

# EPIGAP Optronik GmbH

Koepenicker Str. 325b  
 D-12555 Berlin  
 Fon: +49 (0)30 657637 60  
 Fax: +49 (0)30 657637 70  
 sales@epigap-optronic.de



## Data Sheet

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### High Power IR SMD LED

### EOLS-1020-496

Rev. 02, 2017

Radiation	Type	Case
Infrared	GaAs	SMD 3838 (1515)

**Description:**

- Size 3.8 (W) x 3.8 (L) x 1.0 (H) mm
- Circuit substrate: AlN ceramics
- Devices are RoHS conform
- Lead free solderable, soldering pads: silver plated
- High radiation intensity
- Marking at anode

#### Maximum Ratings

$T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified



Parameter	Test conditions	Symbol	Value	Unit
Forward current		$I_F$	500	mA
Peak forward current	$t \leq 100 \mu\text{s}, T = 1 \text{ ms}$	$I_{FM}$	1000	mA
Reverse voltage	$I_R = 100 \mu\text{A}$	$I_{RM}$	5	V
Operating temperature range		$T_{amb}$	-40 to +85	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	-40 to +85	$^{\circ}\text{C}$
Thermal resistance		$R_{thJA}$	10	K/W

#### Optical and Electrical Characteristics

$T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F = 350 \text{ mA}$		1.2	1.5	V
Radiant power	$\Phi_e$	$I_F = 350 \text{ mA}$		38		mW
Radiant intensity	$I_e$	$I_F = 350 \text{ mA}$	8.5		17	mW/sr
Peak wavelength	$\lambda_p$	$I_F = 350 \text{ mA}$	1005	1020	1035	nm
FWHM	$\Delta\lambda_{0,5}$	$I_F = 350 \text{ mA}$		40		nm
Viewing angle	$\varphi$	$I_F = 350 \text{ mA}$		120		deg.

We reserve the right to make changes to improve technical design and may do so without further notice. Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer.

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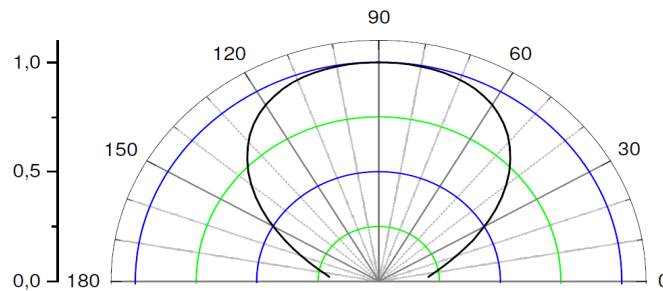
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### High Power IR SMD LED

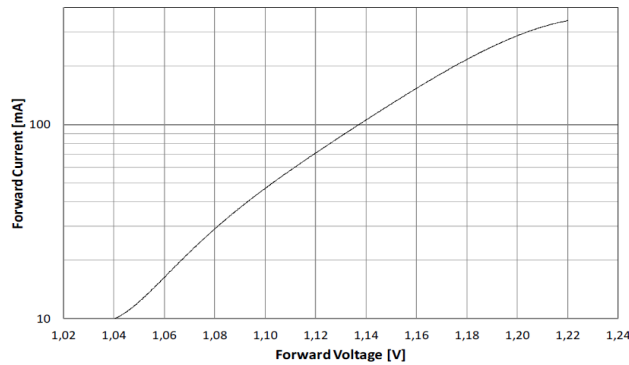
### EOLS-1020-496

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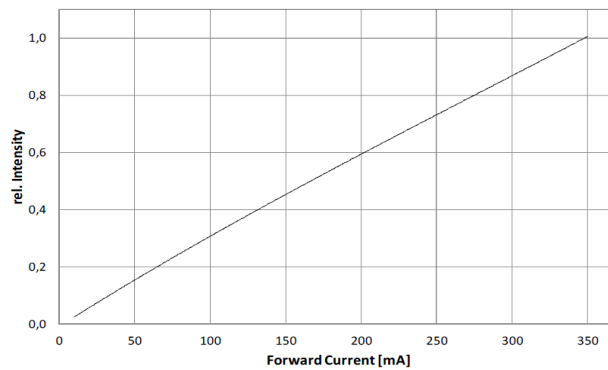
#### Radiation pattern



