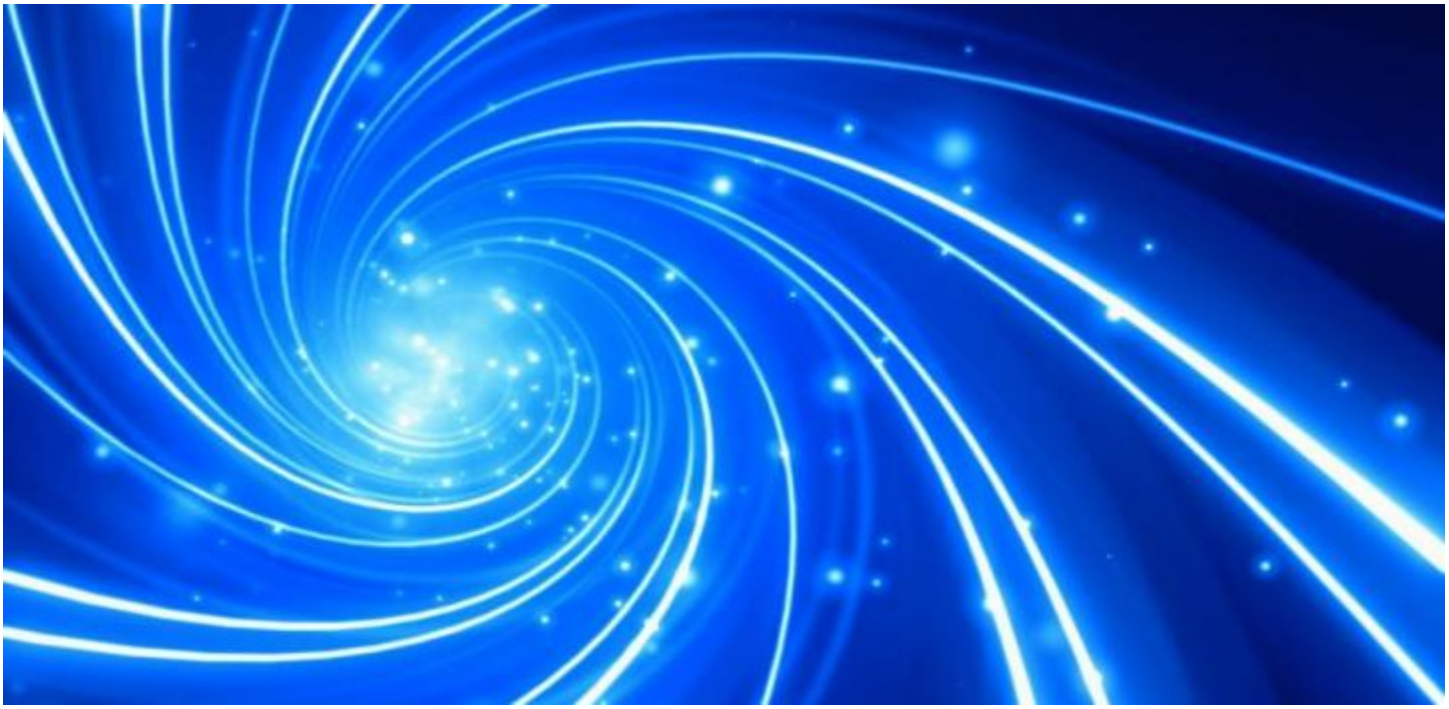
# SunpuLED



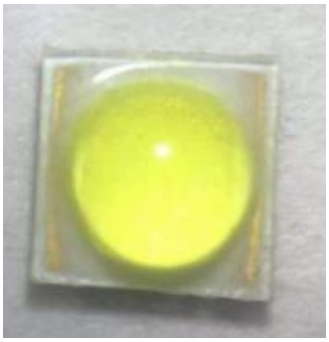
**BeterLED, BeterLife**

## ProductAcknowledgment

| Manufacturers | | ClientConfirm(Quality) | ClientConfirm(R&D) |
|---|---|---|---|
| Prepared | | | |
| Audit | | | |
| Approve | | | |
| After both sides confirmed the Acknowledgment qualified,must be signed and sealed | | | |
| Supply-sideAddress：No150.XinHuiRoad，Hi-TechPark,Ningbo,china | | | |
| Tel：0574-87740939 | | | |

# LEDSPECIFICATION

**PartNo：P35B-57AA0101-0601PD-B**



## Features:

High brightness、high reliability、long life

Light angle：120°

Typical color temperature：5700K-6700K

## productpresentation:

This series of products with high reliability of alumina ceramic substrate,with high brightness,high density,long servicelife,low depreciation,etc.,is an ideal choice for outdoor high requirements of products.

