

# VFQZ35AQ1DCNZ1ZH

- ◆ **Outline(L\*W\*H): 3.75\*3.75\*1.5mm**
- ◆ **Good thermal dissipation & optical uniformity**
- ◆ **Materials: ALN and Quartz lenses**



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## Features

- Forward current:  $\leq 40\text{mA}$
- Typical view angle 50% Iv:  $120^\circ$
- RoHS2.0 and REACH-compliant
- Lens color: water transparent
- ESD level 8 kV(HBM)

## Applications

- Disinfection Sterilization
- Bio-Analysis Detection
- Sensor Light
- Medical optical

■ Product Code Method

V - F - QZ35 - A - Q1DC - N- Z - 1 - Z- H

①    ②    ③    ④    ⑤    ⑥    ⑦    ⑧    ⑨    ⑩

①	②	③	④	⑤
Process Type	Category	Specification	Lens Angle code	Dice wavelength & luminous rank
V: Eutectic process	F: Flip Chip LED	QZ35: 3.75*3.75 mm	A: 120°	Qxxx: UV product

⑥	⑦	⑧	⑨	⑩
Support code	Zener	Cap color ode	Module & Lens code	Current code
N: Substrate Code	Z: Zener	1: Series No	Z: Dispenser	H : 40mA

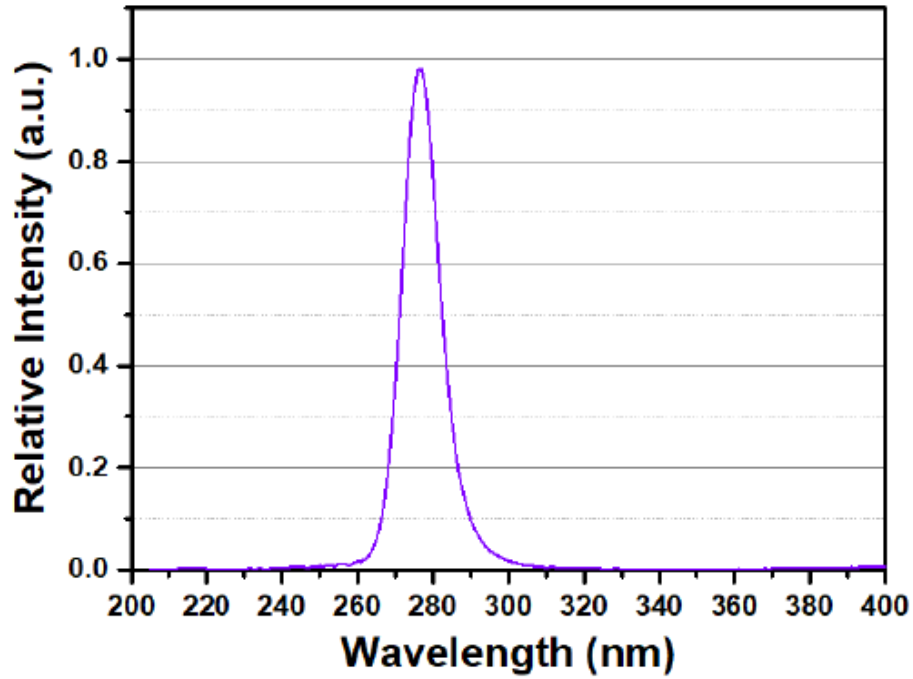
■ Maximum Rating(Ta=25°C)

Characteristics	Symbol	Typical	Unit
DC forward current	I <sub>F</sub>	40	mA
Operating Temperature Range	TOP	-30-60	°C
Storage Temperature Range	TSTG	-40-100	°C
Thermal Resistance	R <sub>js</sub>	15	K/W

