



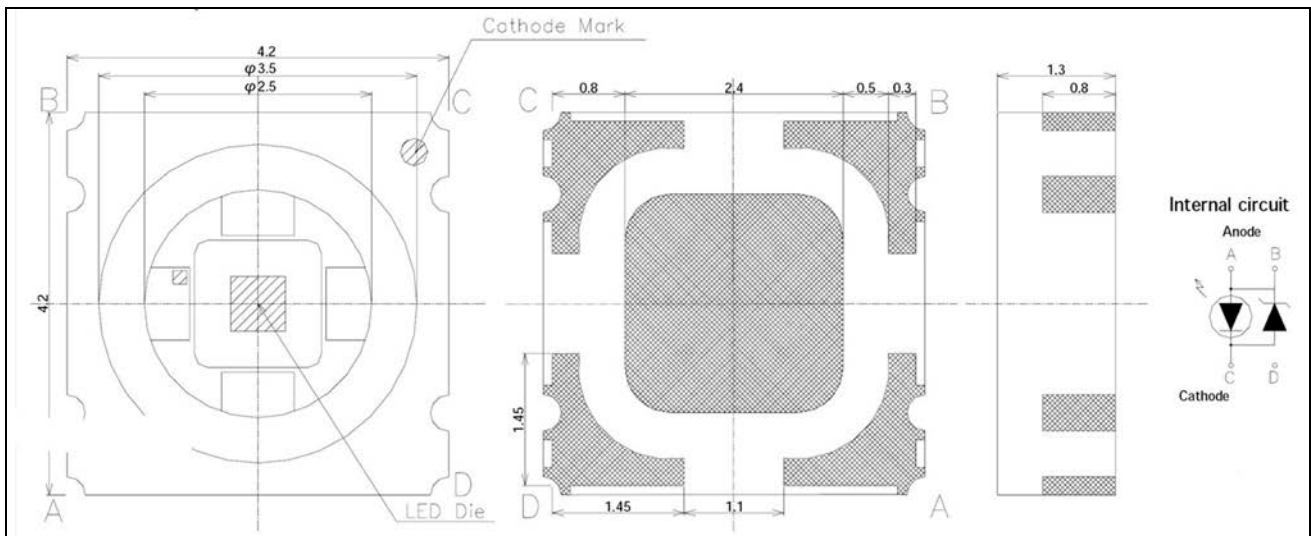
XRL-375-SD



TECHNICAL DATA

HIGH POWER UV LED, SMD

Drawing



Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Item	Symbol	Value	Unit
DC Forward Current	I_F	150	mA
Power Dissipation	P_D	630	mW
Operating Temperature	T_{OP}	-30 ... +80	$^\circ\text{C}$
Storage Temperature	T_{STG}	-30 ... +85	$^\circ\text{C}$
Soldering Temperature * ²	T_{SOL}	260	$^\circ\text{C}$

*¹ pulse width ≤ 0.1 ms, duty ratio $\leq 1/10$

*² for 10 sec.

Specifications ($I_f=100\text{mA}$, $T_a=25^\circ\text{C}$)

Item	Symbol	Min.	Typ.	Max.	Unit
Electrical Specification					
Forward Voltage * ¹	U_F	3.2	3.6	4.2	V
Optical Specification					
Optical Power	P_O	-	48.0	-	mW
Peak Wavelength * ²	λ_P	375	-	380	nm
Spectral Half Width (FWHM)	λ	10	-	20	nm
Viewing Angle	ϕ	120			deg.

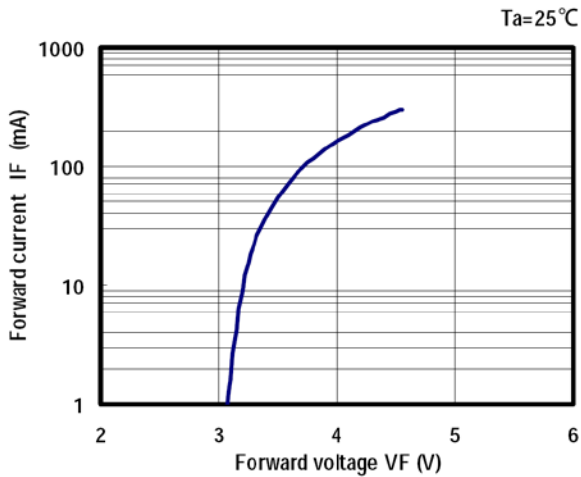
* Note:

1. measurement tolerance is ± 0.2 V
2. measurement tolerance is ± 2 nm

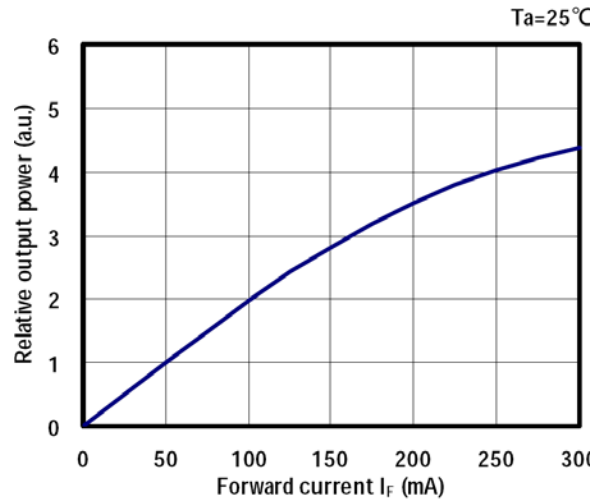


Typical Performance Curves

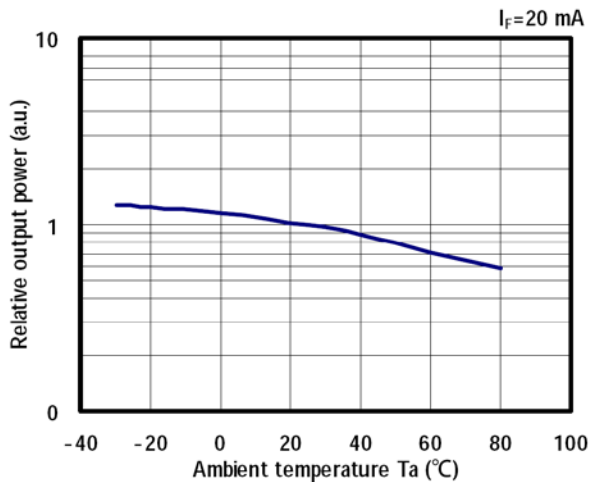
forward voltage vs. forward current:



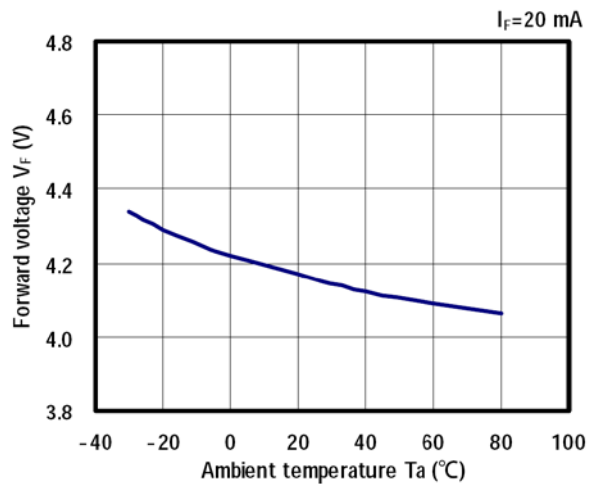
forward voltage vs. relative output power:



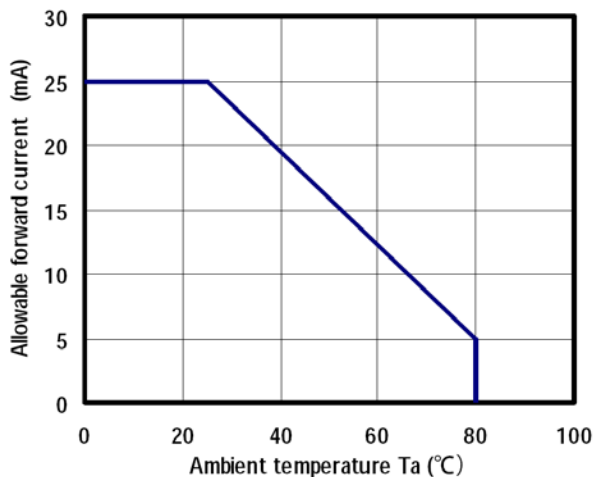
ambient temperature vs. relative output power:



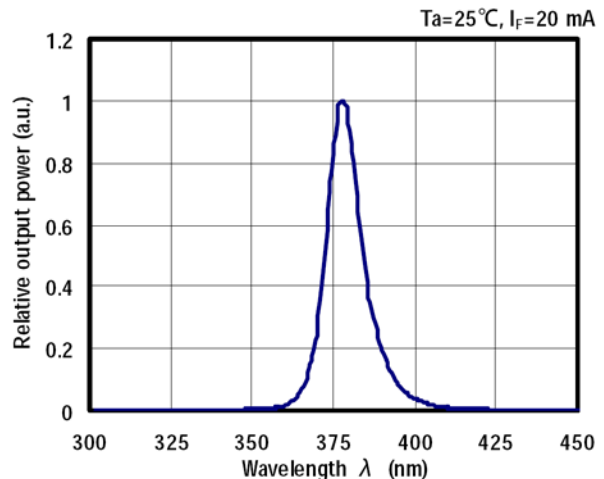
ambient temperature vs. forward voltage:



ambient temp. vs. maximum forward current:

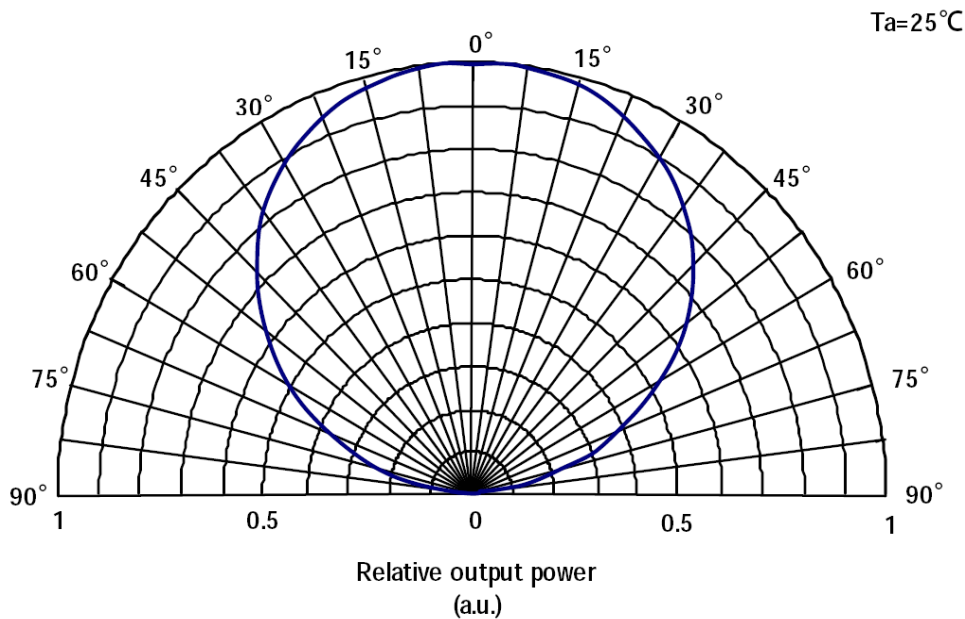


spectrum:





directivity:



Device Materials

Item	Material
Package	Ceramics
Encapsulation	Silicone resin
Electrodes	AuPd

XRL-375-SD is RoHS compliant

Precaution for Use

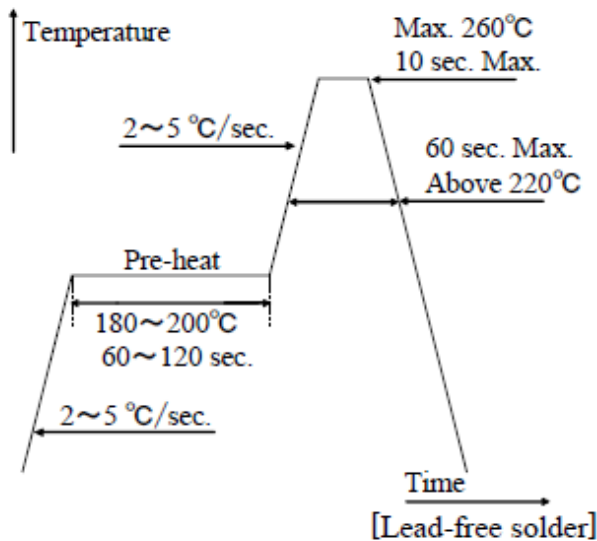
1. Cautions

- 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

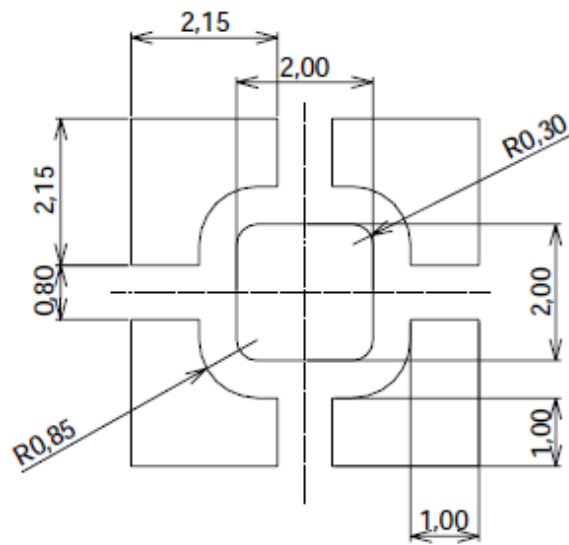


2. Soldering Conditions

■ Temperature profile



■ Recommended soldering pad design



[Unit : mm]

3. 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.





4. 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 decided after considering the ambient maximum temperature of LEDs.

5. Storage

- The LEDs should be stored at 30°C or less and 60%RH or less after being shipped and the storage 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 transitions in ambient temperature, especially in high humidity environments where condensation can occur.