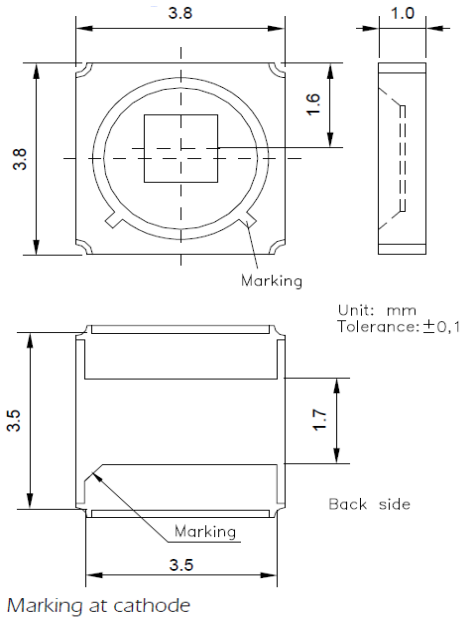
EPIGAP Optronic GmbH
Koepenicker Str. 325b
D-12555 Berlin
Fon: +49 (0)30 657637 60
Fax: +49 (0)30 657637 70
sales@epigap-optronic.de

Data Sheet

High Power IR LED EOLS-870-496

Rev. 03, 2017

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 conform
- Lead free solderable, soldering pads: silver plated
- High radiation intensity
- Marking at anode

Maximum Ratings

T_{amb}= 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Value	Unit
Forward current		I_F	350	mA
Peak forward current	$t_p \leq 100$ µs, τ=1:10	I_{FM}	350	mA
Reverse current	V_R=5 V	I_R	100	µA
Reverse voltage	I_R=100 µA	V_R	5	V
Storage and operating temp. range		T_{stg}	-40 to +85	°C
Thermal resistance		R_{thJA}	10	K/W

Optical and Electrical Characteristics

T_{amb}= 25°C, unless otherwise specified

Parameter	Symbol	Conditions	Min	typ	max	Unit
Forward voltage	V_F	I_F= 350 mA		1.5	2	V
Radiant power	Φ_e	I_F= 350 mA		38		mW
Radiant Intensity	I_e	I_F= 350 mA	20	30		mW/sr
Peak wavelength	λ_p	I_F= 350 mA	860	870	880	nm
FWHM	$\Delta\lambda_{0,5}$	I_F= 350 mA		46		nm

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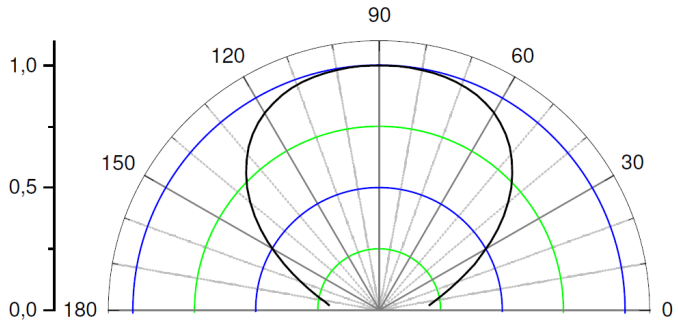
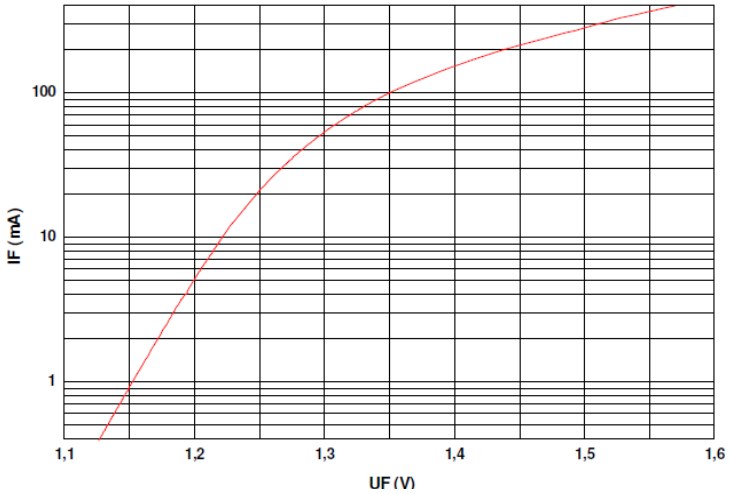
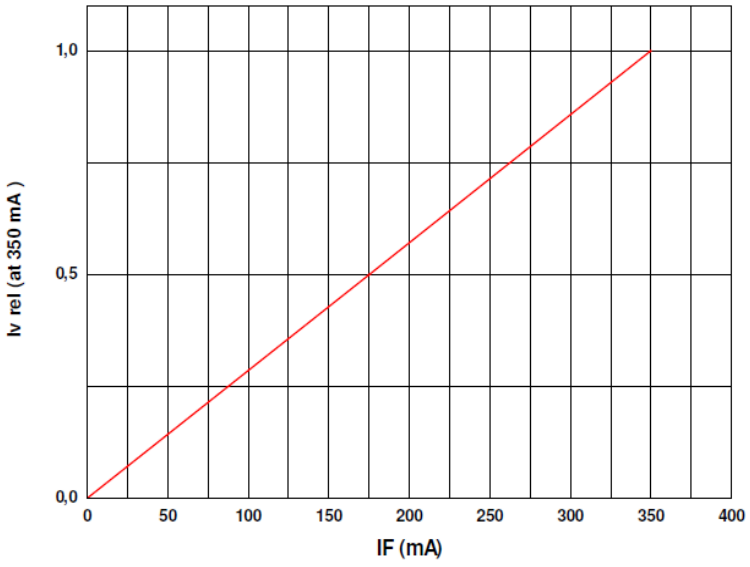
Radiation pattern



