# YETDA INDUSTRY LTD.

## FOUR PINS Ultra Bright Blue LED Lamp
## S114TB4U

Ultra B i ght Blue Dice。
Encapsulated with Water Clear Package。

**Absolute Maximum Ratings :**

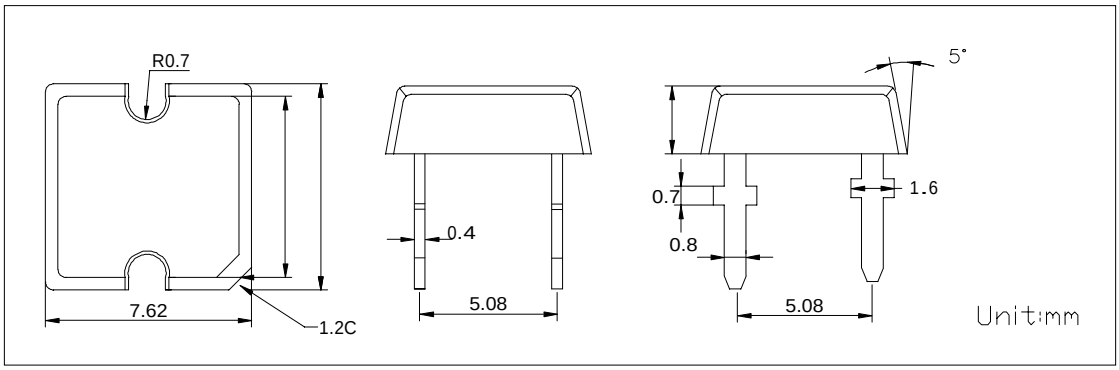
| Parameter | Maximum Rating | Unit |
|---|---|---|
| Peak Forward Current | 120 | mA |
| Continuous Forward Current | 30 | mA |
| Operating Temperature Range | －20℃ to ＋75℃ | |
| Storage Temperature Range | －40℃ to ＋100℃ | |
| Lead Soldering Temperature | 260℃ for 3 seconds<br>1.6mm(0.063 inch) from body | |

**Electro-Optical Characteristics** （**Ta = 25**℃）

| Parameter Radiant | Test Condition | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Forward Voltage | If = 20mA | Vf | 3.0 | | 3.6 | V |
| Reverse Current | Vr = 5V | Ir | | | 10 | uA |
| Luminous flux | If = 20mA | Iv | 300 | 450 | | lm |
| Spectral Bandwidth | If = 20mA | ϕV | | | | nm |
| Wavelength | If = 20mA | λp | 465 | | 475 | nm |
| | | λd | | | | nm |
| Half View Angle | If = 20mA | 2 θ1/2 | | 120 | | deg |

Package

Item: 114

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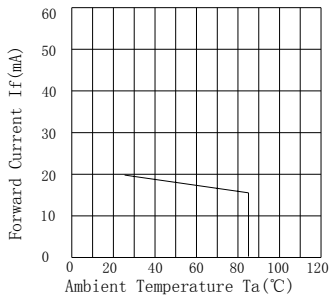
## ■ Reliability Performance

### Test Items And Result

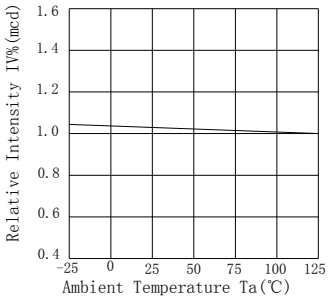
| Test Classification | Test Item | Test Conditions | Test Duration | Sample Size | AC/RE |
|---|---|---|---|---|---|
| Life Test | Room Temperature DC Operating Life Test | Ta=25℃±5℃, IF=20mA | 1000 hrs | 22 pcs | 0/1 |
| Environment Test | Thermal Shock Test | -10℃±5℃←→+100℃±5℃ 5min. 10sec. 5min. | 50 cycles | 22 pcs | 0/1 |
| | Temperature Cycle Test | -40℃±5℃←→+85℃±5℃ 30min. 5min. 30min. | 50 cycles | 22 pcs | 0/1 |
| | High Temperature & High Humidity Test | Ta=85℃±5℃ RH =85%±5 %RH | 1000 hrs | 22 pcs | 0/1 |
| | High Temperature Storage | Ta=100℃±5℃ | 1000 hrs | 22 pcs | 0/1 |
| | Low Temperature Storage | Ta=-55℃±5℃ | 1000 hrs | 22 pcs | 0/1 |
| Mechanical Test | Resistance to Soldering Heat | Ta=230℃±5℃ | 5sec. | 22 pcs | 0/1 |
| | Lead Integrity | Load 2.5N(0.25kgf) 0° ~ 90° ~0° | 3times | 22 pcs | 0/1 |

