

# EPIGAP Optronic GmbH

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## Data Sheet

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### SMD-LED

### EOLS-1020-590

Rev. 03, 2017

Radiation	Type	Case
infrared	standard	SMD 3018 (1008)

<p>Unit: mm Tolerance: <math>\pm 0,1</math></p> <p>Soldering Pad for Stabilization (without contact) Marking Back side</p>	<p style="text-align: center;"><b>Description:</b></p> <ul style="list-style-type: none"> <li>- Size 1008: 3.0 (L) x 1.8 (W) x 1.0 (H) mm</li> <li>- Circuit substrate: glass laminated epoxy</li> <li>- Devices are RoHS conform</li> <li>- Lead free solderable, soldering pads: gold plated</li> <li>- Marking at cathode</li> </ul>
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### Maximum Ratings

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

Parameter	Test Conditions	Symbol	Value	Unit
Peak forward current	$t_p \leq 100 \mu\text{s} \tau = 1:10$	$I_{FP}$	250	mA
Continuous forward current		$I_F$	50	mA
Reverse voltage		$V_R$	5	V
Operating temperature range		$T_{amb}$	-40 to +85	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	-55 to +85	$^{\circ}\text{C}$
Thermal resistance		$R_{thJA}$	500	K/W

### Optical and Electrical Characteristics

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

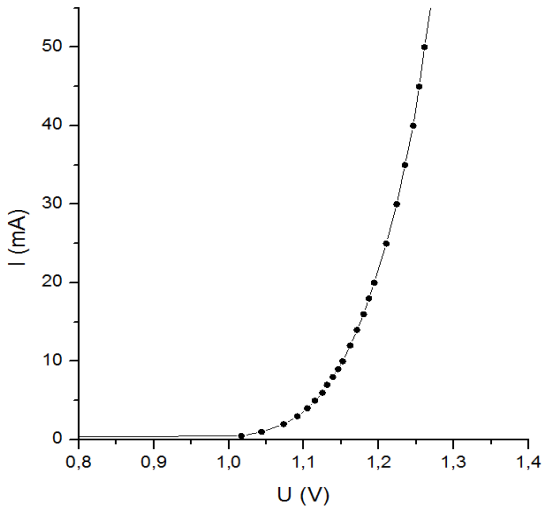
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F = 50 \text{ mA}$		1.3	1.5	V
Reverse current	$I_R$	$V_R = 5 \text{ V}$			100	$\mu\text{A}$
Radiant power	$\Phi_e$	$I_F = 50 \text{ mA}$		10		mW
Radiant intensity	$I_e$	$I_F = 50 \text{ mA}$		5		mW/sr
Peak wavelength	$\lambda_p$	$I_F = 50 \text{ mA}$	1005	1020	1035	nm
Spectral bandwidth	$\Delta\lambda_{0.5}$	$I_F = 50 \text{ mA}$		40		nm
Switching time	$t_r, t_f$	$I_F = 50 \text{ mA}$		20		ns

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.

