PRODUCT SPECIFICATIONS

DS-UV2754P3Z-6868AC-S-12

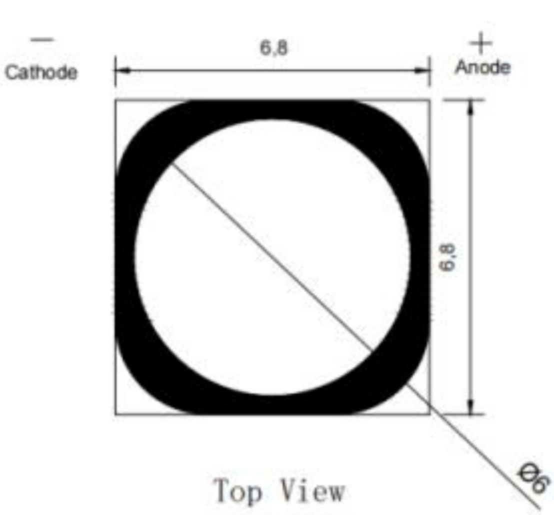
◆ Features

- Low Voltage
- High Brightness
- Dimension 6.80mm* 6.80mm* 1.82mm
- High Luminous Efficiency
- Long Operation Life
- High anti-ESD Ability
- RoHS compliant

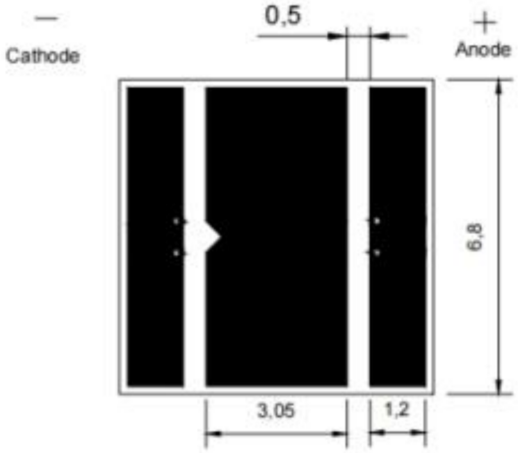
◆ Applications

- UV Security Check
- UV Sterilization System
- UV Photo-catalyst
- UV Sensor Light
- UV Jewelry Appraisal
- UV Plant Growth

Mechanical Dimension

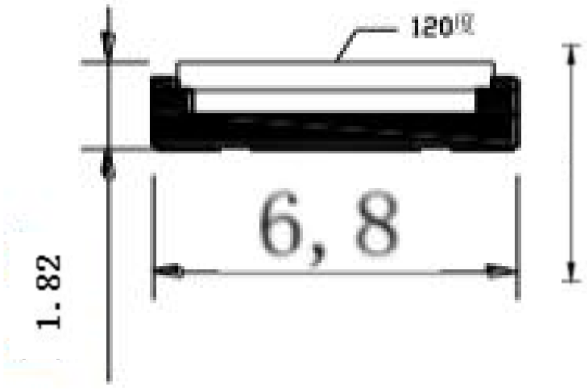


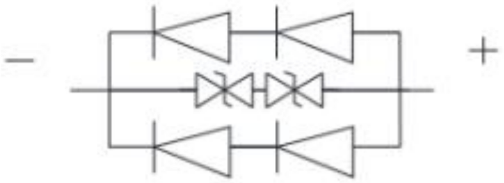
Top View



Bottom View

侧视图





Notes:

1、Dimensions are in millimeters.

2、Tolerances unless mentioned are ± 0.1mm

Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Power Dissipation/DICE	Pd	12	W
DC Forward Current/DICE	IF	700	mA
Single Chip Pulsed Forward Current	IFP	1000	mA
Reverse Voltage	VR	5	V
Operating Temperature	Topr	-30 ~ +60	°C
Storage Temperature	Tstg	-40 ~ +100	°C