#### $I_F - U_F$ characteristic



#### $I_{e, rel} - I_F$ characteristic



#### Spectrum @ 350 mA

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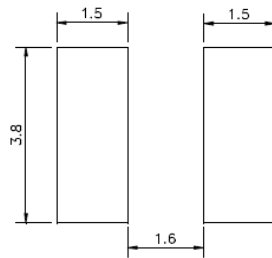
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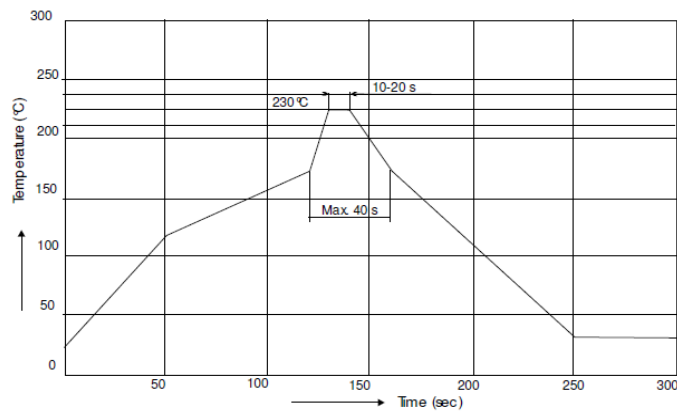
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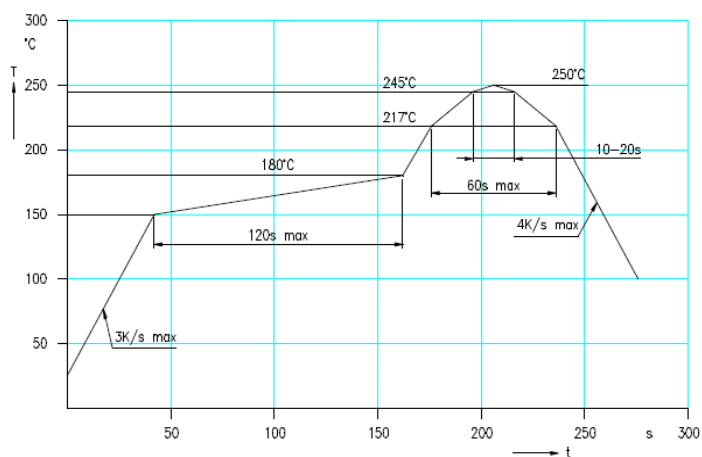
#### Recommended Soldering Pattern



#### IR reflow soldering profile



#### IR reflow soldering profile for lead free soldering



Manual soldering: max power of iron 25 W / 3 s / 300°C



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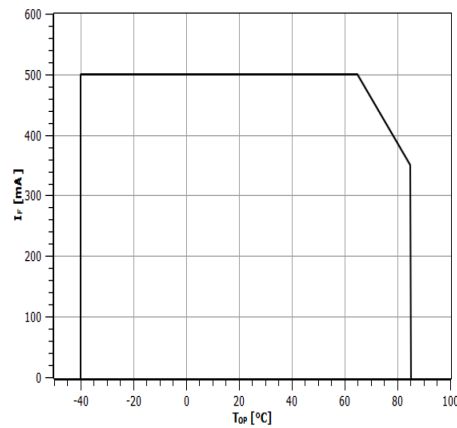
## Data Sheet

### High Power IR SMD LED

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#### Maximal forward current (DC) characteristic



All SMD-LEDs are 100% measured according to CIE 127 and selected on full automated equipment with an accuracy of  $\pm 11\%$ .

Art. No. 133 122



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