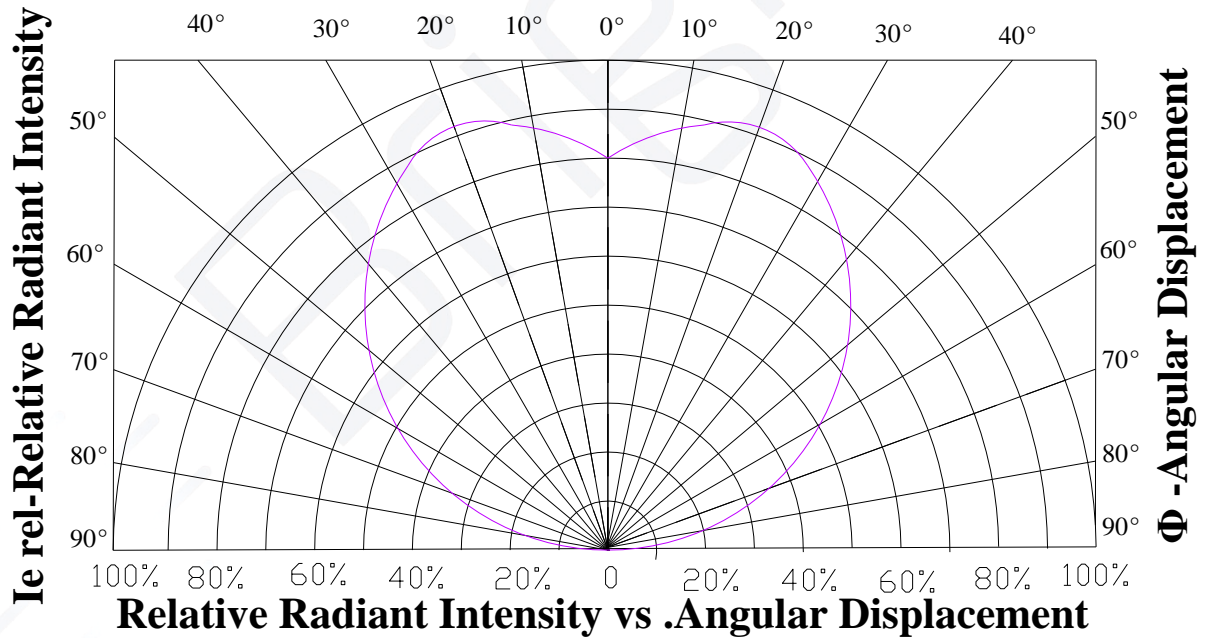
■ Typical Product Characteristics(Ta=25°C)

Characteristics	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Forward Voltage	$V_F$	5	-	8	V	$I_F=40mA$
Radiant flux (Power)	$\Phi$	2	-	4	Mw	$I_F=40mA$
Peak Wavelength	$\lambda_P$	270	275	280	nm	$I_F=40mA$
Spectral Width 50%	$\Delta\lambda$	-	11	-	nm	$I_F=40mA$
Viewing Angle	$2\theta_{1/2}$	-	120	-	Deg	$I_F=40mA$