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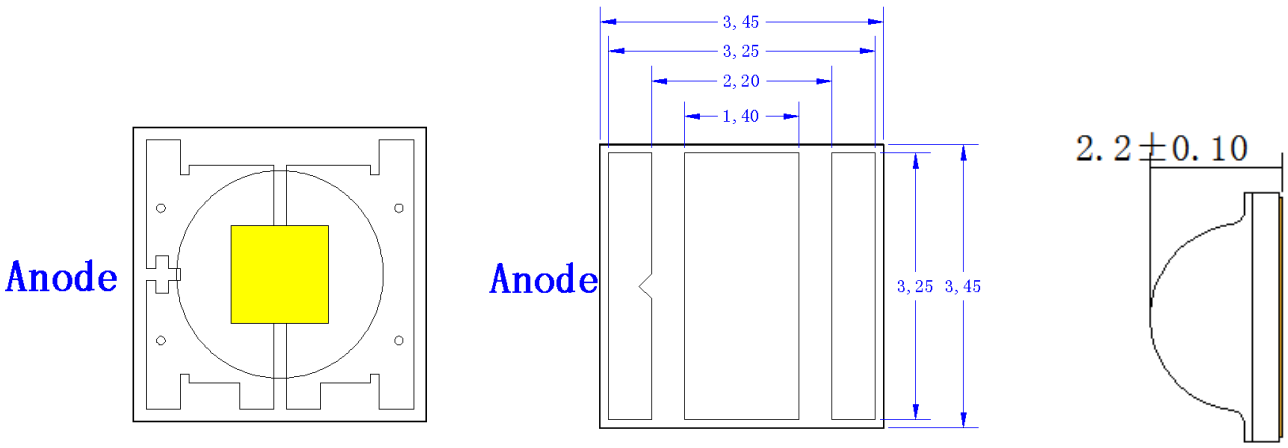
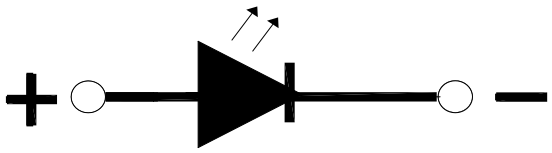
## Outlinedimensions:




## Circuitstructure:



**1P1S**

NOTES:

All dimensions are in millimeters.

Tolerance is ±0.1mm unless otherwise noted.

It is strongly recommended that the temperature of TS ( Weldingplate ) is not higher than 85℃.

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## Limitparameter(Ta=25℃)

| Parameter | Symbol | TestCondition | Value | | Unit |
|---|---|---|---|---|---|
| | | | Min. | Max. | |
| DC Forward Current | $I_f$ | Tc=25℃ | ---- | 2500 | mA |
| Reverse voltage | $V_r$ | Tc=25℃ | ---- | 5 | V |
| LED Junction Temperature | $T_j$ | ---- | ---- | 150 | ℃ |
| Operating Temperature | $T_{opr}$ | ---- | -40 | +85 | ℃ |
| Storage Temperature | $T_{str}$ | ---- | 0 | +40 | ℃ |
| Soldering temperature | ---- | ---- | 260° for 5 seconds max | | |

## Photoelectricparameters(Ta=25℃)

| CCT | Item | Symbol | Test | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| 5700-6700k | Forward Voltage | $V_F$ | IF=1500mA | 2.8 | 3.0 | 3.2 | V |
| | Luminous Flux | $\Phi_v$ | | | 630 | -- | lm |
| | Color Temperature | CCT | | 5700 | -- | 6700 | K |
| | General Color | $R_a$ | | -- | -- | 70 | -- |
| | Electricpower | W | | -- | 3.33 | -- | ℃/W |

