

EPIGAP Optronik GmbH

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Data Sheet

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Infrared SMD-LED

EOLS-700-496

Rev. 03, 2017

Radiation	Type	Case
deep red - 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 conform
- Lead free solderable, soldering pads: silver plated
- High radiation intensity

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	$I_F= 350 \text{ mA}$		1.9	2.2	V
Radiant power	Φ_e	$I_F= 350 \text{ mA}$		36		mW
Radiant Intensity	I_e	$I_F= 350 \text{ mA}$	10	15		mW/sr
Peak wavelength	λ_p	$I_F= 350 \text{ mA}$	690	700	710	nm
FWHM	$\Delta\lambda_{0,5}$	$I_F= 350 \text{ mA}$		23		nm
Rise and fall time	V_F	$I_F= 350 \text{ mA}$		40	160	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.

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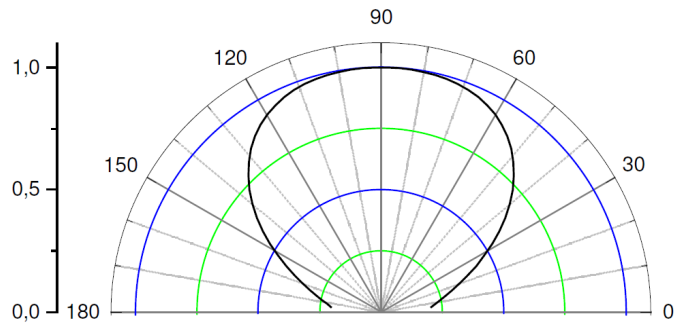
Data Sheet

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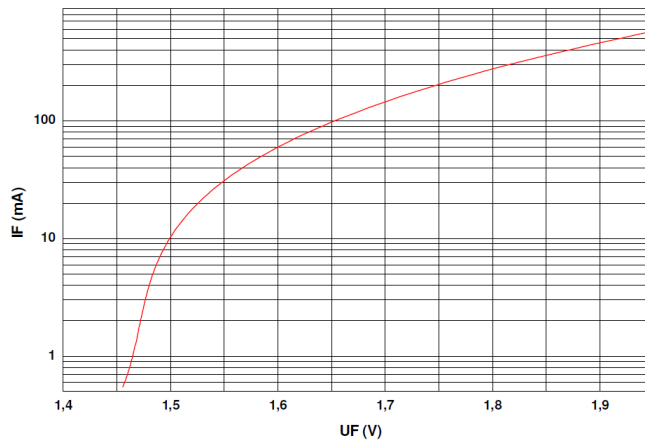
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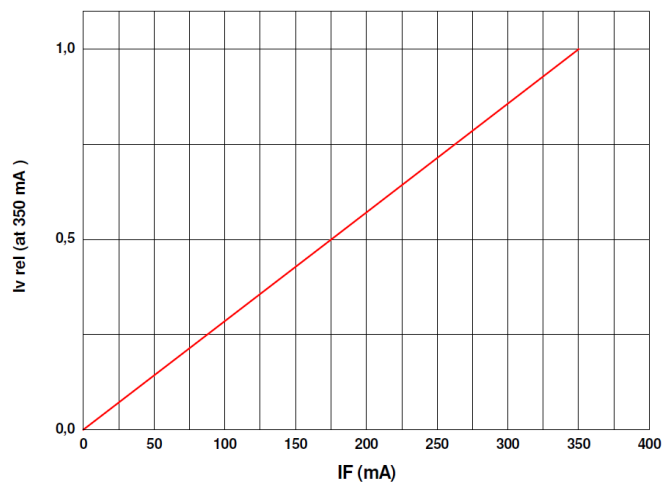
Radiation pattern