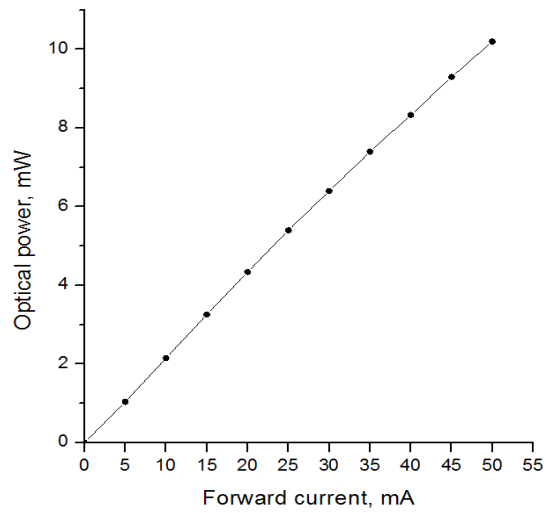
**Data Sheet**

**SMD-LED**

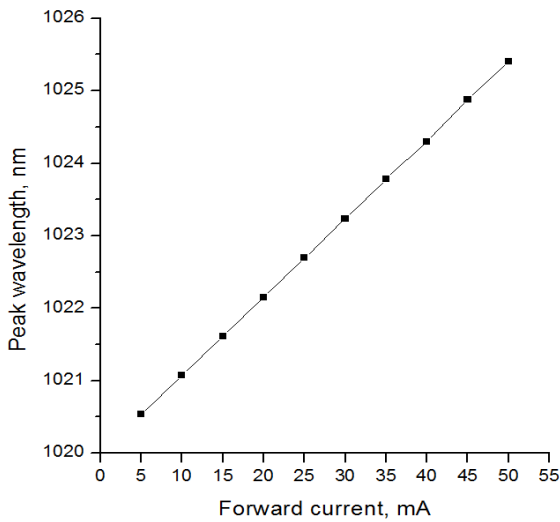
**EOLS-1020-590**



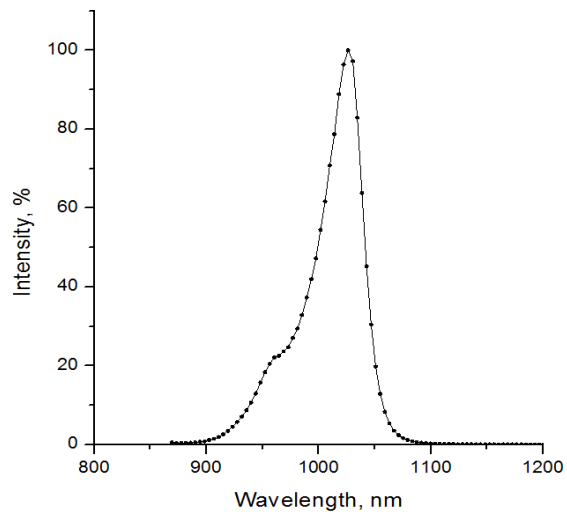
Forward current vs. voltage



Optical power vs. forward current



Peak wavelength vs. forward current



Typical spectrum at 50 mA



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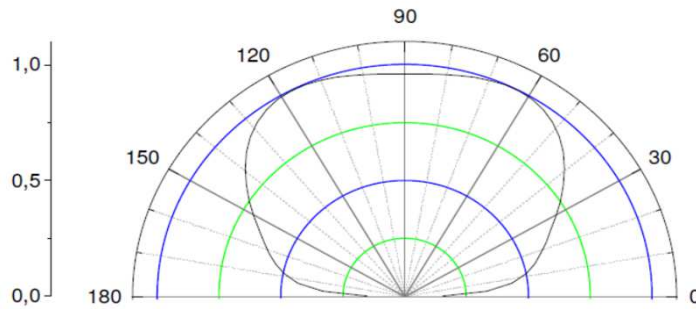
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### SMD-LED

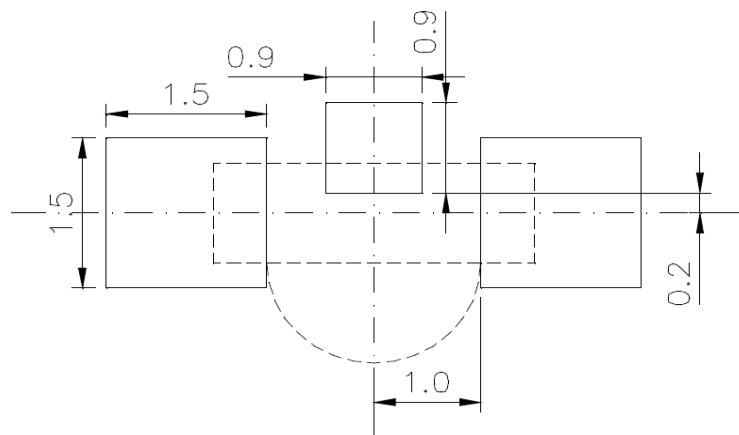
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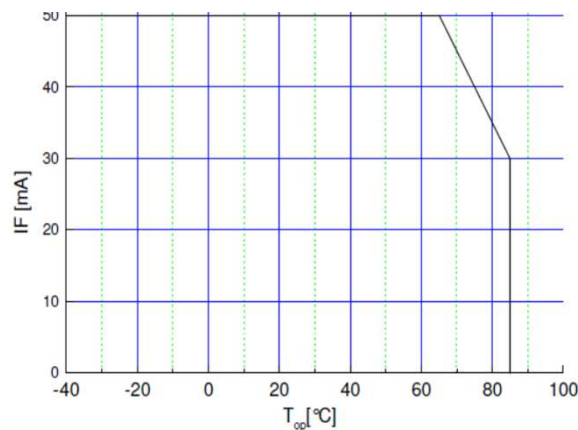
#### Radiation pattern



