EPIGAP OSA

# DATASHEET

# OCI-460 ID980-XS

**High Power Infrared LED with Silicone Glob Top on Starboard (with cables attached)**

## Features:

- High power IR SMD LED with glob top mounted on starboard
- Starboard material: Al
- Backside isolated
- ROHS and REACH compliant
- Lead-free solderable
- Delivered with cables attached

## Applications:

- Sensing
- Industrial
- Medical
- Life Science

This high power 980 nm infrared SMD LED is engineered for industrial and life science sensing applications.

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## Typical Electro-Optical Characteristics

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

| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Emitting Color | | Infrared | | | | |
| Forward Voltage | $V_f$ | $I_f$ = 350 mA | | 1.4 | 1.8 | V |
| | | $I_f$ = 1000 mA | | 1.7 | | |
| Peak Wavelength | $\lambda_P$ | $I_f$ = 350 mA | 960 | 980 | 1000 | nm |
| FWHM | $\Delta\lambda$ | $I_f$ = 350 mA | | 30 | | nm |
| | | $I_f$ = 1000 mA | | 40 | | |
| Radiant Power | $\Phi_e$ | $I_f$ = 350 mA | | 215 | | mW |
| | | $I_f$ = 1000 mA | | 550 | | |
| | | $I_f$ = 1500 mA | | 900 | | |
| Radiant Intensity (1) | $I_e$ | $I_f$ = 350 mA | 40 | 80 | | mW/sr |
| | | $I_f$ = 1000 mA | | 180 | | |
| View Angle | $\theta$ | $I_f$ = 350 mA | | 135 | | deg. |
| Reverse Current | $I_R$ | $V_R$ = 5 V | | | 10 | µA |

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

## Maximum Ratings

| Parameter | Symbol | Min | Max | Unit |
|---|---|---|---|---|
| Forward Current | $I_{f, max}$ | | 1500 | mA |
| Reverse Voltage | $V_R$ | | 5 | V |
| Operating Temperature | $T_{op}$ | -40 | +85 | °C |
| Storage Temperature | $T_{St}$ | -40 | +85 | °C |

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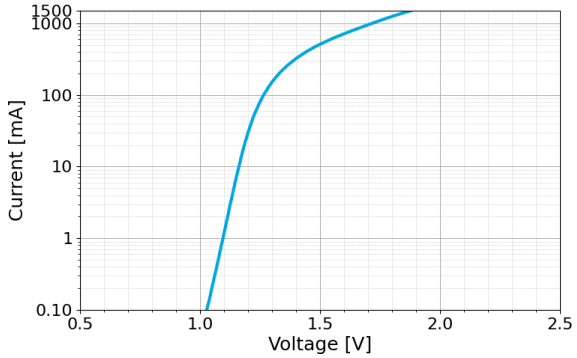
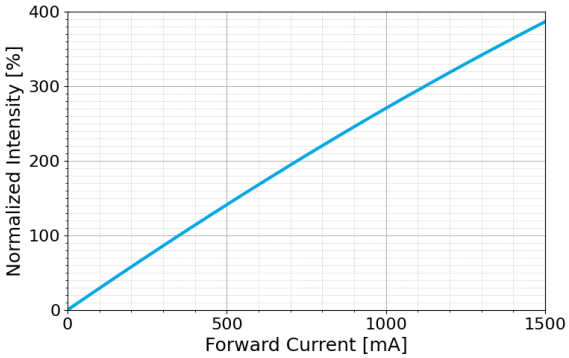
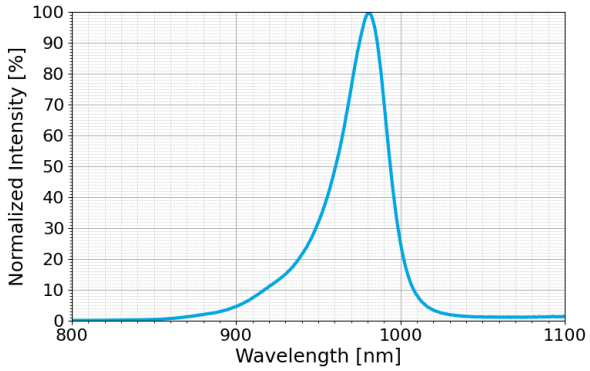
## Typical Performance