$I_F - U_F$ characteristic



$I_{v, rel} - I_F$ characteristic



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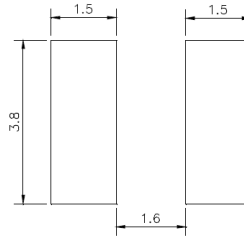
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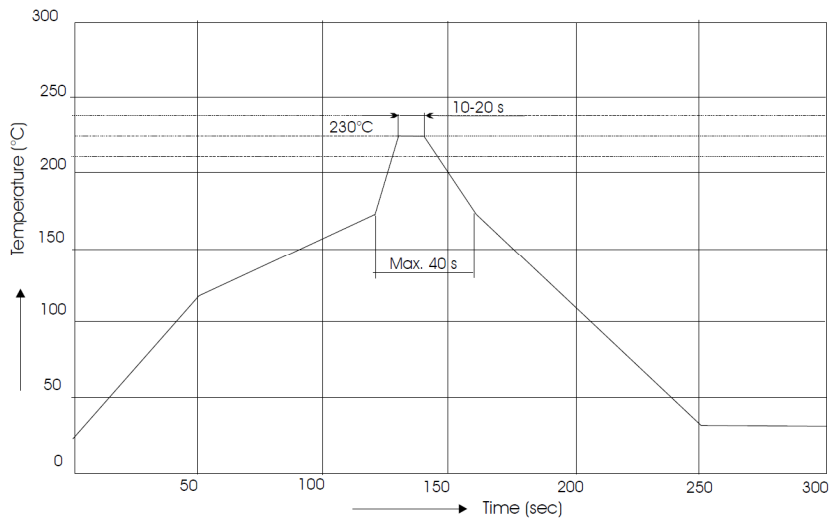
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Recommended Soldering Patterns

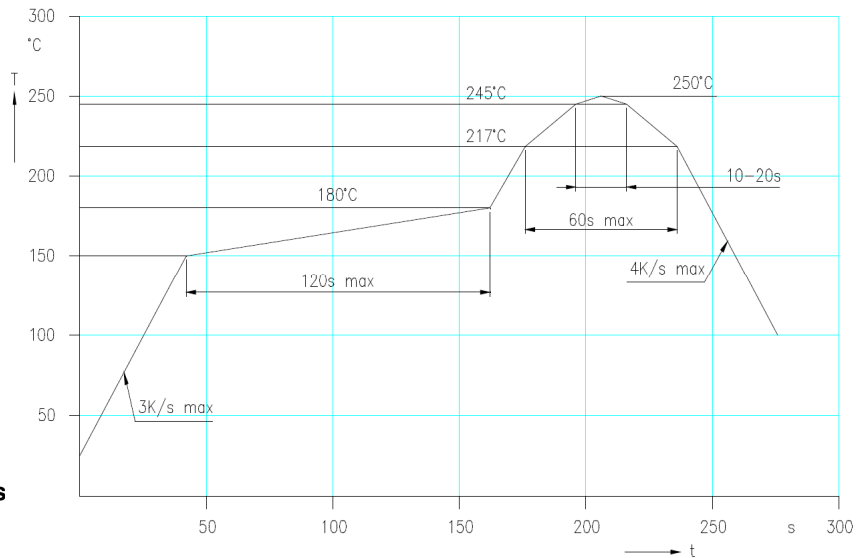


recommended max. thermal resistance
 device-ambient: 20 K/W

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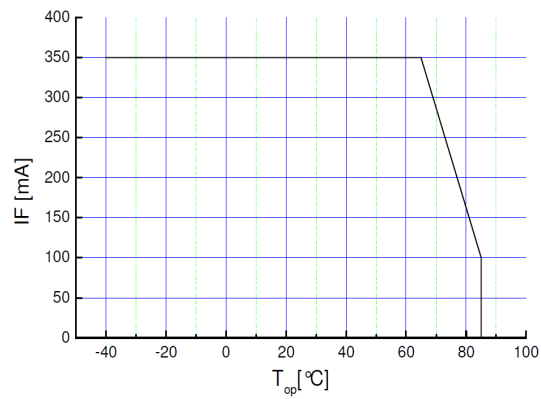
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Measured according to CIE 127. All SMD-LEDs are 100% measured and selected on full automated equipment with an accuracy of $\pm 11\%$.

**Maximal
forward
current (DC)
characteristic**



Art. No. 133 026



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