

Paragon Semiconductor Lighting Technology

PSLT

ParagonLED

Specifications

Product Type : CDAC-83-5024-230V-50

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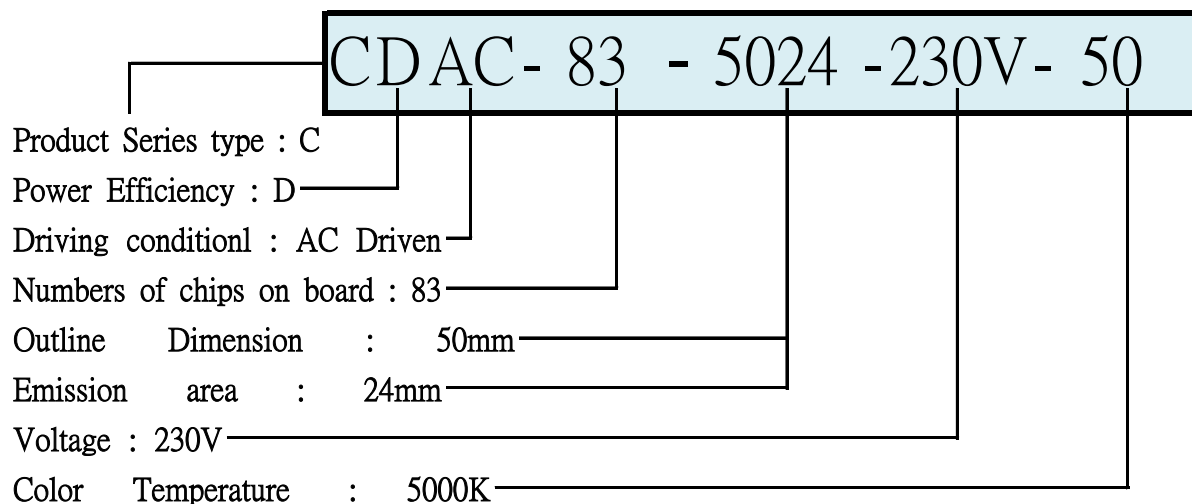
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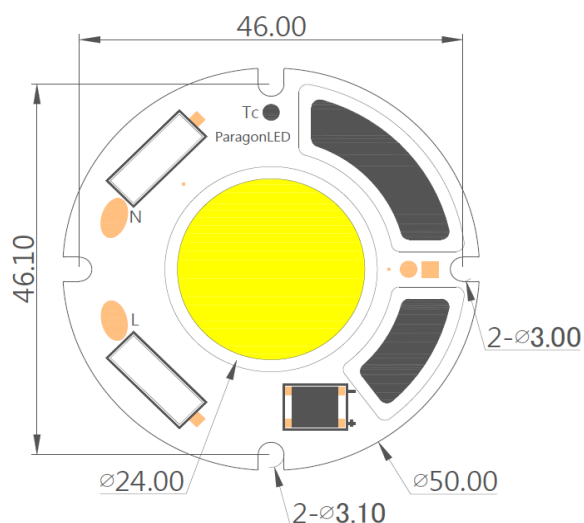
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1. General Description

(1) Naming rule



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



Thickness : 1.0 ± 0.1 mm

2. Electro-Optical Characteristics

(1) Absolute Maximum Rating

| Parameter | Symbol | Value | Unit |
|------------------------------|--------|-----------------|------|
| Power Dissipation | PD | 33 | W |
| Forward Current | IF | — | mA |
| Forward Voltage | VF | 220 ~ 250 | V |
| Operating Temperature | Topr | -40 ~ +105 | °C |
| Storage Temperature | Tstg | -40 ~ +105 | °C |
| Assembly process temperature | Tsol | <300°C , 5 secs | |

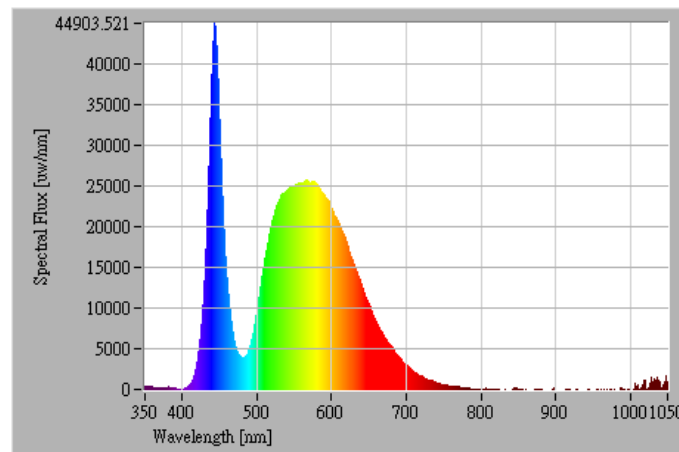
(2) Electro-Optical Characteristics

| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|--------------------|----------|-----------|-----|------|-----|---------------|
| Forward Voltage | VF | – | 220 | 230 | 250 | V |
| Reverse Current | IR | – | – | – | – | μA |
| Luminous Intensity | Φ_v | VF=230V | – | 3465 | – | Lm |
| Color rendering | Ra | VF=230V | – | 70 | – | |