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## Typicalcurve

Fig.1 forward current Vs forward voltage

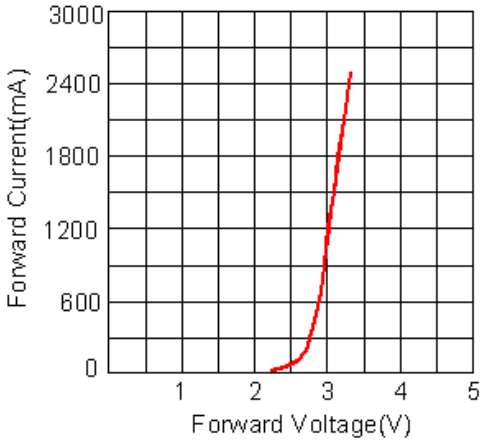



Fig.2 Relative intensity Vs Forward current

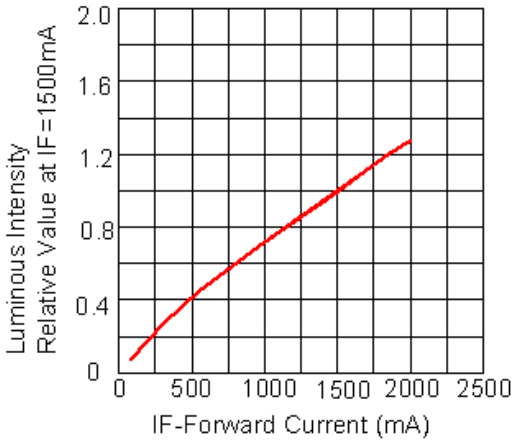



Fig.3 Forward current Vs Ambient temperature

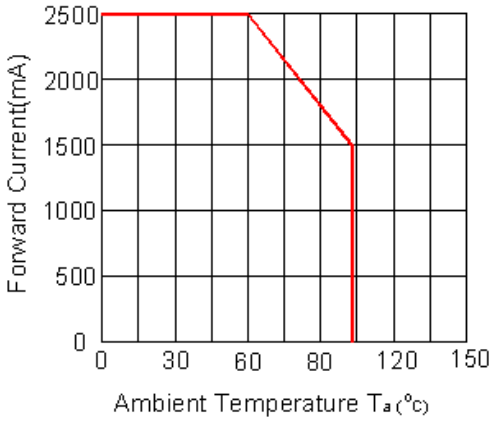
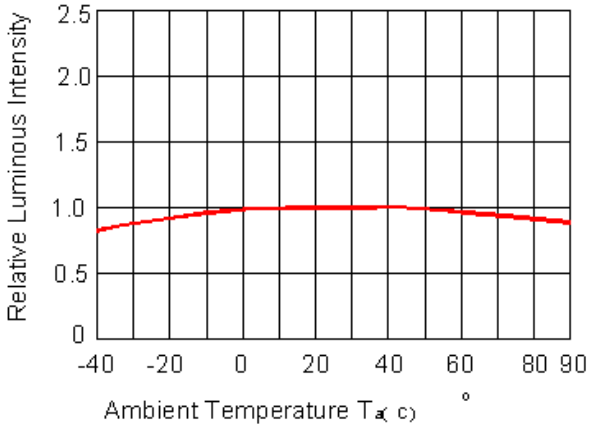



Fig.4 Relature intensity Vs Ambient temperayure



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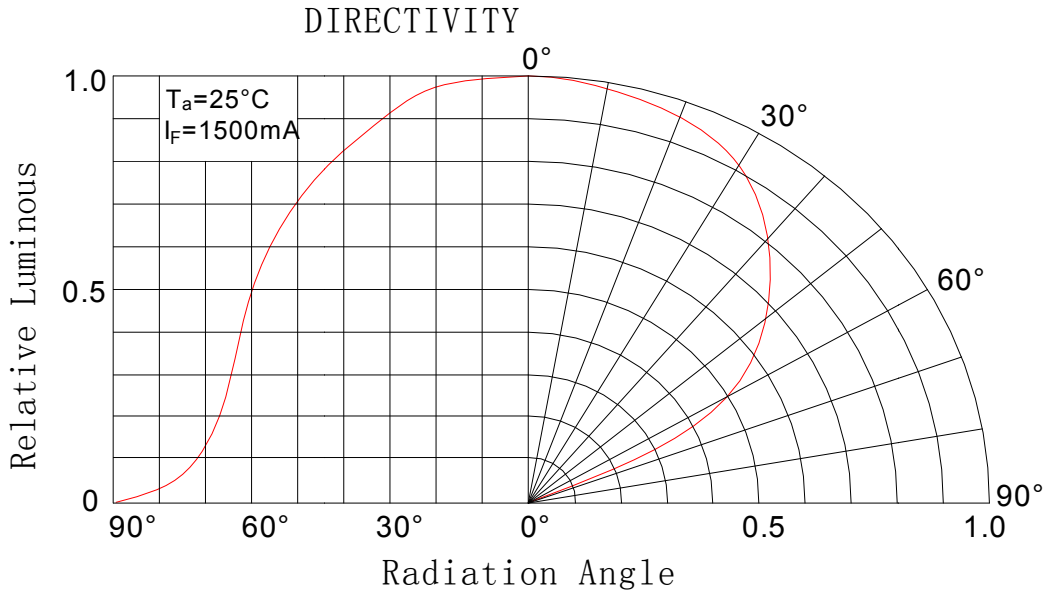

