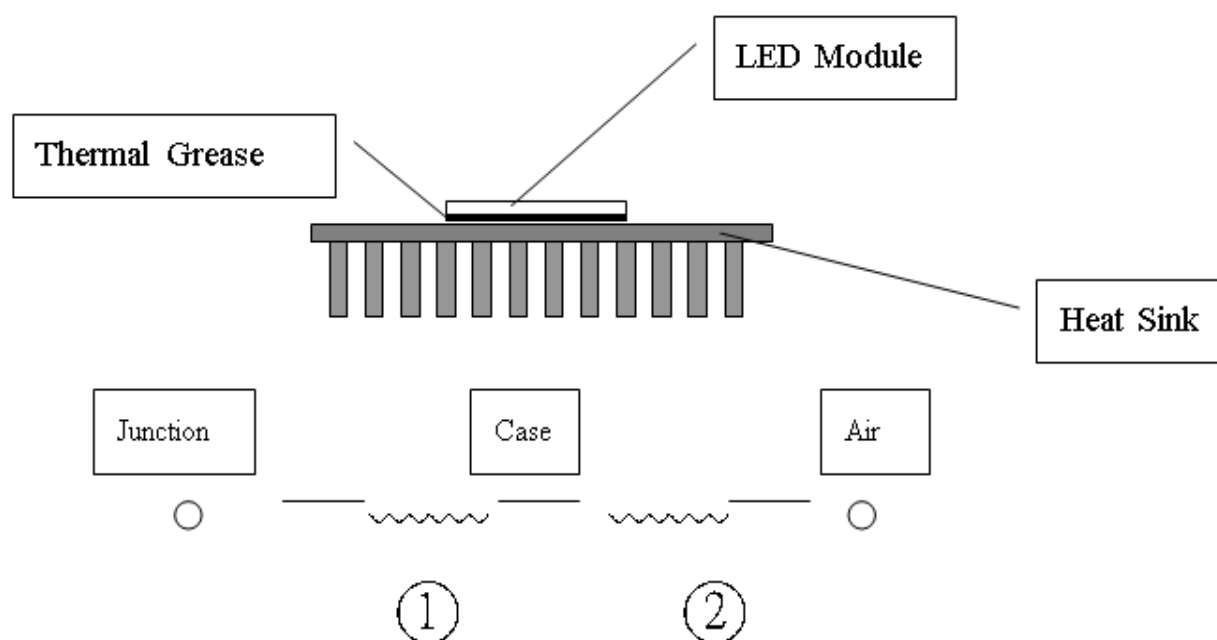
### Candle Power Distribution & Cartesian Coordinate



#### (4) Layout



### 3. 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 | Tstg= +80°C , x1,000 hrs                | 0/20             |
| Low Temperature Storage Test  | Tstg=-60°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=230V             | > 0 x 1.1                   |
| Total Luminous Flux | VF=230V             | < 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.***