ROITHNER LASERTECHNIK GmbH
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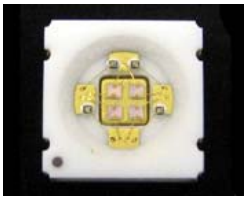
XHL-375-SD



TECHNICAL DATA

UV LED Array, SMD

XML-375-SD is a high power multi emitter LED, utilizing 4 high power LED chip dies on a ceramic SMD submount. It complies with RoHS directive.

Specifications

- Structure: GaN
- Peak Wavelength: 375 - 380 nm
- Optical Output Power: typ. 95 mW
- Package: ceramic SMD, 4.2 x 4.2 x 1.3mm
- Built in Zener Diode

Absolute Maximum Ratings (T_a=25°C)

Item	Symbol	Value	Unit
DC Forward Current	I_F	100	mA
Power Dissipation	P_D	840	mW
Operating Temperature	T_{OP}	-30 … +80	°C
Storage Temperature	T_{STG}	-30 … +100	°C
Soldering Temperature *2	T_{SOL}	260	°C

*2 for 10 sec.

Specifications (If=80mA, T_a=25°C)

Item	Symbol	Min.	Typ.	Max.	Unit
Electrical Specification					
Forward Voltage *1	U_F	6.4	7.6	8.4	V
Optical Specification					
Optical Power	P_O	-	95	-	mW
Peak Wavelength *2	λ_P	375	-	380	nm
Spectral Half Width (FWHM)	λ	10	-	20	nm
Viewing Angle	φ		120		deg.

* Note:
1. measurement tolerance is ± 0.2 V
2. measurement tolerance is ± 2 nm

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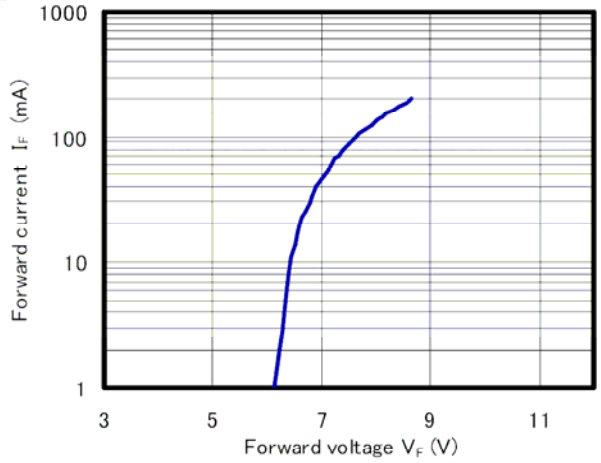
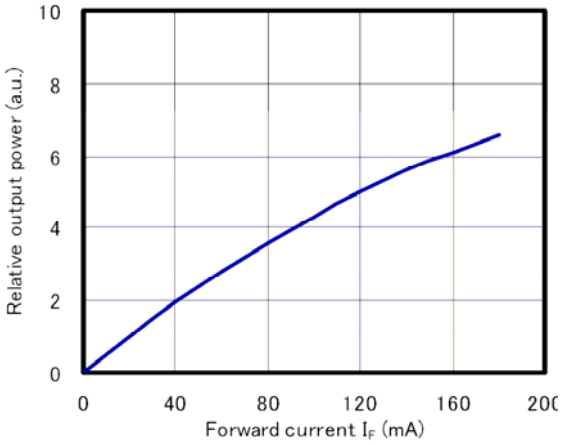
Typical Performance Characteristics