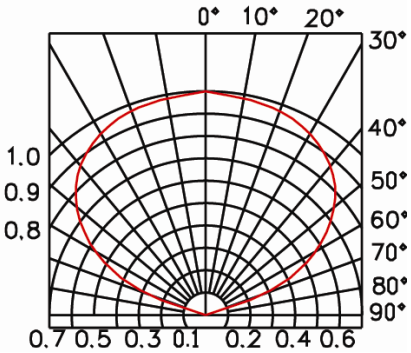
Typical Optical/Electrical Characteristics Curves
(Ta=25℃ Unless Otherwise Noted)

Forward Current vs. Ambient Temperature

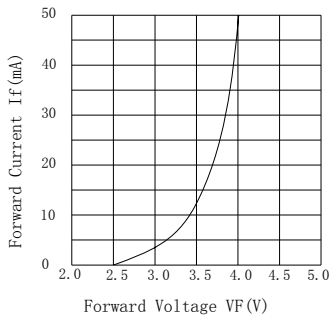



Relative Intensity vs. Ambient Temperature

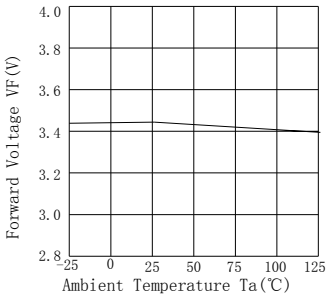


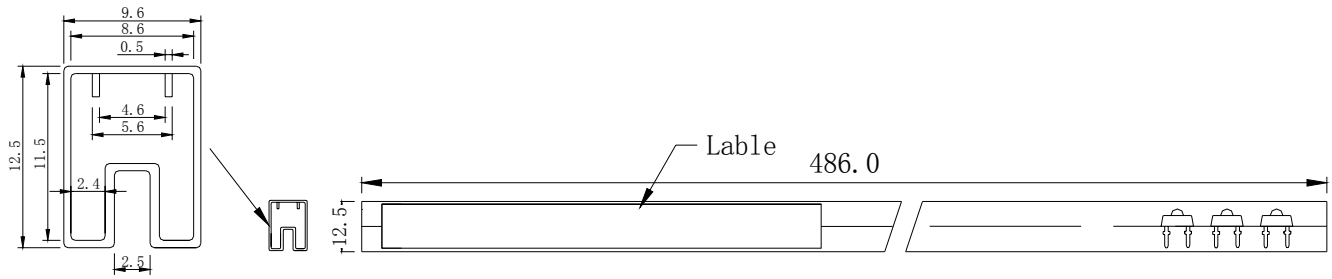

Forward Current vs.Forward Voltage




Forward Voltage vs. Ambient Temperature



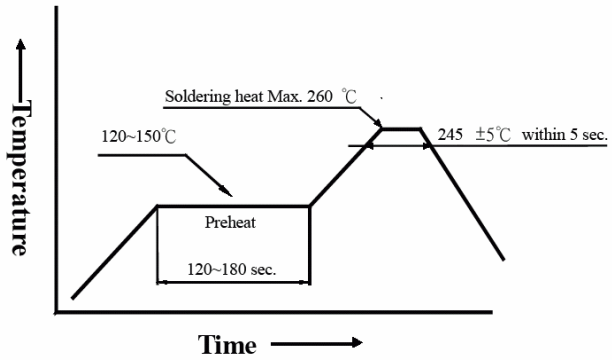
## Package means




Notes: Each Adhesive Pipe 60pcs.

## Soldering:

1. Manual Of Soldering
   The temperature of the iron tip should not be higher than 260℃(500℉) and Soldering within 3 seconds per solder-land is to be observed.
2. DIP soldering (Wave Soldering):
   Preheating:120℃~150℃,within 120~180 sec.
   Operation heating:245℃±5℃ within 5 sec.260℃(Max)
   Gradual Cooling (Avoid quenching).




## Handling:

Care must be taken not to cause to the epoxy resin portion of LED while it is exposed to high temperature.
Care must be taken not rub the epoxy resin portion of LED with hard or sharp article such as the sand blast and the metal hook.
Care must be taken there should be more than 3mm from jointing point to the epoxy resin.

## Notes for designing:

Care must be taken to provide the current limiting resistor in the circuit so as to drive the LED within the rated figures .Also caution should be taken not to overload LED with exorbitant voltage at the turning ON and OFF of the circuit.
When using the pulse drive care must be taken to keep the average current within the rated figures .Also the circuit should be designed so as be subjected to reverse voltage when turning off the LED.

## Storage:

In order to avoid the absorption of moisture . it is recommended to solder LED as soon as possible after unpacking the sealed envelope.

If the envelope is still packed to store it in the environment as following:
Temperature:-5℃~45℃(23℉~113℉)Humidity : RH 60% Max.