■ Relative Spectral Power Distribution

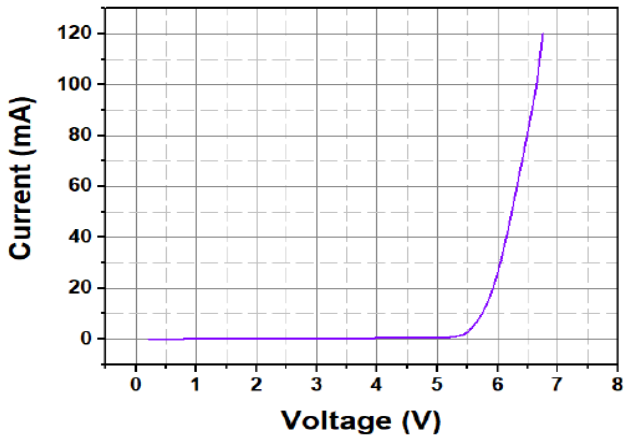


■ Typical Diagram Characteristics of Radiation

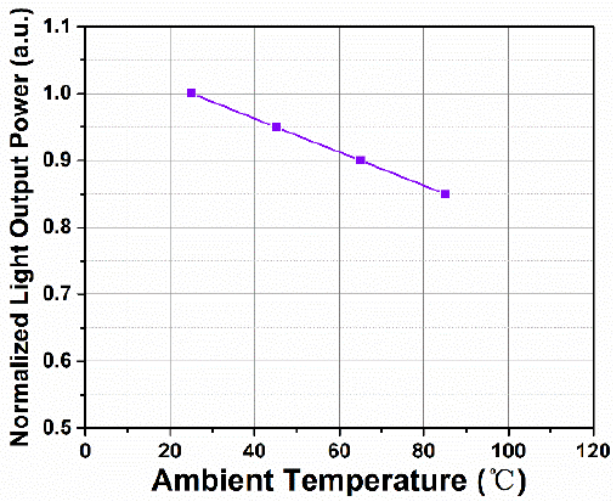


■ Relative Spectral Power Distribution

Forward Current vs. Forward Voltage

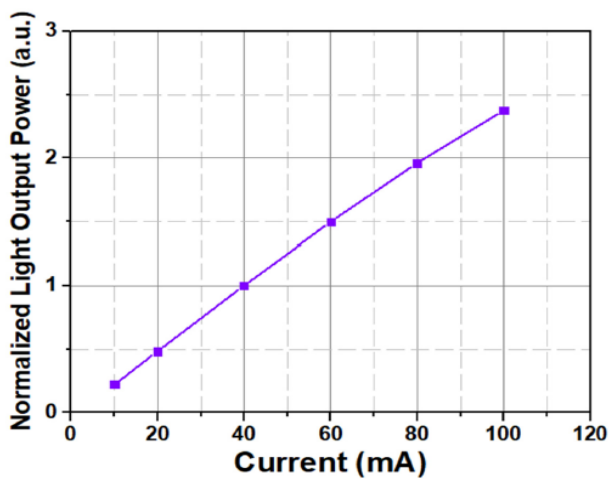


Output Power vs. Ambient Temperature



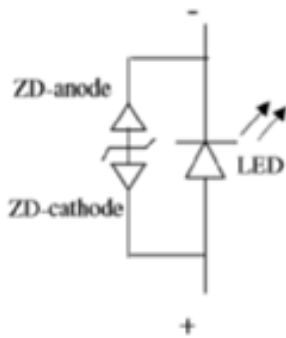
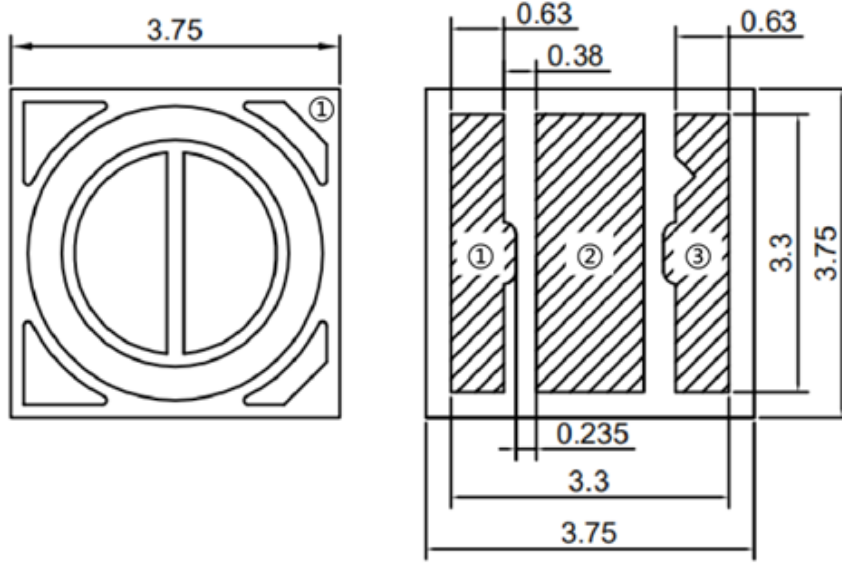
Attenuation:  $\Delta 2.5\%/10\text{ }^\circ\text{C}$