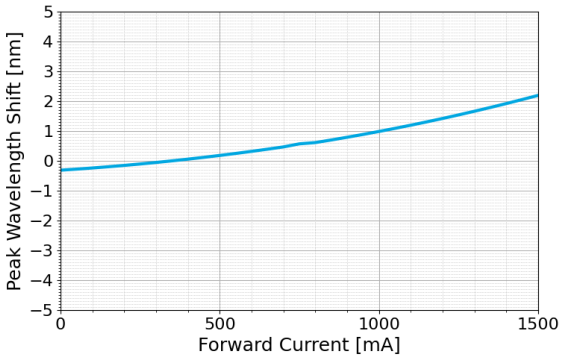

**Forward Current vs. Forward Voltage**



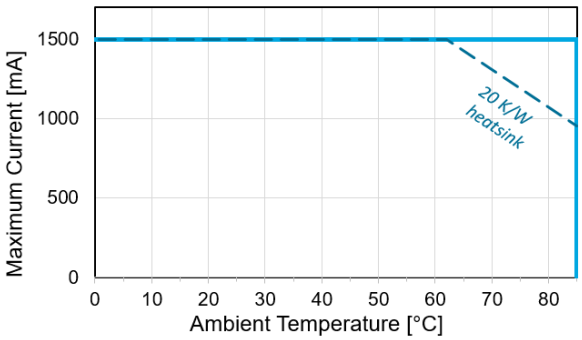

**Relative Intensity vs. Forward Current**




**Optical Spectrum**

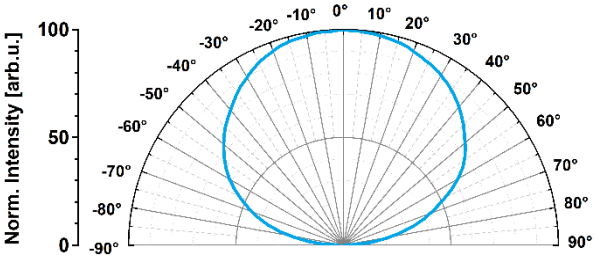



**Wavelength Shift vs. Forward Current**




**Maximum Ratings(1)**

(1) Assuming connection to an infinite heatsink if not stated otherwise




**Radiation Pattern**

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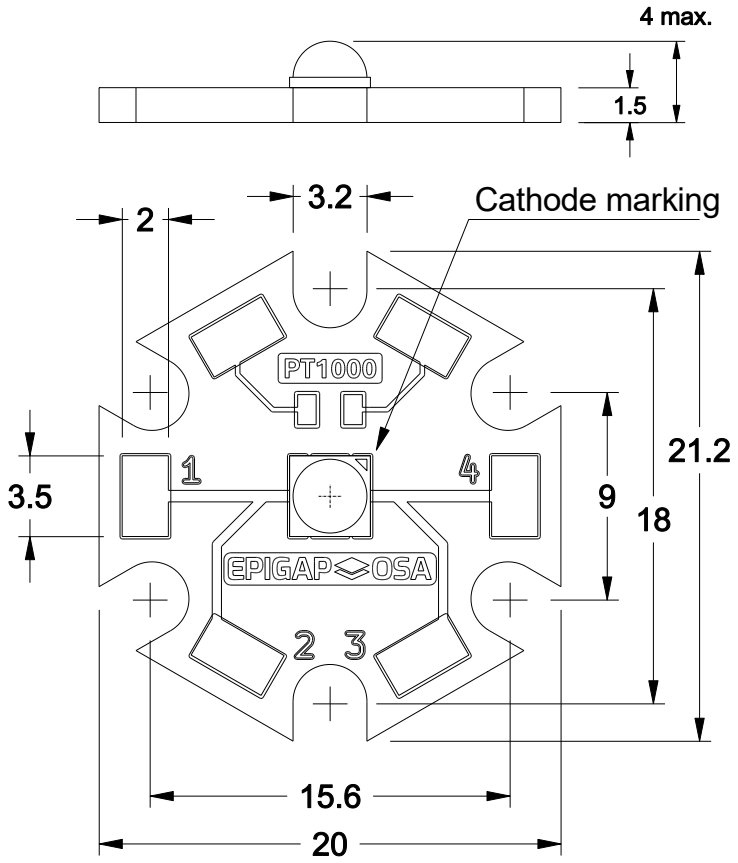
## Outline Drawing

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




The starboards are delivered with cables attached to following pads:
Cathode (N/-) pad: 4
Anode (P/+) pad: 1

## Packing

| | |
|---|---|
| **Packing** | The device is packaged in special resealable plastic bag with integrated ESD protection.<br>Shelf life for sealed bag 12 month at max. 30 °C and 60% Rh. |

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## 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.

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