

EPIGAP Optronik GmbH

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Data Sheet

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High Power IR LED

EOLS-880-496

Rev. 04, 2021

Radiation	Type	Case
Infrared	AlGaAs	SMD 3838 (1515)

Description:

- Size 3.8 (W) x 3.8 (L) x 1.0 (H) mm
- Circuit substrate: AlN ceramics
- Devices are RoHS and REACH conform
- Lead free solderable, soldering pads: silver plated
- Taped in 16 mm blister tape, cathode to transporting perforation
- Marking at cathode

Maximum Ratings

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



Parameter	Test conditions	Symbol	Value	Unit
Forward current		I_F	350	mA
Peak forward current	$t_p \leq 100 \mu\text{s}$, $\tau = 1:10$	I_{FM}	500	mA
Reverse current	$V_R = 5 \text{ V}$	I_R	100	μA
Reverse voltage	$I_R = 100 \mu\text{A}$	V_R	5	V
Storage and operating temp. 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	$I_F = 350 \text{ mA}$		1.6	2	V
Radiant power	Φ_e	$I_F = 350 \text{ mA}$		90		mW
Radiant Intensity	I_e	$I_F = 350 \text{ mA}$	18	28		mW/sr
Peak wavelength	λ_p	$I_F = 350 \text{ mA}$	870	880	890	nm
FWHM	$\Delta\lambda_{0,5}$	$I_F = 350 \text{ mA}$		38		nm

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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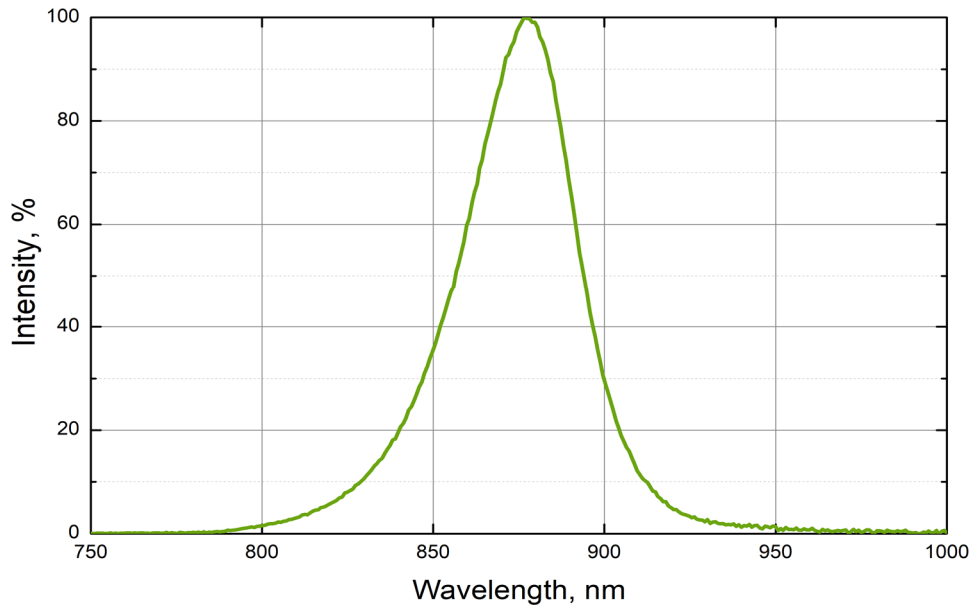


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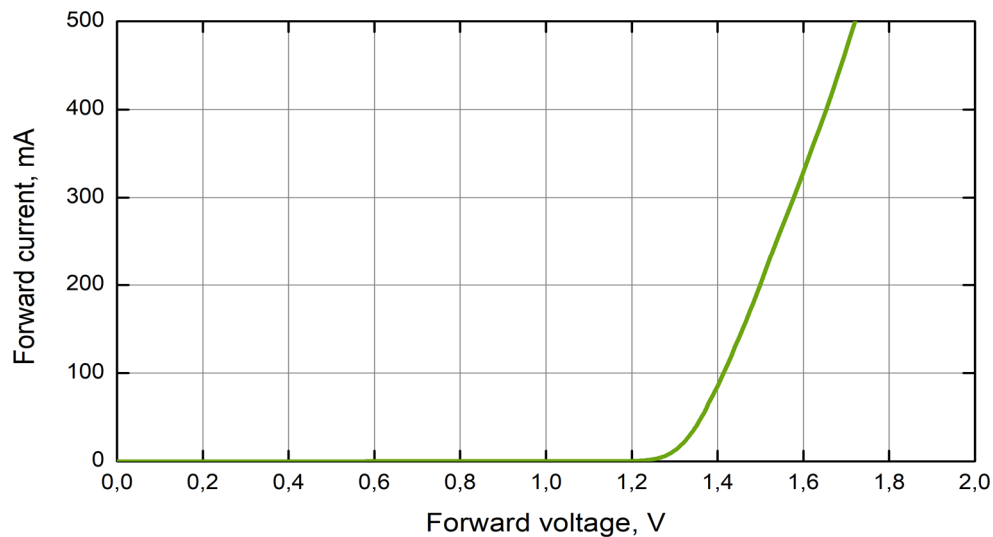
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Spectrum @ 350 mA