## ReliabilityTestsandResults

| Test | Reference Standard | TestConditions | Test Duration | Units Failed/ Tested |
|---|---|---|---|---|
| Temperature Cycle | JEITAED-4701 100 105 or MIL-STD-202G | -40℃(30min)~25℃(5min)~100℃(30min)~25℃(5min)or -40℃(30min)~100℃(30min) | 100cycles | 0/10 |
| High Temperature Storage | JEITAED-4701 200 201 | $T_A$=90℃ | 1000hours | 0/10 |
| HighTemperatureHumidityStorage | JEITAED-4701 100 103 | $T_A$=85℃RH=90% | 1000hours | 0/10 |
| LowTemperatureStorage | JEITAED-4701 200 202 | $T_A$=-40℃ | 1000hours | 0/10 |
| HighTemperatureOperatingLife | JESD22-A108D | TC=85℃$I_F$=2500mA | 1000hours | 0/10 |
| ElectrostaticDischarges | JEITAED-4701 300 304 | HBM 2KV 3KΩ 100Pf 3pulses nedative | | 0/10 |
| TemperatureCycle* 1 | Sunpu- opto | -40℃(30min)~(90s)~110℃(30min)~(90s)-40℃ | 300cycles | 0/10 |
| TemperatureHumidityStorage* 2 | Sunpu- opto | $T_A$=85℃RH=85%$I_F$=2500mA | 1000hours | 0/10 |

✧NOTES:

*Measurements are performed after allowing the LEDs to return to room temperature

**PartNo：P35B-57AA0101-0601PD-B**

## FailureCriteria

| Items | Conditions | FailureCriteria |
|---|---|---|
| Forward Voltagd(VF) | $I_F$=1500mA | >Initialvaluex1.1 |
| Luminous Flux(ΦV) | $I_F$=1500mA | <Initialvaluex0.7 |