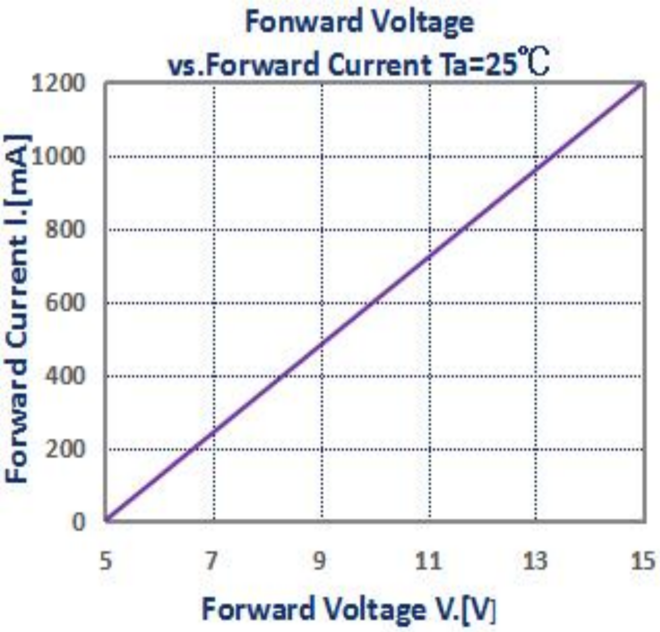
Electro-Optical Characteristic

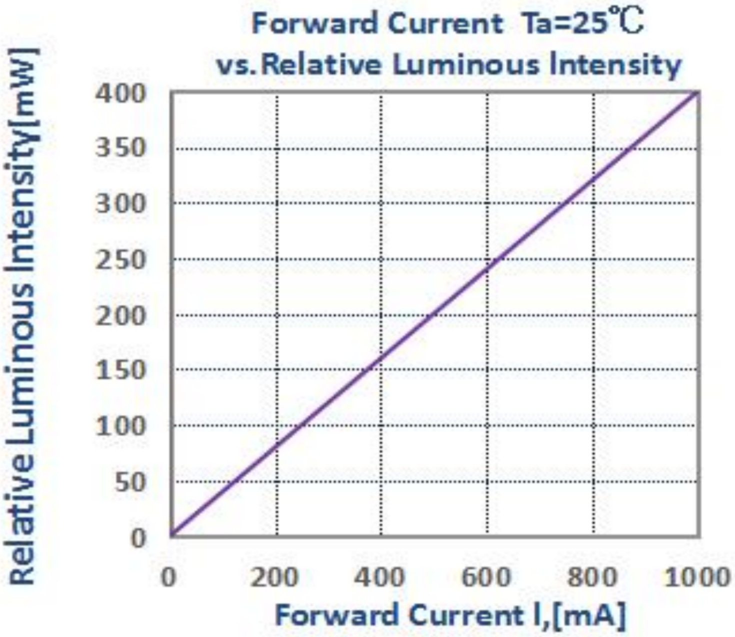
Parameter	Symbol	Value			Unit	Test condition
		Min.	Typ.	Max.		
Forward Voltage	Vf	9		12	V	If=700mA
Reverse Current	Ir	-	-	10	μA	Vr=5V
Viewing angle	2θ1/2	-	120	-	Deg	If=700mA
Peak wavelength	λP	270	-	280	nm	If=700mA
Luminous Flux	Φe	240	-	300	mW	If=700mA

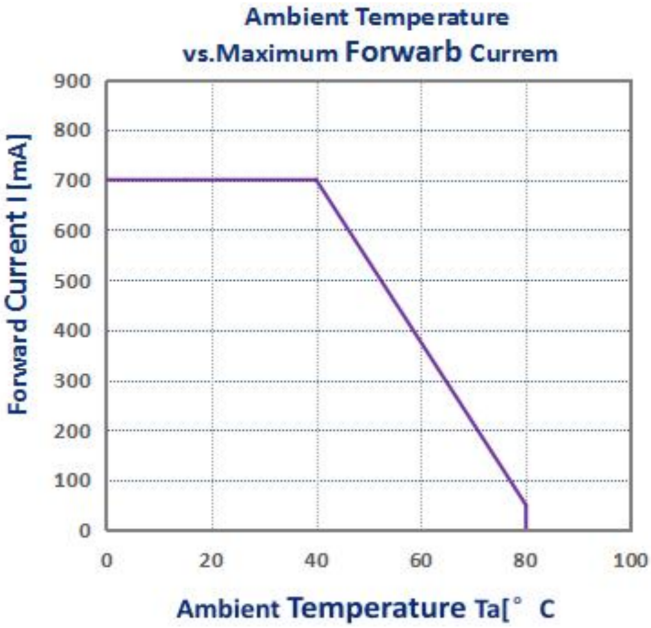
Notes:

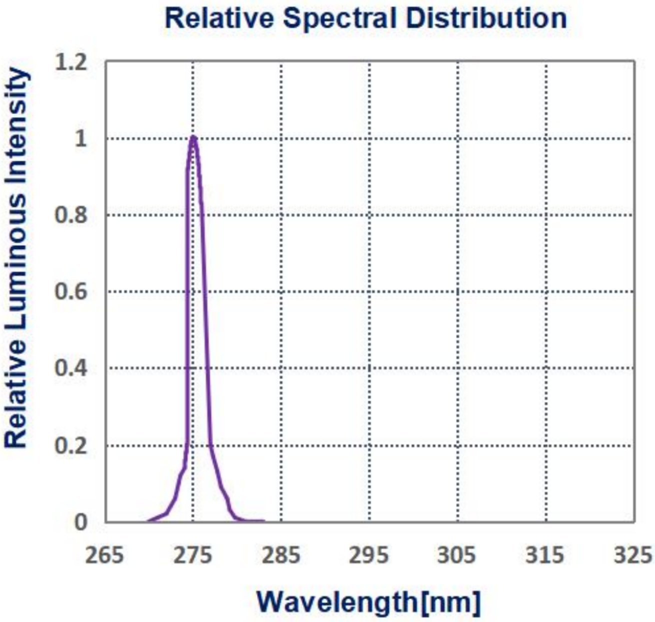
1、Radiant flux measurement tolerance: ±10%.
2、The data of luminous flux measured at thermal pad=25℃
3、Typical radiant flux or light output performance is operated within the condition guided by this datasheet.

Typical Characteristics Curves


Fonward Voltage
vs.Forward Current Ta=25℃


Forward Current Ta=25℃
vs.Relative Luminous Intensity


Ambient Temperature
vs.Maximum Forwarb Currem


Relative Spectral Distribution

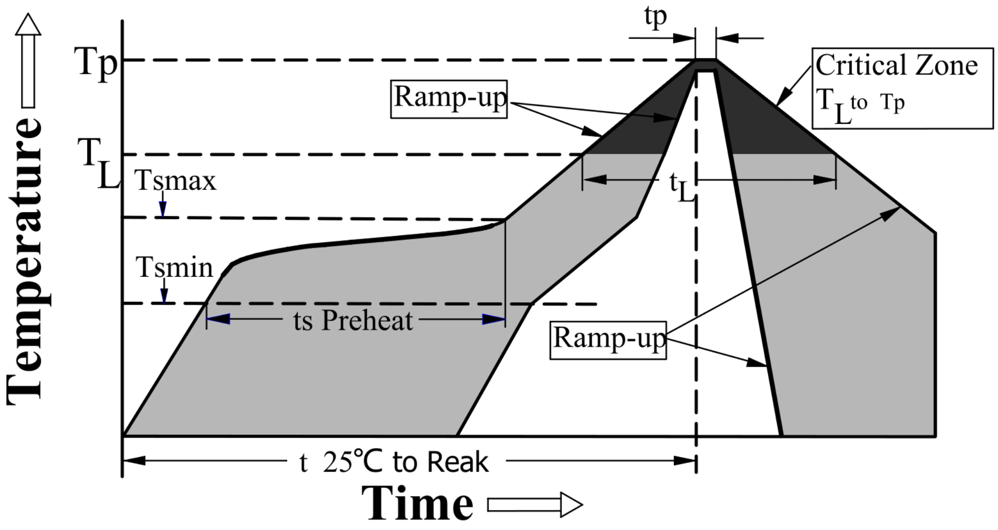
Soldering :

1. Manual Soldering

The temperature of the iron tip should not be higher than 350℃ and Soldering time to be within 3 seconds per solder-pad.