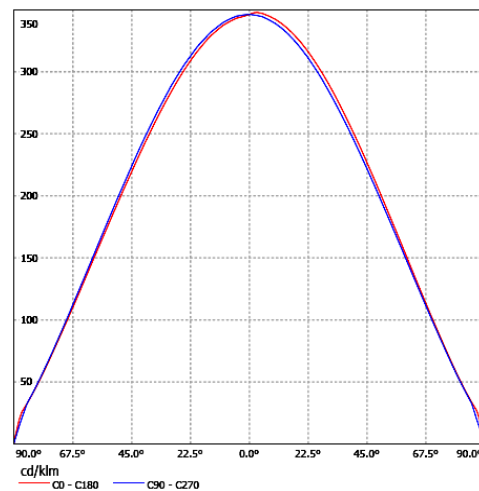
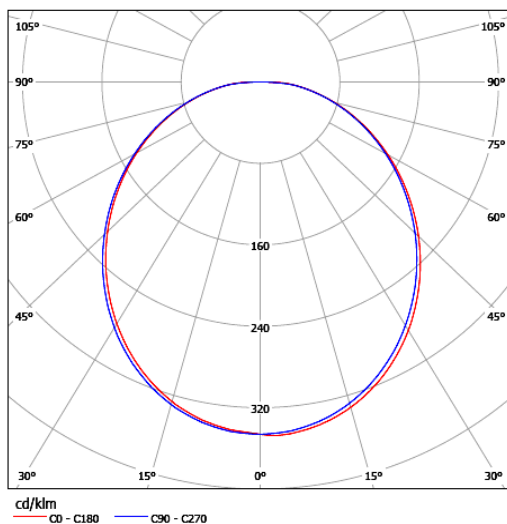
Notice: Operating voltage of CDAC-083 product varies from 220V~250V · users must keep the temperature of solder joint point under 105°C (with suitable heat sink), or may cause Serious luminous decay. We DO NOT guarantee of improper use.

(3) Characteristics

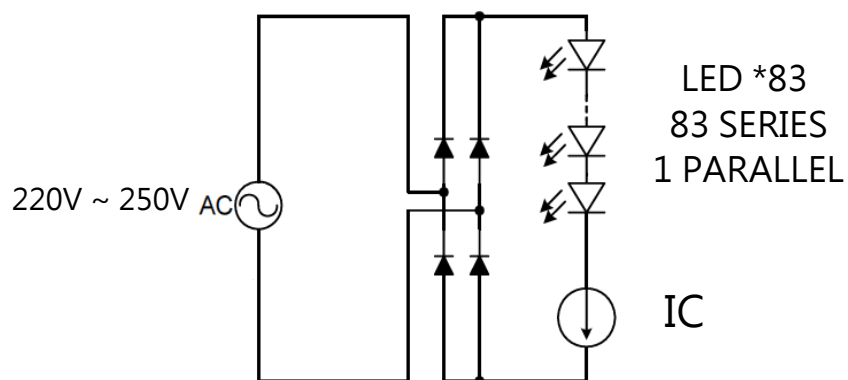
Spectrum



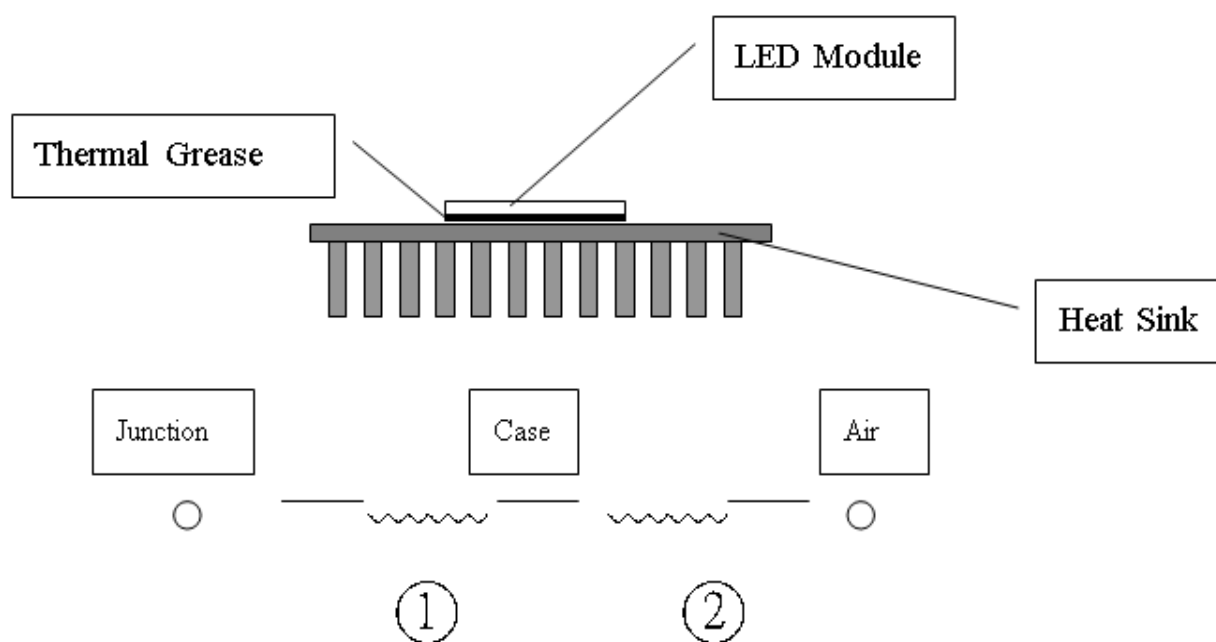
Candle Power Distribution & Cartesian Coordinate



(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= +105°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°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.***