Output Power vs. Forward Current



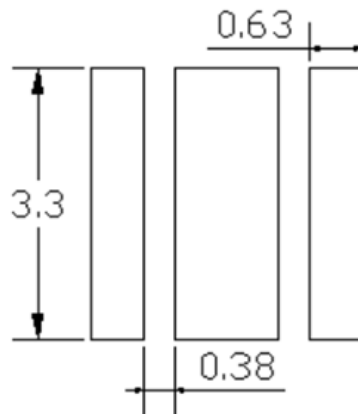
Incremental slope:  $\Delta 1\text{ mW}/10\text{ mA}$

■ Dimensions



①	The anode plate welding
②	Thermal pad
③	The cathode plate welding

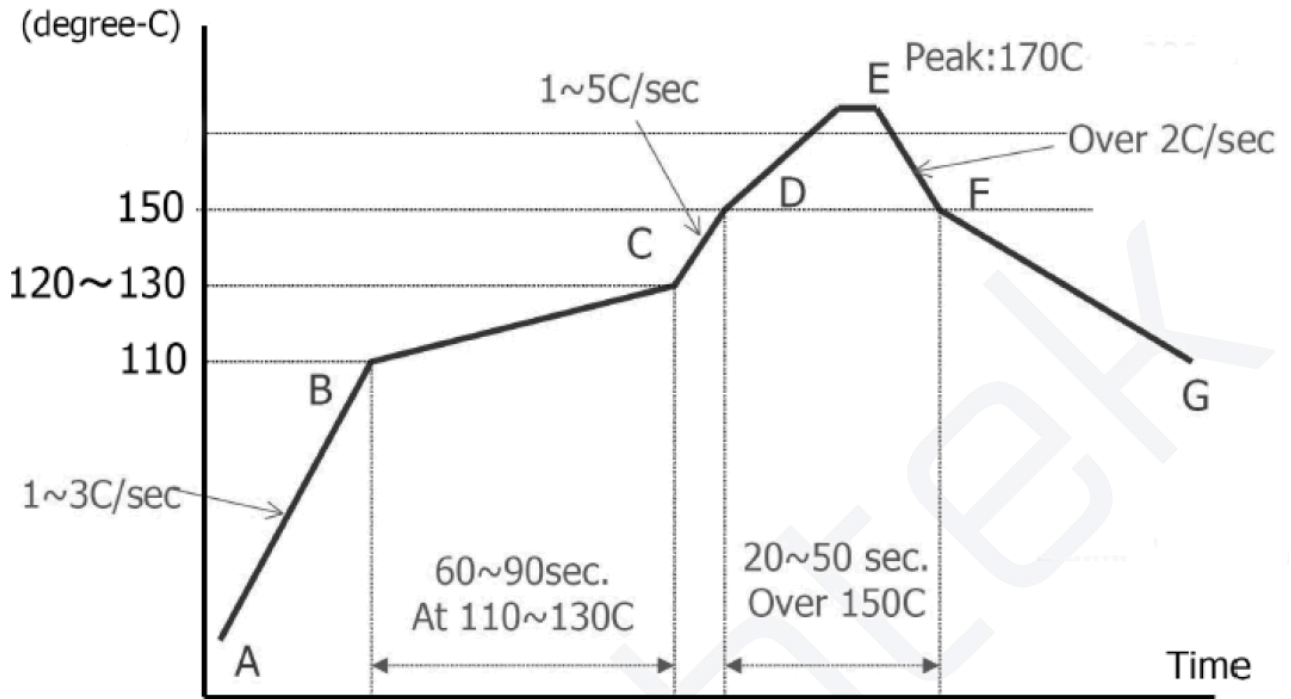
**Recommend Pad layout**



- Notes:
1. All dimensions are in millimeters
  2. Tolerance is  $\pm 0.12\text{mm}$  unless otherwise noted
  3. Specifications are subject to change without notice.
  4. The product height is 1.5 mm