Forward current vs. forward voltage



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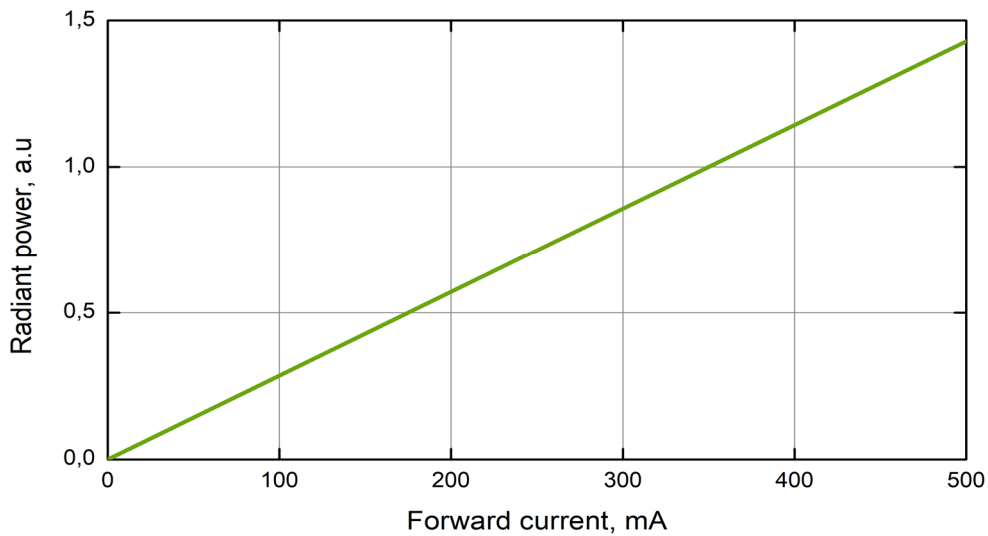


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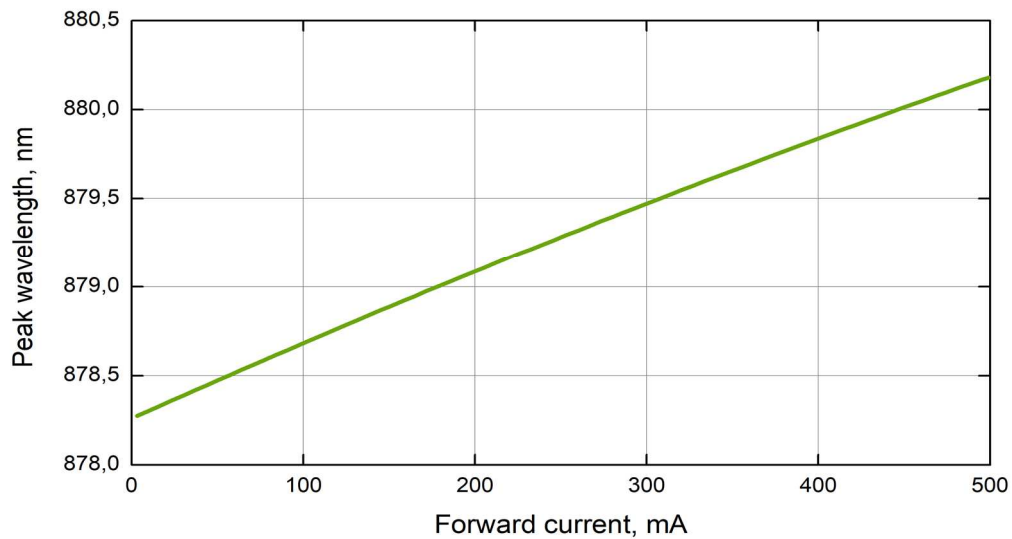
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Radiant power vs. forward current