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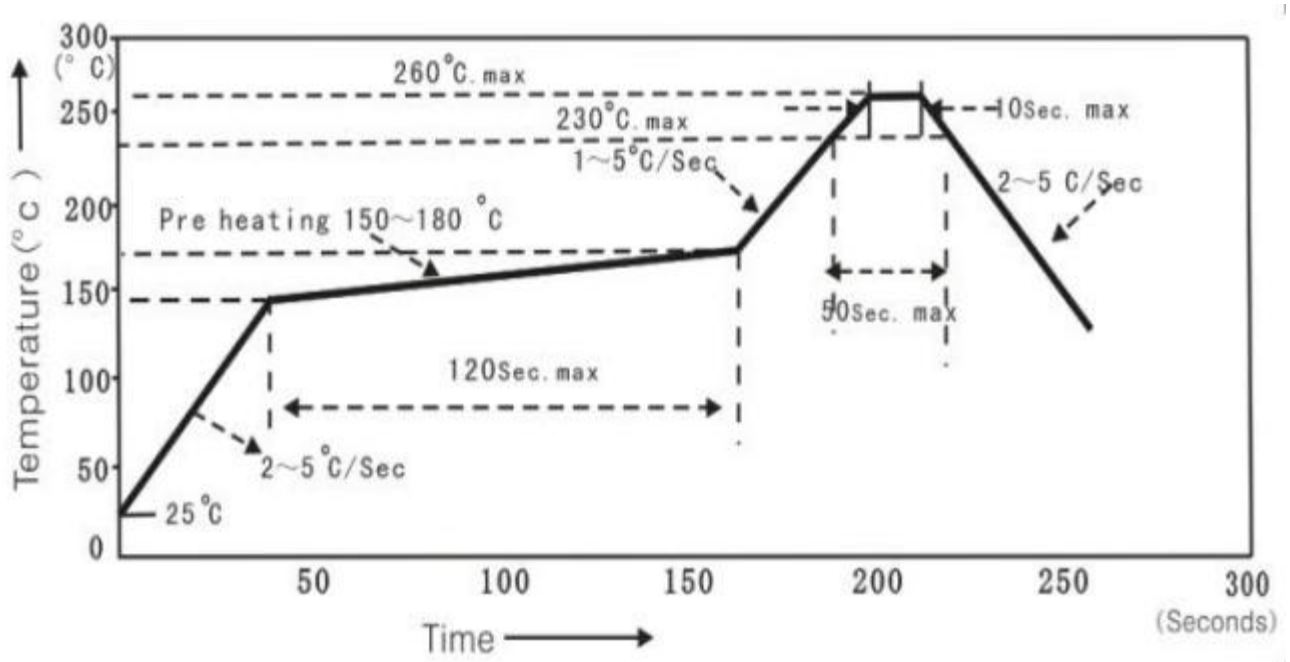
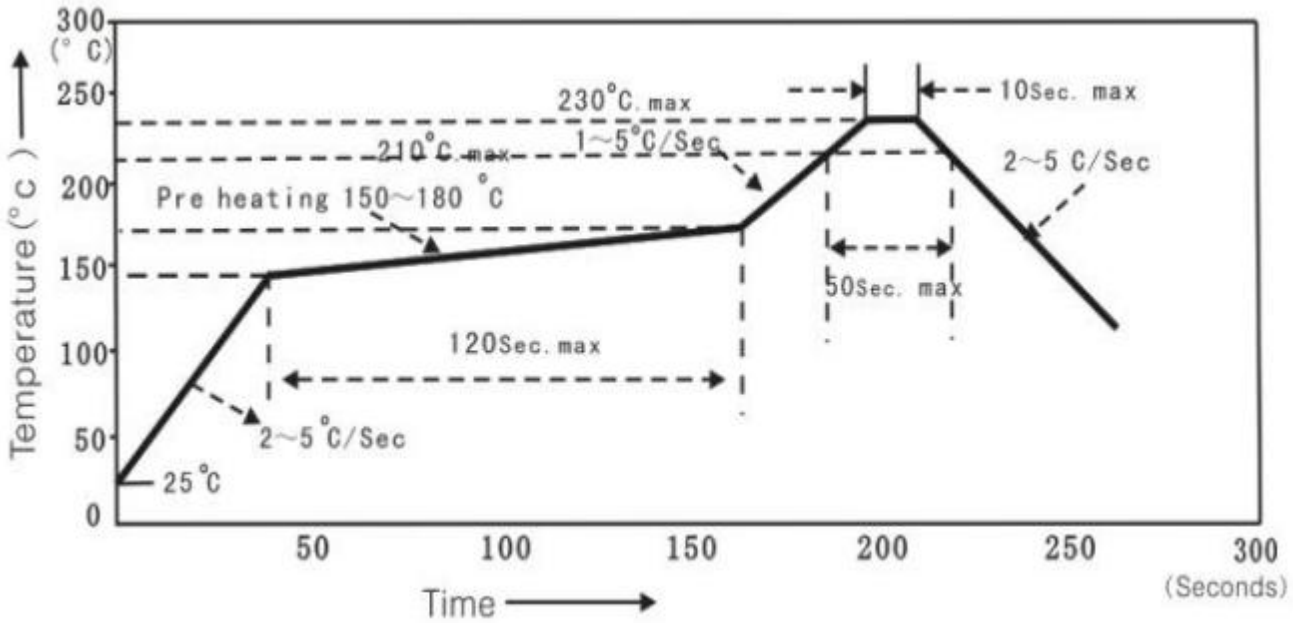
## Lead-freesolderreflowcurve:




## Haveleadsoldereflowcurve:



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| Temperature curve characteristics | Have lead solde | Lead-free solder |
|---|---|---|
| Average rate of tenperature increase(Tsmax-Tp) | Max3℃/s | Max3℃/s |
| Preheat： minimum temperature(Tsmin) | 100℃ | 150℃ |
| Prehea： maximum temperature(Tsmax) | 150℃ | 200℃ |
| Maintain a higher temperature： temperature(TL) | 183℃ | 217℃ |
| Maintain a higher temperature：time(tL) | 60-150s | 60-150s |
| Tp/ temperature | 215℃ | 260℃ |
| Ramp Down Rate | Max6℃/s | Max6℃/s |
| The time needed for heating up to theTp of 25℃ | Max6min | Max8min |

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## Packaging