#### Recommended Soldering Patterns



#### Maximal forward current (DC) characteristic



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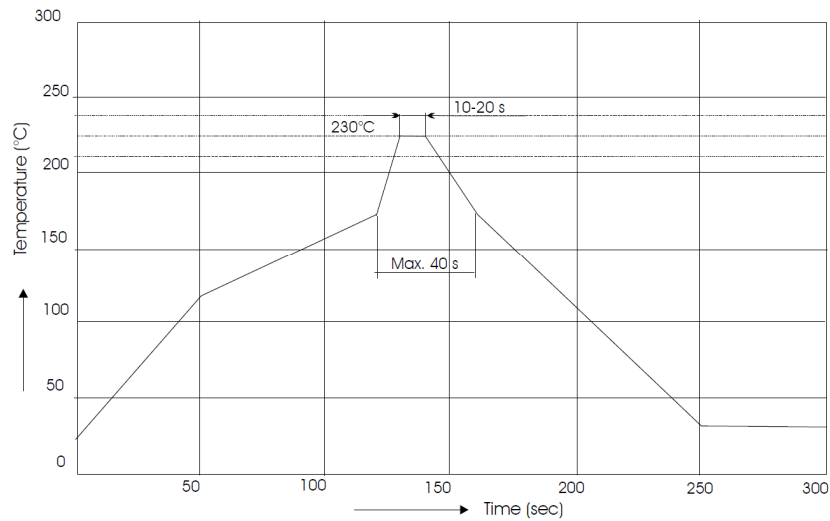
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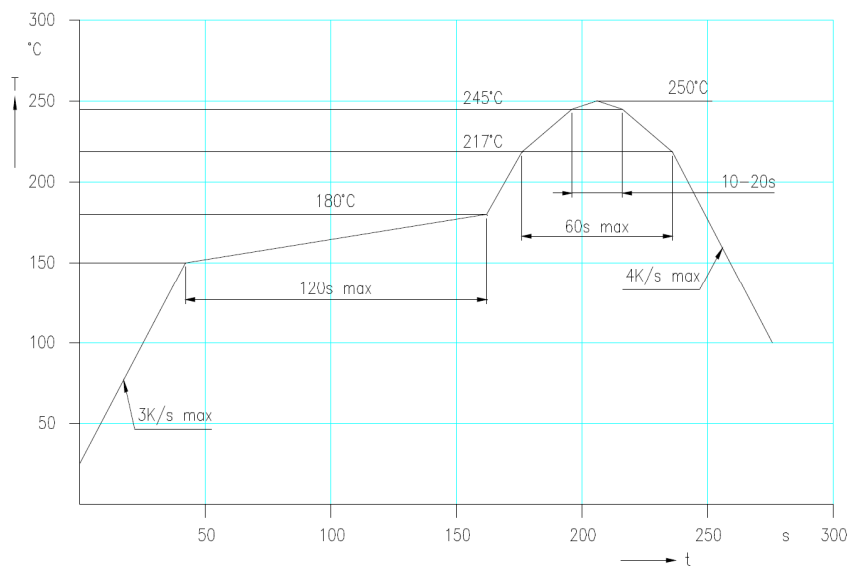
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### IR reflow soldering profile



### IR reflow soldering profile for lead free soldering



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

Art. No. 133 194



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