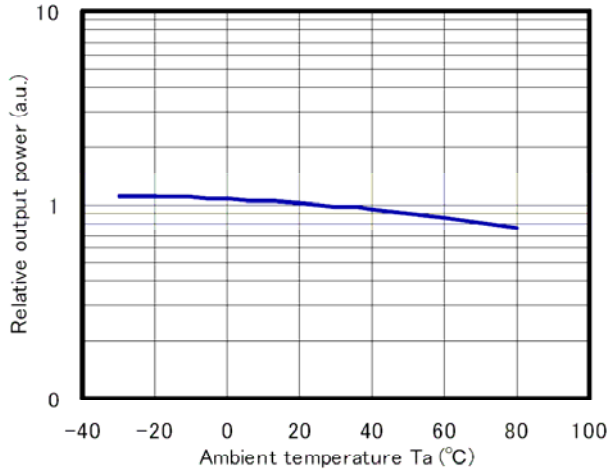
Forward voltage vs. Forward current:



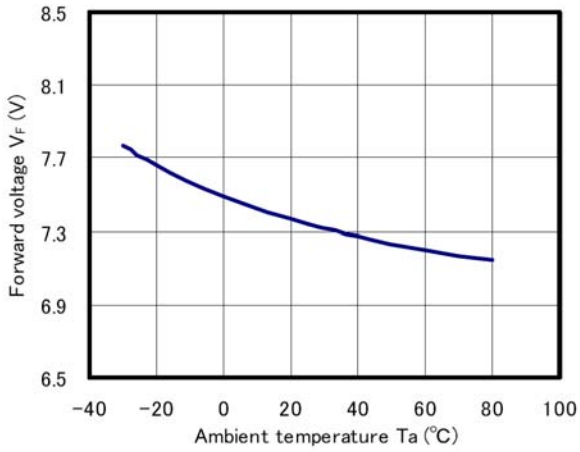
Forward current vs. Relative output power:



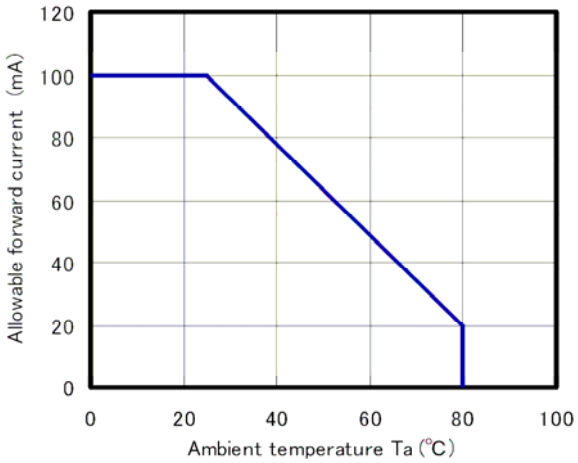
Ambient temp vs. Relative output power:



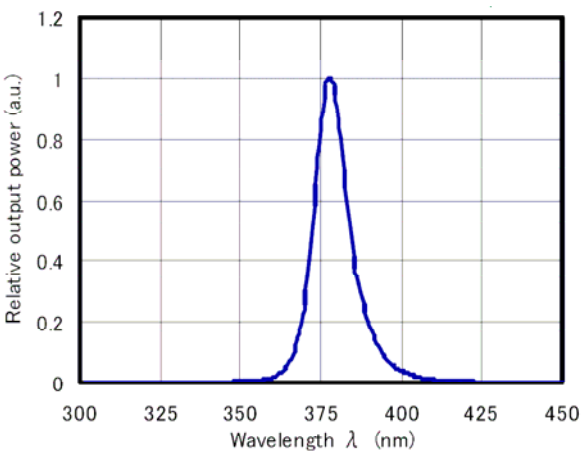
Ambient temp. vs. Forward voltage:



Ambient temp vs. Forward current:



Spectrum:



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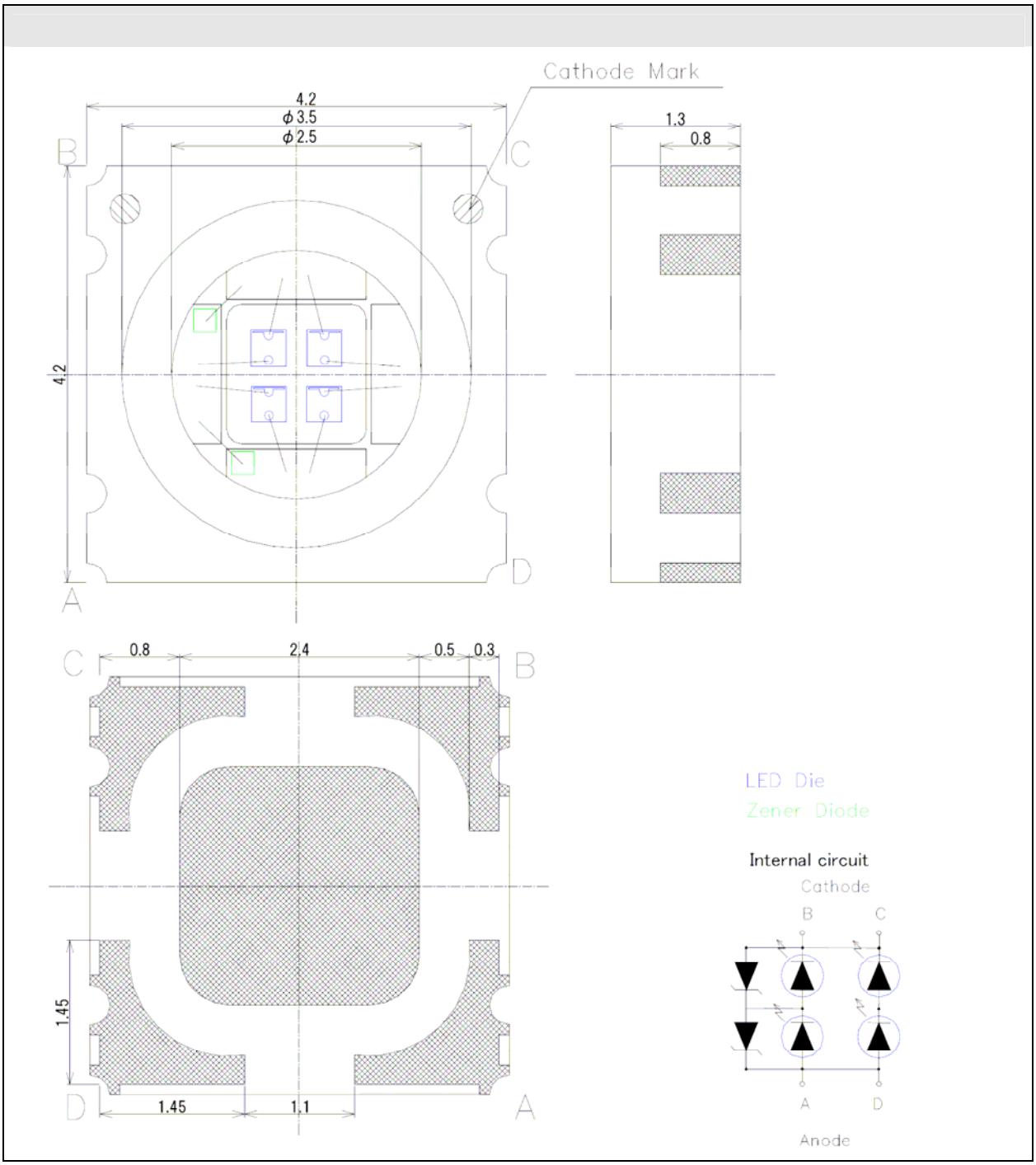
Outline Dimensions