■ Reflow Profile

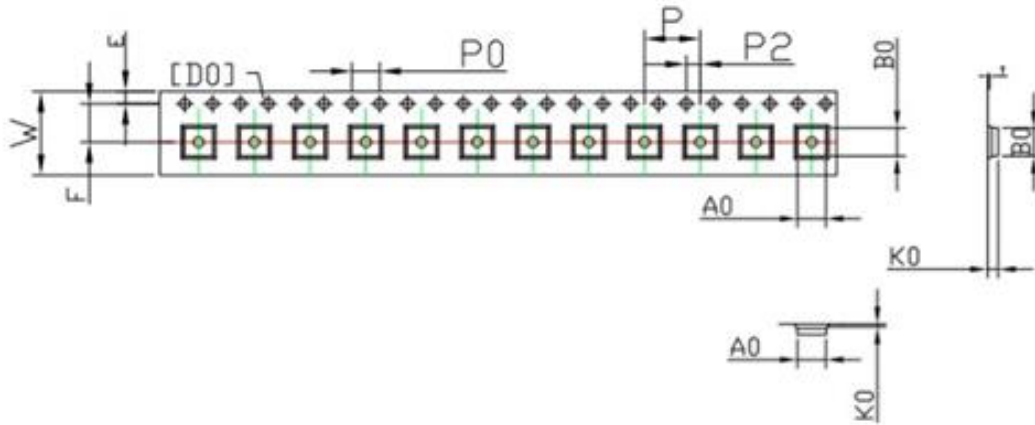
SMT Reflow Soldering Profile



Notes:

Low temperature solder paste shall be used for reflow welding of the patch. The peak temperature shall not be greater than 170 °C, and the peak time shall be controlled at about 20 seconds. Reflux time should not be longer than 5 minutes. Recommend tin bismuth/tin silver bismuth series of solder paste, such as Sn42 / Ag1.0 / Bi57.。

- [1] Reflow welding shall not be performed more than once;
- [2] welding deep uv leds should not be repaired. When repairs are inevitable, appropriate tools must be used.
- [3] during welding, do not apply pressure to the deep uv LED during heating;
- [4] it is recommended to use the convection flow reflow welder above the 7 temperature zone.

**■ Packing**


Symbol	AO	BO	KO	PO	P	P2
Spoc	3.90±0.1	3.90±0.1	1.60±0.1	4.0±0.10	8.0±0.1	2.00±0.10
Symbol	W	T	E	F	D	D1
Spoc	12.0±0.3	0.30±0.05	1.75±0.10	5.5±0.1	1.5±0.1	1.50±0.10



**■ Test Items and Results of Reliability**


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<b>Test Item</b>	<b>Test Conditions</b>	<b>Duration/ Cycle</b>	<b>Number of Damage</b>	<b>Ac/Re</b>
<b>Resistance to Soldering Heat</b>	Tsld=<170°C, Reflow furnace at 10 °C	1 times	0/100	0/1
<b>Thermal shock</b>	-40°C/15min~120°C /15min	500 cycles	0/35	0/1
<b>Life Test</b>	T <sub>a</sub> =25°C I <sub>f</sub> =40mA	1000 hrs	0/35	0/1
<b>ESD(HBM)</b>	8KV at 1.5kΩ;100pF	3 times	0/30	0/1

Note: Version updates will not be announced and Brightek will have the final interpretation rights