

5mm UV-A LED 365-375nm

Product applications

Light sources for UV curing
Light sources for photocatalyst air cleaner / purifier
Fluorescence disclosing and verification
Chemical analysis equipment
Medical and biomedical applications
Hazardous materials detection.
Industrial emitters



Absolute Maximum Ratings. (Ta=25°C)

DC Forward Current IF:	20 mA
Peak Pulse Forward Current*1 IFP:	100 mA
Allowable Reverse Current IR:	50 mA
Power Dissipation PD:	80 mW
Operating Temperature TOPR:	-40 ~ +85 °C
Storage Temperature TSTG:	-40 ~ +100 °C
Soldering Temperature TSOL.	260 — 5

*Note:

1. IFP Conditions: Pulse Width \leq 10msec, Duty \leq 1/10

Electro-Optical Characteristic Characteristics . (Ta=25°C)

λ_p Range (nm)	Po (mW)	Vf (V)	Viewing Angle 2 θ 1/2	Current (mA)
365~375	2~4	3.2~4.2	15°	20

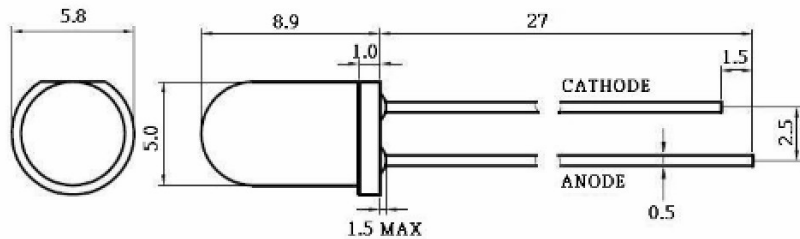
*Note:

1. Forward voltage measurement allowance is \pm 0.2V
2. Peak wavelength measurement allowance is \pm 2nm
3. Optical output measurement allowance is \pm 10%

Materials

Item	Material
Die	InGaN based
Zener diode	Si
Lead-frame	Ag Plating, Iron Alloy
Bonding wire	Au
Encapsulation	UV-resistant epoxy resin (Water Clear)

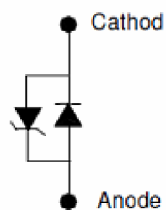
Dimension figure



*Notes:

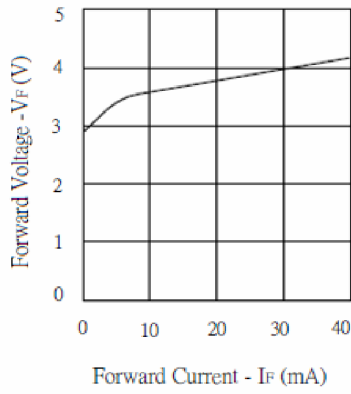
1. Unit : mm
2. Tolerance: ± 0.15 mm

Circuit Diagram

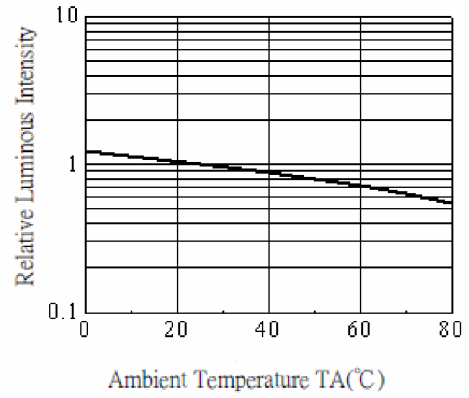


Standard Optical and Electrical Characteristics.

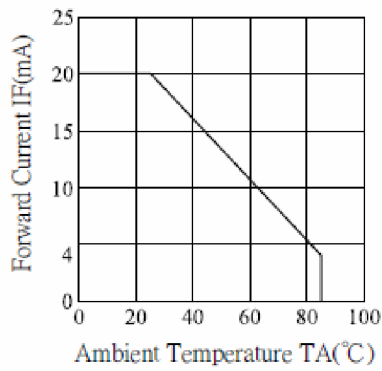
Forward Voltage vs. Forward Current



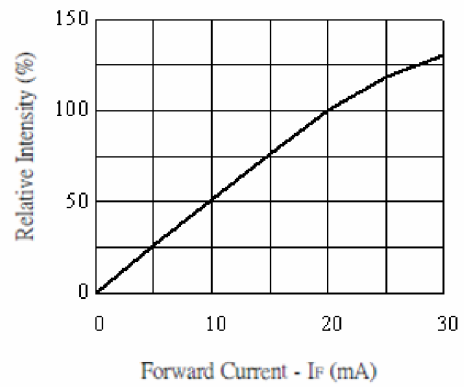
Relative Luminous Intensity vs. Ambient Temperature



