EPIGAP OSA

# DATASHEET

# OLS-330 EB590B-X-TU



(exemplary picture, the product may vary)

**Yellow LED with Epoxy Lens**

## Features:

- Footprint: 3216 (1206)
- Epoxy lens with 30° view angle
- Size: 3.2(L) x 1.6(W) x 1.6(H) mm
- Circuit substrate: Glass Laminated Epoxy
- ROHS and REACH compliant
- Lead-free solderable
- Taped in 8 mm blister tape
- Taping: face-up (T)

## Applications:

- Sensing
- Illumination

Copyright © 2026 EPIGAP OSA Photonics GmbH. All Rights Reserved

## Typical Electro-Optical Characteristics

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

| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Emitting Color | | | | Yellow | | |
| Forward Voltage | $V_f$ | $I_f$ = 20 mA | | 2.0 | 2.4 | V |
| Peak Wavelength | $\lambda_p$ | $I_f$ = 20 mA | | 590 | | nm |
| Dominant Wavelength | $\lambda_d$ | $I_f$ = 20 mA | 584 | | 594 | nm |
| FWHM | $\Delta\lambda$ | $I_f$ = 20 mA | | 20 | | nm |
| Luminous intensity | $I_v$ | $I_f$ = 20 mA | 1600 | 2400 | | mcd |
| View Angle | $\theta$ | $I_f$ = 20 mA | | 30 | | deg. |
| Reverse Current | $I_R$ | $V_R$ = 5 V | | | 10 | µA |

## Maximum Ratings

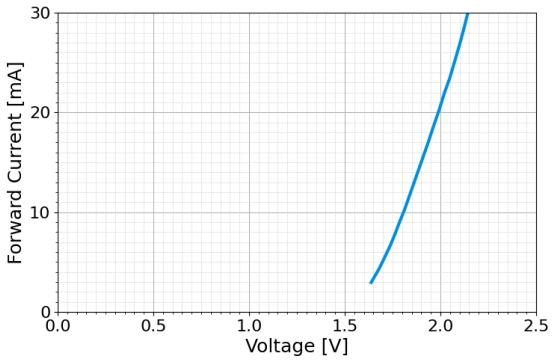
| Parameter | | Symbol | Min | Max | Unit |
|---|---|---|---|---|---|
| Forward Current | | $I_{f, max}$ | | 30 | mA |
| Forward Current, pulsed | f = 1kHz, τ=1:8 | $I_{f, pulse}$ | | 105 | mA |
| Reverse Voltage | | $V_R$ | | 5 | V |
| Power dissipation | | Pd | | 72 | mW |
| Thermal Resistance Junction – Solder point | | $R_{th_JS}$ | | 450 | K/W |
| Operating Temperature | | $T_{op}$ | -40 | +85 | °C |
| Storage Temperature | | $T_{St}$ | -40 | +85 | °C |

