EPIGAP OSA

DATASHEET

OCU-431 UI230

Ceramic SMD Ultraviolet LED with Flat Top

Features:

- Footprint: 3535 (1414)
- Size: 3.5(L) x 3.5(W) x 1.5(H) mm
- Circuit substrate: AlN Ceramics
- ROHS and REACH compliant
- Lead-free solderable
- All devices sorted into intensity classes
- Taped in 12 mm blister tape
- Taping: face-up (T)

Applications:

- Sensorics
- Medical
- Disinfection

This 230 nm extreme UV-C SMD LED is engineered for precision in advanced UV disinfection or sensing solutions. Flat design is well suited for compact applications.

Typical Electro-Optical Characteristics

Measurement conditions $T_{ambient}$ = 23 °C; t_{test} ≤ 60 ms

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Emitting Color				Ultraviolet		
Forward Voltage	V_f	I_f = 200 mA		8		V
Peak Wavelength	λ_P	I_f = 200 mA	230		235	nm
FWHM	$\Delta\lambda$	I_f = 200 mA		12		nm
Radiant Power	Φ_e	I_f = 200 mA		6		mW
View Angle	θ	I_f = 200 mA		115		deg.
Reverse Current (2)	I_R	V_R = 5 V			-	µA

(1) Measured according to the CIE 127, Condition B

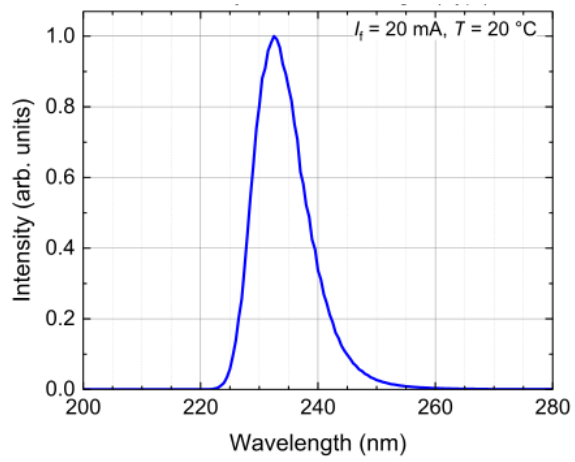
(2) LED should never be operated with reverse bias

Maximum Ratings

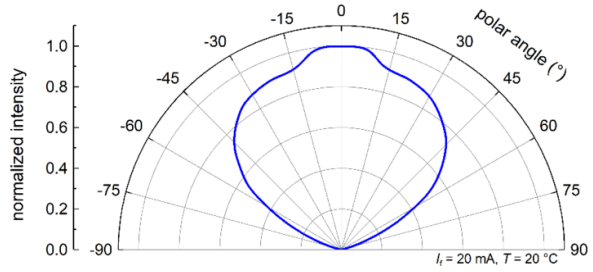
Parameter	Symbol	Min	Max	Unit
Forward Current	$I_{f, max}$		200	mA
Forward Current, pulsed	$I_{f, pulse}$		TBD	mA
Reverse Voltage	V_R		-	V
Thermal Resistance Junction – Solder point	R_{th_JS}		TBD	K/W
Operating Temperature	T_{op}	TBD	TBD	°C
Storage Temperature	T_{St}	-40	85	°C