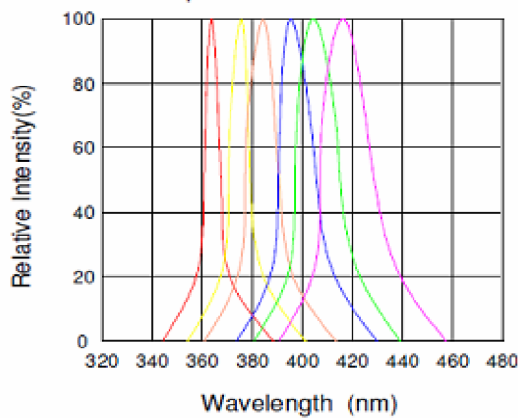
Forward Current vs. Ambient Temperature



Relative Intensity vs. Forward Current



Spectrum Distribution



(Red line for 5043700x only)

Precaution For Use

1. Cautions

- (1) The devices are UV LEDs. The UV LED during operation radiates UV light.
- (2) DO NOT look directly into the UV light or look through the optical system. To prevent inadequate exposure of UV radiation, wear UV protective glasses.

2. Lead Forming

- (1) When forming leads, the leads should be bent at a point at least 3mm from the base of the lead.

DO NOT use the base of the leadframe as a fulcrum during lead forming.

- (2) Lead forming should be done before soldering.
- (3) DO NOT apply any bending stress to the base of the lead. The stress to the base may damage the LED's characteristics or it may break the LEDs.
- (4) When mounted the LEDs onto the printed circuit board, the holes on the circuit board should be exactly aligned with the leads of LEDs. If the LEDs are mounted with stress at the leads, it causes deterioration of the lead and it will degrade the LEDs.

3. Storage

- (1) The LEDs should be stored at 30°C or less and 70%RH or less after being shipped and the storage life limits 3 months. If the LEDs stored for 3 months or more, they can be stored for a year in a sealed container with a nitrogen atmosphere and moisture absorbent material.

- (2) The LED leads are comprised of an Ag plated Iron alloy. The surface may be affected by environments which contain the corrosive gases and so on. Please avoid the conditions which may cause the LED to corrode, tarnish or discolor. This corrosion or discoloration may cause difficulty during soldering operations.

It is recommended that LEDs be used as soon as possible.

- (3) Please avoid rapid transition in ambient temperature, especially, in high humidity environment where condensation can occur.
- (4) When washing is required, IPA (Isopropyl Alcohol) should be used.

4. Soldering Conditions

- (1) Solder the LEDs no closer than 3mm from the base of the lead.
- (2) Recommended soldering conditions:

Dip Soldering	
Pre-Heat	120°C Max.
Pre-Heat Time	60 Seconds Max.
Solder Bath Temperature	260°C Max
Dipping Time	5 Seconds Max
Dipping Position	No lower than 3mm from the base of the epoxy bulb

- (3) DO NOT apply any stress to the lead particularly when heat.
- (4) The LEDs must not be reposition after soldering
- (5) After soldering the LEDs, the lead should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- (6) When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.
- (7) Cut the LED leads at room temperature. Cutting the leads at high temperature may cause the failure of the LEDs.

5. Static Electricity

- (1) The LEDs are very sensitive to Static Electricity and surge voltage. So it is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.
- (2) All devices, equipment and machinery must be grounded properly. It is recommended that precautions should be taken against surge voltage to the equipment that mounts the LEDs.

6. Heat Generation

- (1) The powered LEDs generate heat. Heat dissipation should be considered in the application design to avoid the environmental conditions for operation in excess of the absolute maximum ratings.

7. Warranty

- (1) Perform an acceptance inspection on arrival of the goods. Return the defectives if any stipulating the disqualification and quantity.
- (2) Embedding the LEDs into the application and the verification of life and other qualities in practical use shall be executed by user.
- (3) Do not use the LEDs for the applications that require the higher reliability and security and that may endanger life and health by the breakdown and the malfunction. Seller shall not bear any responsibility or liability with respect to any claims and damages caused by user's usage of the LEDs without following our intended purpose or any written consent.
- (4) Seller shall not bear responsibility for any damages or defects caused by improper operation at the current in excess of the absolute maximum ratings that are not covered by warranty.