2. Reflow Soldering Characteristics

Temperature Profile



Profile Feature	Sn-Pb Eutectic Assembly
Average Ramp-Up Rate ($Ts_{max.}$ to T_p)	3℃ / second max.
Preheat Temperature Min. ($Ts_{min.}$)	100℃
Preheat Temperature Max. ($Ts_{max.}$)	150℃
Preheat Time ($ts_{min.}$ to $ts_{max.}$)	60-120 seconds
Time Maintained Above Temperature (T_L)	183℃
Time Maintained Above Time (t_L)	60-150 seconds
Peak / Classification Temperature (T_p)	220℃
Time Within 5℃ of Actual Peak Temperature (t_p)	10-30 seconds
Ramp – Down Rate	6℃ / second max.
Time 25℃ to Peak Temperature	6 minutes max.

Notes: 1. All temperature refer to the application Printed Circuit Board (PLCC), measured on the surface adjacent to the package body.

- **Lens cleaning :**

In the case where a minimal level of dirt and dust particles can not be guaranteed, a suitable cleaning solution can be applied to the lens surface

1. Try a gentle swabbing using a lint-free swab
2. If needed, the use of lint-free swab and isopropyl alcohol used gently removes dirt from the lens surface
3. Do not use other solvents as they may directly react with the LED assembly
4. Do not use ultrasonic cleaning that the LED will be damaged

- **Handling :**

Care must be taken not to damage LED's silicon while exposing to high temperature or contact LED's epoxy resin with hard or sharp objects, such as metal hook, tweezer or sand blasting**.**

- **Storage Conditions :**

1、Before the package is opened :The LEDs should be stored at 30°C or less and 85%RH or less after being shipped from Everlight and the storage life limits are 1 year. The LEDs can be stored up to 3 years if in a sealed container with a nitrogen atmosphere and moisture absorbent material.

2、 After opening the package: The LED's floor life is 168hrs when environment is 30℃ or less and 60%RH or less. The LED should be soldered within 168hrs (7days) after opening the package. If unused LEDs remain, it should be stored in moisture proof packages.

3、 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment: 60±5℃ for 24 hours.

- **ESD**

Static electricity and high volt can damage led, The production whose Die material is InGaN must strictly required to prevent ESD, Must put on static glove and static fillet, Soldering tool and the cover of device must connect the ground, oldering condition follows the related stating of production specification manual.

Recommended Circuit

The current through each LED must not exceed the absolute maximum ratings when designing the circuits.

In general, there can be various forward voltages for LEDs. Different forward voltages in parallel via a single resistor can result in different forward currents to each LED, which also can output different radiant flux values. In the worst case, the currents can exceed the absolute maximum ratings which can stress the LEDs. Matrix circuit with a single resistor for each LED is recommended to avoid the radiant flux fluctuations.

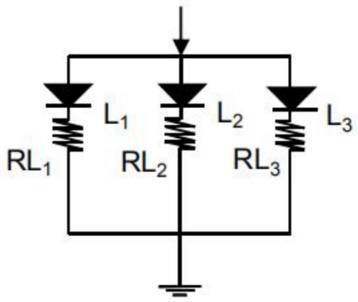


Fig.1 Recommended Circuit in Parallel Mode
: Separate resistors must be used for each LED.

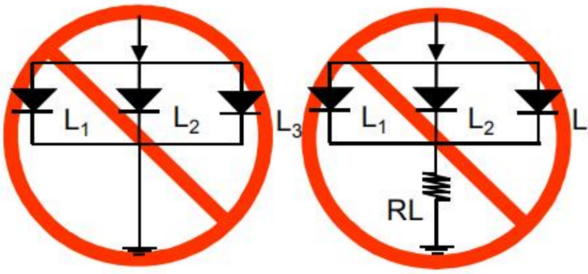


Fig.2 Abnormal Circuit
Circuits to Avoid : The current through the LEDs may vary due to the variation in LED forward voltage.

The driving circuits must be designed and operated by forward bias only so that the LEDs are not to be operated by the reverse voltages while turned off, which can damage the LEDs.

Reverse voltage can damage the zener diode and cause destructions.

Eye Safety Guidelines

Do not view directly in to the deep UV(UVC) light of LED driven at low current or the LED with optical instruments for measuring such as radiant flux, light distribution and spectrum, etc.

Do not expose to the human body and eyes during the LED light emitting because UV(UVC) light can be hazardous for human.

Please wear UV protective products such as UV protective glasses, mask, etc.