Electrostatic discharge classification (MIL-STD-883): Class 1

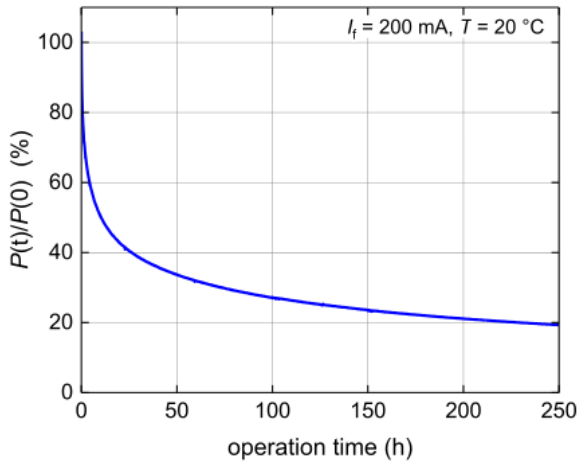
Typical Performance



Optical Spectrum



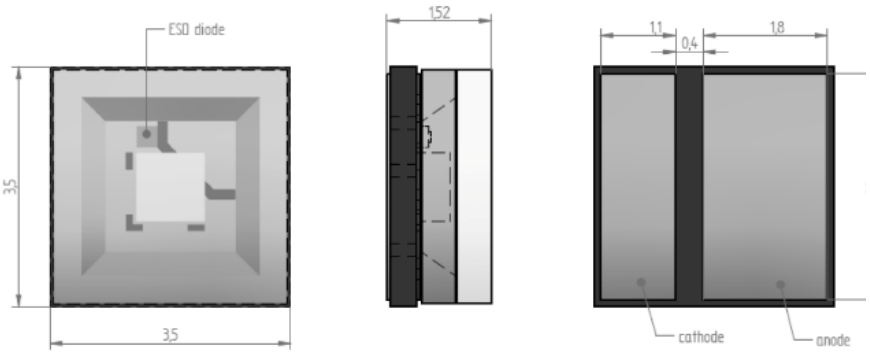
Viewing Angle



Typical Output Power Degradation

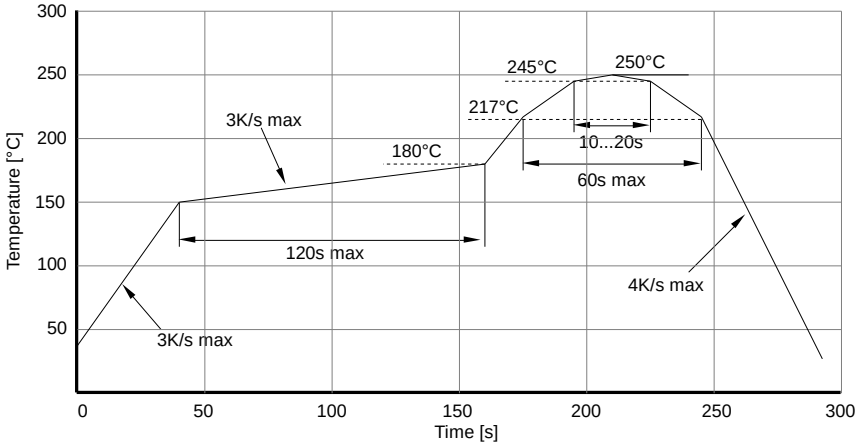
Outline Drawing

Unless otherwise specified, all drawing units are in mm
Tolerances are: ISO 2768-m

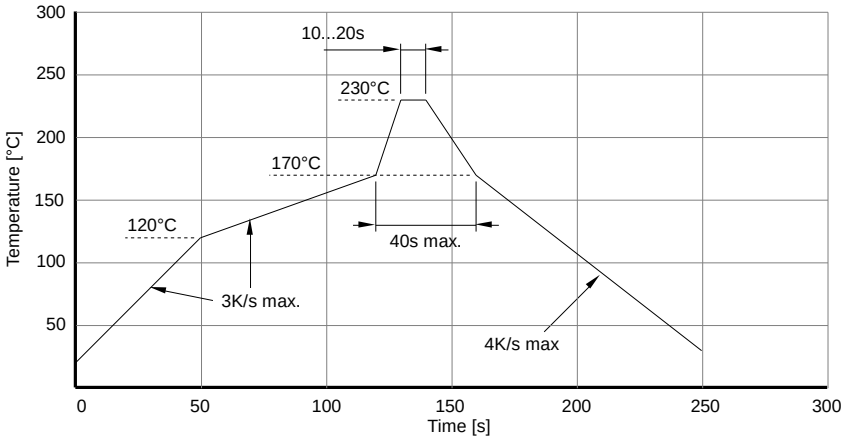


Cathode is the smaller pad.

Soldering Profile



IR reflow soldering profile for lead free soldering



IR reflow soldering profile for solder containing lead

Manual Soldering: Maximum soldering iron power, temperature and time 25 W / 300 °C for 3 s.

Warnings (UV light)

- **While in operation UV LEDs emit intense but mainly invisible ultraviolet radiation, which may be harmful to eyes, even for brief periods.**
- **Do not look directly into the UV LED during operation.**
- **Be sure that you and everyone in the vicinity wear safety goggles that provide suitable UV protection when operating a UV LED.**
- **Please follow all standard procedures for storing, handling, cleaning, mounting, soldering, disposing, or otherwise handling LED dies or packaged LEDs, including static electricity protection.**
- **The user has the responsibility to inform, train and instruct, customers and employees of the dangers to eye safety.**
- **UV LEDs are ESD sensitive (Class1). Handling and use of UV LEDs must be compatible with the ESD sensitivity rating.**

Notice

The information describes the type of component and shall not consider as assured characteristics. Terms of delivery and rights to change reserved. The data sheet may change without prior notification; the only valid issue and current revision can be on our website. Due to technical requirements, components may contain dangerous substances.
It is the responsibility of the customer to evaluate and ensure that the use of the products in their specific applications complies with relevant safety standards and regulations. Customers must assess the exposure conditions within their systems and ensure that appropriate measures are taken to prevent exceeding the permissible exposure limits outlined in IEC 62471. EPIGAP OSA Photonics GmbH does not assume liability for any non-compliance arising from the integration or usage of LEDs in customer systems.
Parameters can vary in different applications. The customer must validate all operating parameters for each application. EPIGAP OSA Photonics GmbH does not have the responsibility for the reliability and the degradation behavior of products made with EPIGAP OSA Photonics GmbH diodes as they depend not only on the product itself but also on the operation, manufacturing or design of the final products. The customer is responsible to ensure the long-term stability of the product according to their requirements. If components are used in toys or, life support systems, EPIGAP OSA Photonics GmbH must expressly authorize the use of the components prior to incorporating them into the customer's systems!
Packaging: EPIGAP OSA Photonics GmbH uses recyclable packages.

EPIGAP OSA Photonics GmbH
www.epigap-osa.de

Köpenicker Str.325
12555 Berlin Germany
Tel. +49 (0)30 6576 3764
sales@epigap-osa.de