

## DATASHEET

# EOLC-385-27

UV 385 nm LED Chip

### Features:

- Size: 380  $\mu\text{m}$  / 15 mil
- Thickness: 150  $\mu\text{m}$
- Au alloy pad: 100  $\mu\text{m}$
- Bond-pad: n-up

### Applications:

- Fluorescence
- Sensing
- Medical
- Spectroscopy
- Curing
- Forensic analysis

## Typical Electro-Optical Characteristics

Measurement conditions

 $T_{\text{ambient}} = 25\text{ °C}$ 

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Emitting Color	UV					
Forward Voltage	$V_f$	$I_f = 20\text{ mA}$		3.3	3.8	V
Peak Wavelength	$\lambda_p$	$I_f = 20\text{ mA}$	380	385	390	nm
FWHM	$\Delta\lambda$	$I_f = 20\text{ mA}$		15		nm
Radiant Power	$\Phi_e$	$I_f = 20\text{ mA}$		25		mW
Reverse Current <sup>(1)</sup>	$I_R$	$V_R = 5\text{ V}$			--	$\mu\text{A}$

(1) LED should never be operated with reverse bias

## Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Forward Current ( $T = 25\text{ °C}$ , infinite heatsink)	$I_{f, \text{max}}$		30	mA
Reverse Voltage	$V_R$		--	V
Operating Temperature	$T_{\text{op}}$	-40	+85	$\text{°C}$

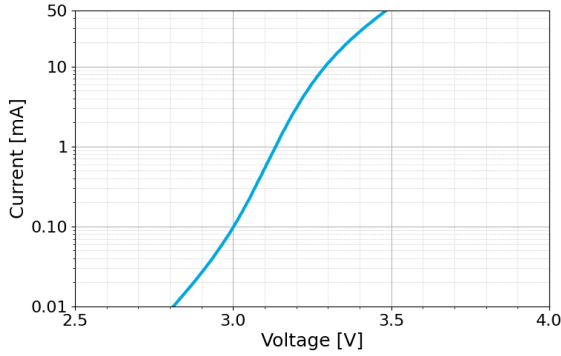
Electrostatic discharge classification (MIL-STD-883): Class 1

## Mechanical Dimensions

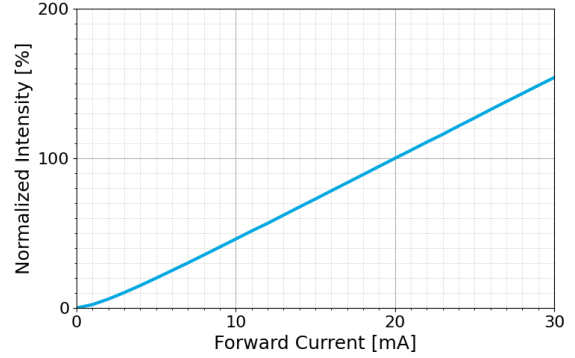
Parameter	Value	Unit
Chip size	380	$\pm 30$ $\mu\text{m}$
Thickness	150	$\pm 25$ $\mu\text{m}$
P-pad (bottom) / Au	-	- $\mu\text{m}$
N-pad (top) / Au alloy	100	$\pm 10$ $\mu\text{m}$



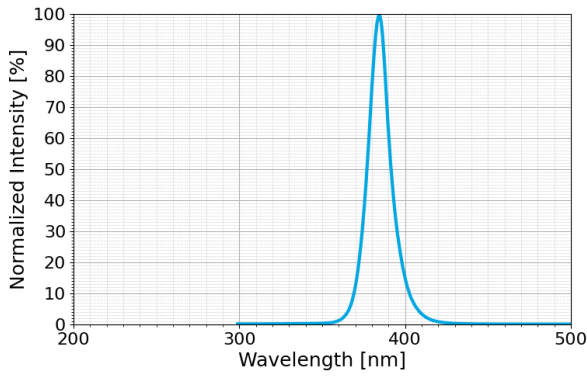
## Typical Performance



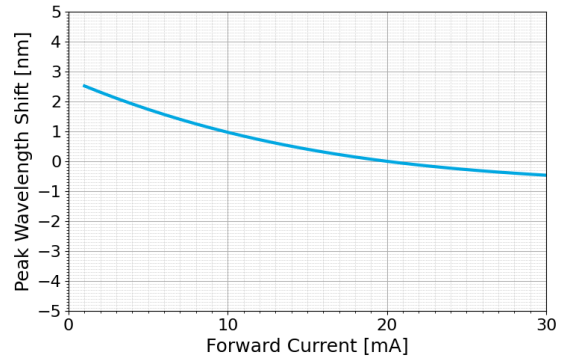
**Current vs. Forward Voltage<sup>(1)</sup>**



**Relative Intensity vs. Forward Current<sup>(1)</sup>**



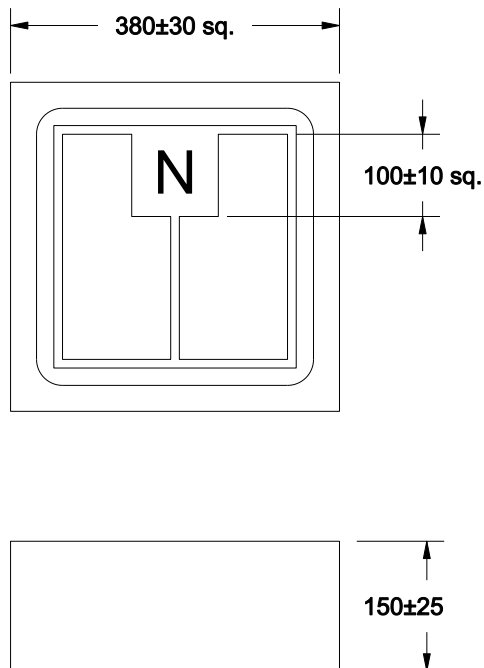
**Optical Spectrum<sup>(1)</sup>**  
<sup>(1)</sup> Measured in a TO-46 can



**Wavelength Shift vs. Forward Current<sup>(1)</sup>**

**Outline Drawing**

*Unless otherwise specified, all drawing units are in  $\mu\text{m}$*



Dice delivered on adhesive film.

## 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 for ensuring 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](http://www.epigap-osa.de)

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