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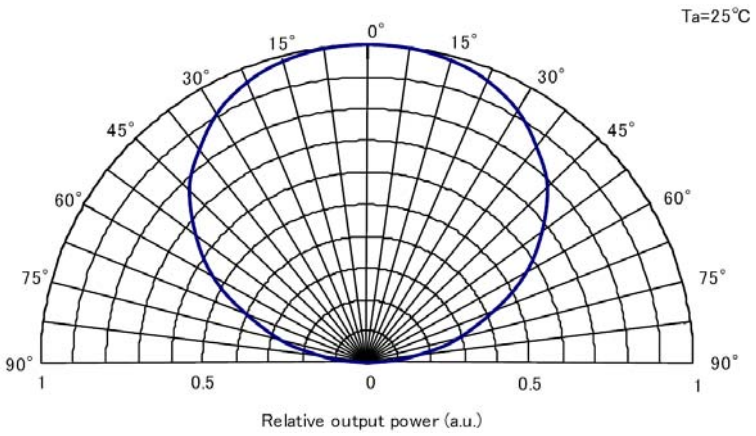
Device Materials

Item	Material
submount	ceramic
encapsulation	silicone

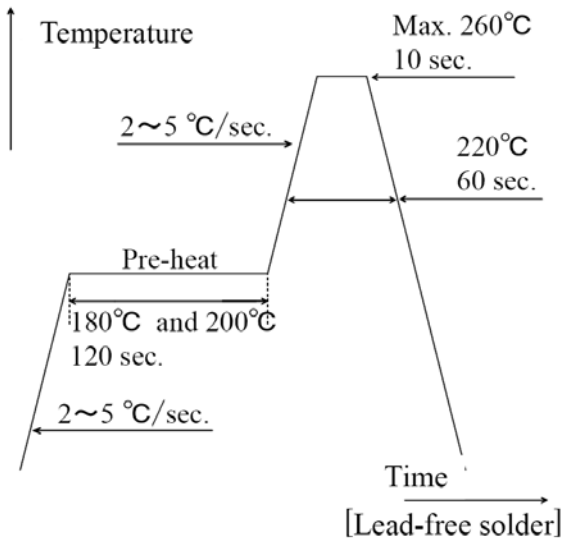
Emission Pattern

Directivity

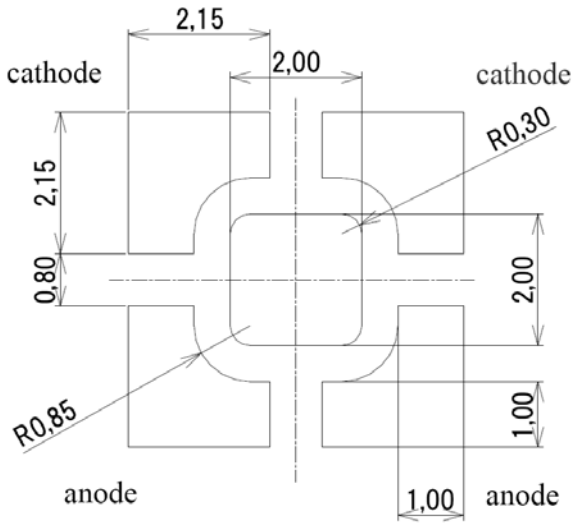


Soldering Conditions

Temperatue profile:



Recommended soldering pad design:



Precaution for Use

1. Cautions

- This device is a UV LED, which radiates intense UV light during operation.
- DO NOT look directly into the UV light or look through the optical system. To prevent inadequate exposure of UV radiation, wearing UV protective glasses is recommended

2. Static Electricity

- 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.
- 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.

3. Heat Generation

- Thermal design of the end product is of paramount importance. Please consider the heat generation of the LED when making the system design. The coefficient of temperature increase per input electric power is affected by the thermal resistance of the circuit board and density of LED placement on the board, as well as other components. It is necessary to avoid intense heat generation and operate within the maximum ratings given in the specification.
- The operating current should be desided after sonsidering the ambient maximum temperature of LEDs.

4. Storage

- The LEDs should be stored at 30°C or less and 70%RH or less after being shippedand the sorage life limits are 3 months. If the LEDs are stored for 3 months or more, they can be stored for a year in a sealed container with nitrogen atmosphere and moisture absorbent material.
- Please avoid rapid transistions in ambient temperature, especially in high humidity environments where condensation can occur.