Peak wavelength vs. forward current



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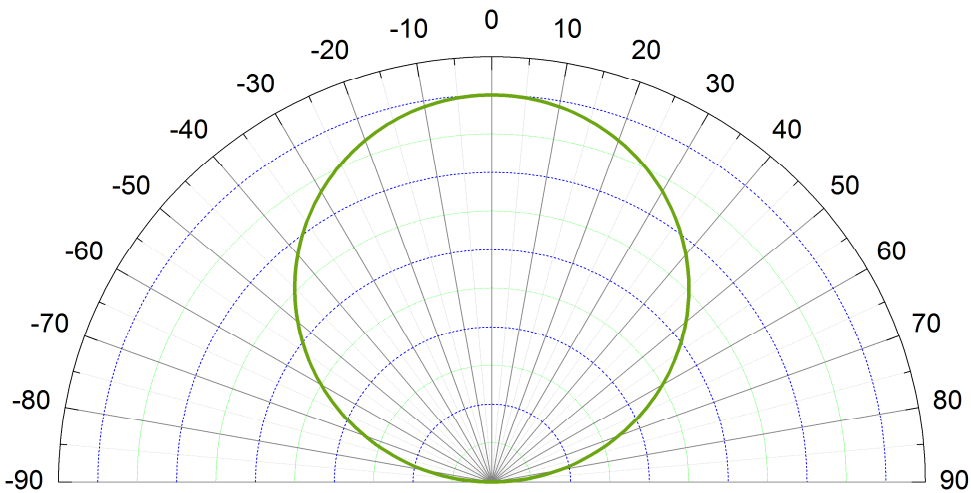


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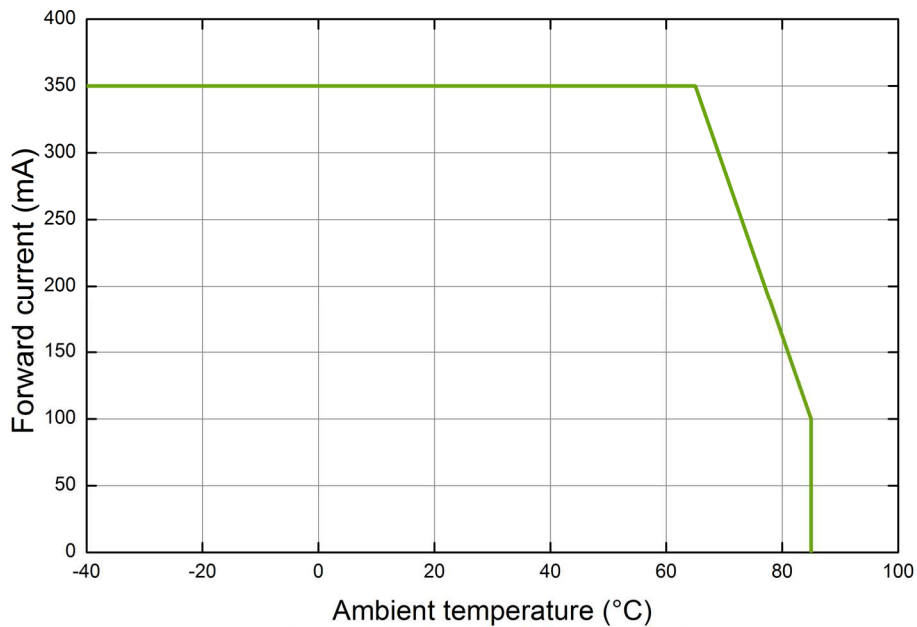
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Radiation pattern



Maximum allowable forward current vs. operating temperature



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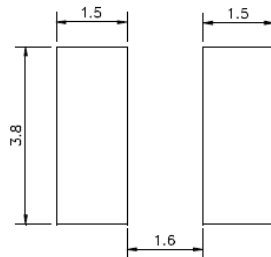
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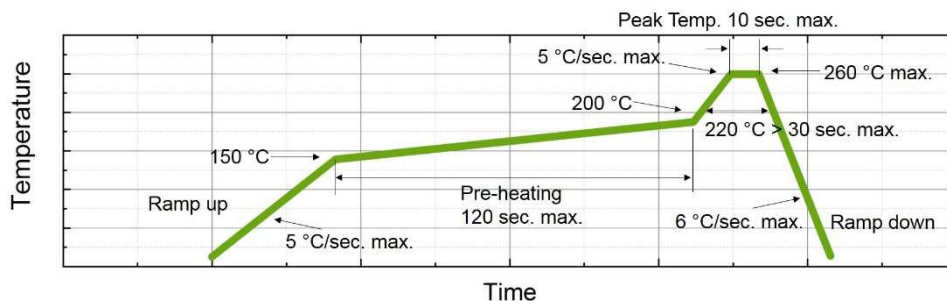
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Measured according to CIE 127. All SMD LEDs are 100% measured and selected on full automated equipment with an accuracy of $\pm 11\%$.



Recommended soldering patterns



Recommended reflow soldering profile

Art. No. 133 039



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