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

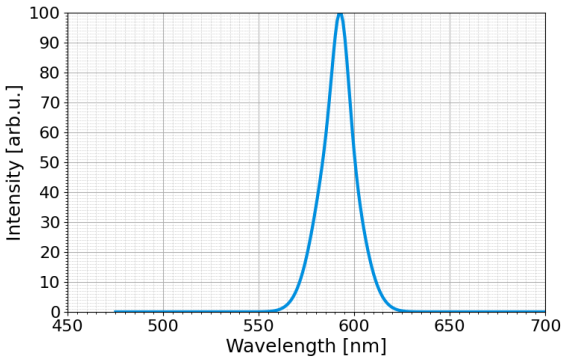



Copyright © 2026 EPIGAP OSA Photonics GmbH. All Rights Reserved

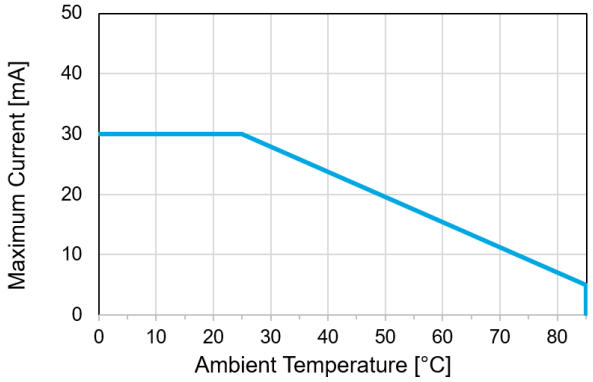
## Typical Performance



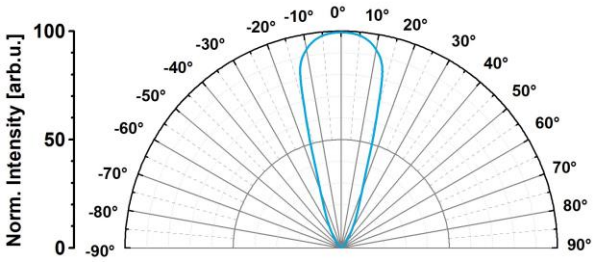

**Forward Current vs. Forward Voltage**




**Optical Spectrum**




**Maximum Ratings** (1)



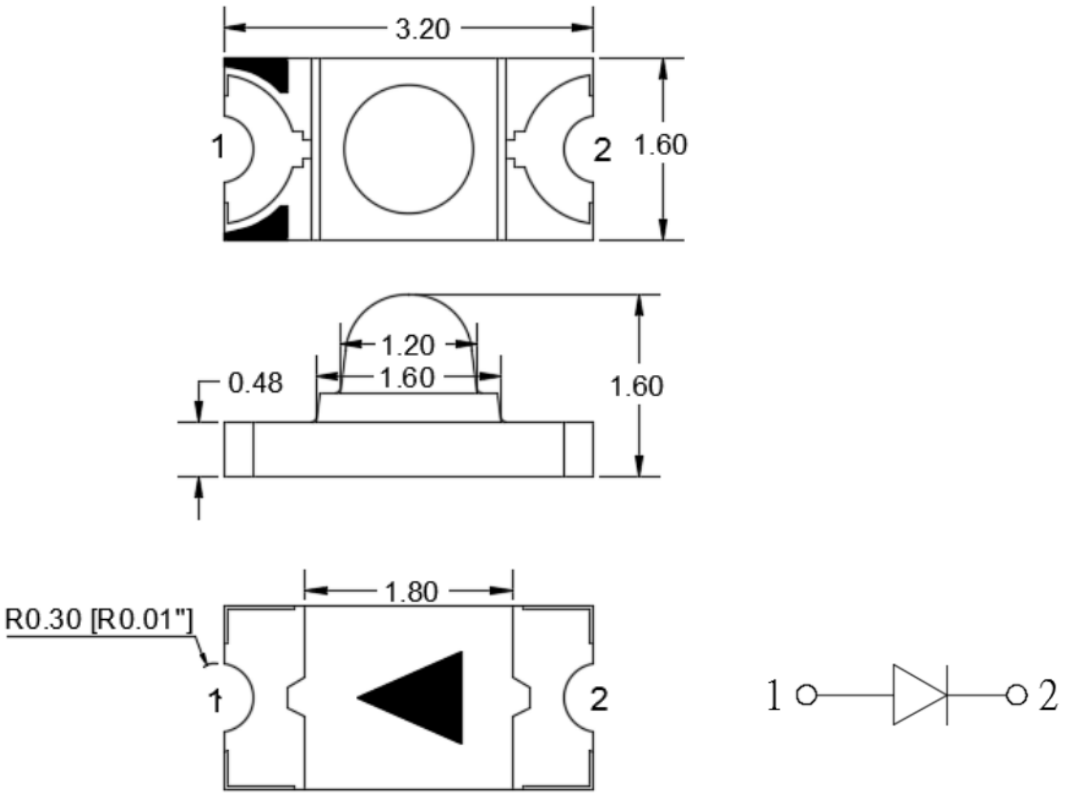

**Radiation Pattern**

(1) Assuming connection to an infinite heatsink

Copyright © 2026 EPIGAP OSA Photonics GmbH. All Rights Reserved

## Outline Drawing

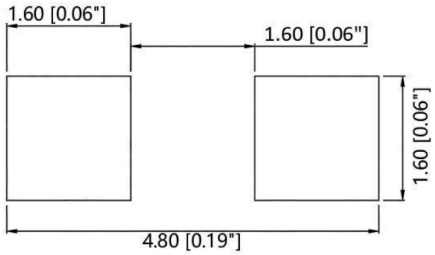
Unless otherwise specified, all drawing units are in mm
Tolerances are: ISO 2768-m




Marking at the anode side.