I_F - U_F characteristic



$I_{e,rel}$ - I_F characteristic



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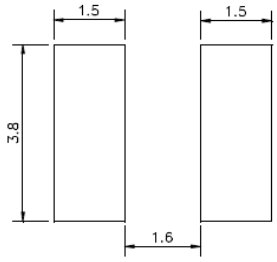
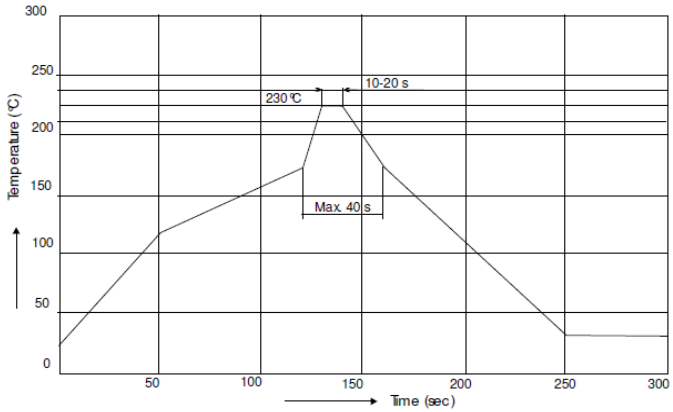
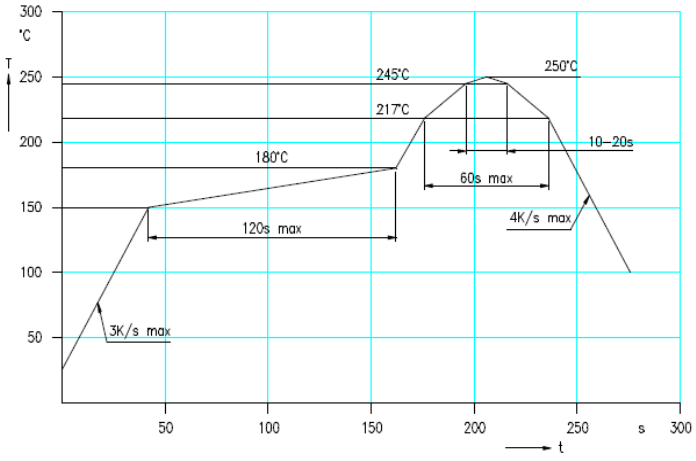
Recommended Soldering Patterns



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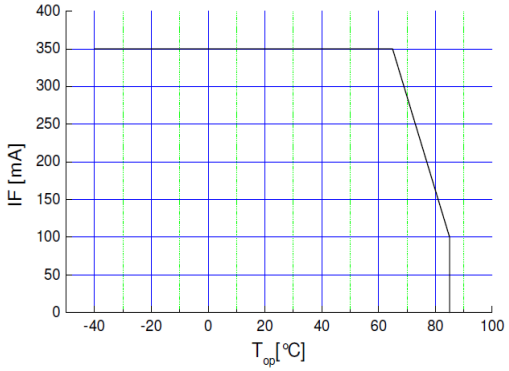
Measured according to CIE 127. All SMD-LEDs are 100% measured and selected on full automated equipment with an accuracy of ±11%.

Maximal forward current (DC) characteristic



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