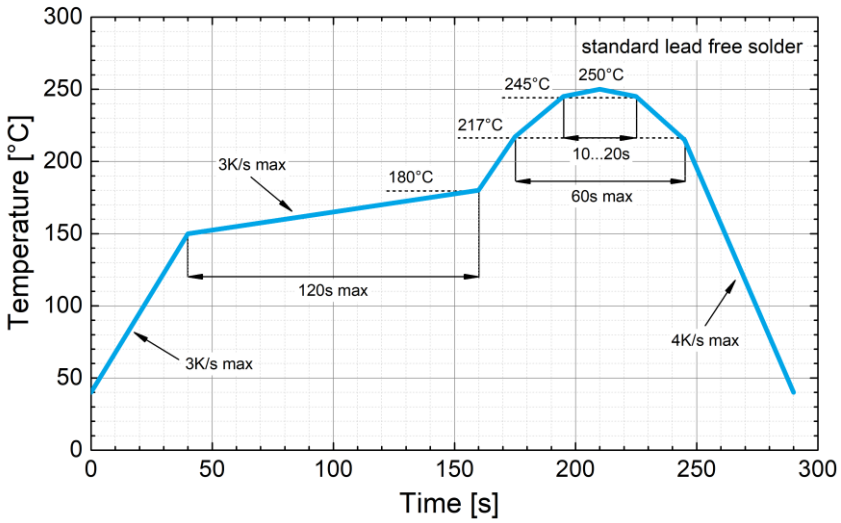
## Recommended soldering pad

Unless otherwise specified, all drawing units are in mm unless specified otherwise

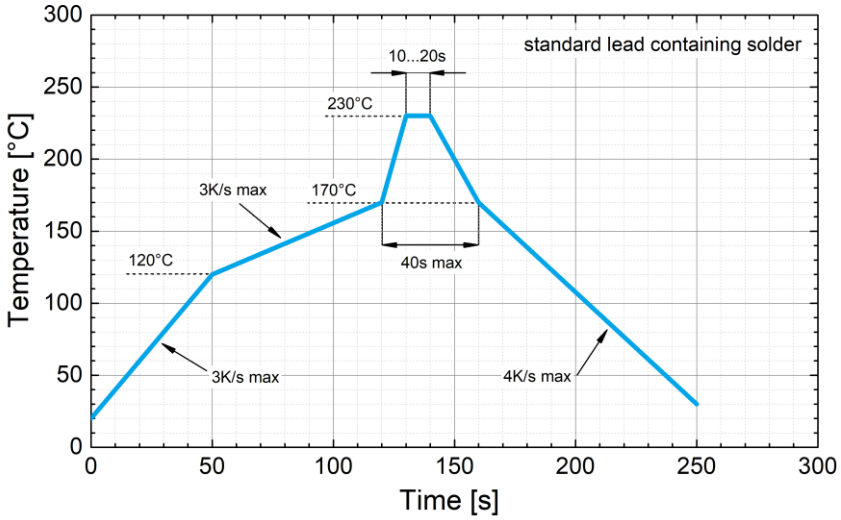



Copyright © 2026 EPIGAP OSA Photonics GmbH. All Rights Reserved

## Soldering Profile




Recommended soldering profile for lead free soldering

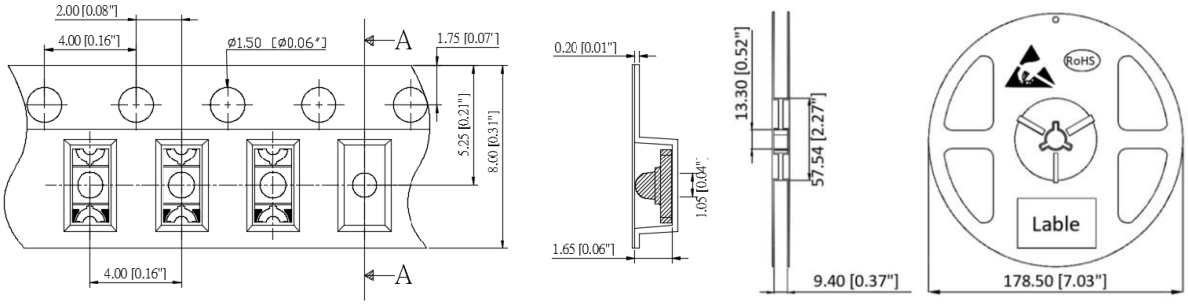



Recommended soldering profile for solder containing lead

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

Copyright © 2026 EPIGAP OSA Photonics GmbH. All Rights Reserved

# Tape And Reel Packaging




| D | Parts/reel |
|---|---|
| 7" | 2000 |

**Packaging** The reel is sealed in a special plastic bag with integrated ESD protection including a silica dry-pack. Shelf life for sealed bag: 12 months on max. 30 °C and 60% Rh.
Floor life: 12 months under max. 30 °C and 60% Rh in a dust free environment.
Other bags (i.e. MBB, HIC, Vacuum pack, etc.) available on request.

Copyright © 2026 EPIGAP OSA Photonics GmbH. All Rights Reserved

## Notice

The information describes the type of component and shall not consider as assuOrange 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

Copyright © 2026 EPIGAP OSA Photonics GmbH. All Rights Reserved