

EPIGAP Optronik GmbH

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Data Sheet

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High Power SMD LED

EOLS-780-227

Rev. 03, 2020

Radiation	Type	Case
Infrared	AlGaAs	SMD 6046 (2418), ceramics

All dimensions in mm

Description:

- size: 6.0(L) x 4.6(W) x 4.3(H) mm
- high pulse current up to 1000 mA
- with lens, view angle 20°
- soldering pads: gold plated; only for reflow soldering
- marking at anode

Maximum Ratings

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

Parameter	Test conditions	Symbol	Value	Unit
Forward current		I _F	700	mA
Peak forward current	t _p ≤ 100 μs, τ = 1:10	I _{FM}	1000	mA
Reverse voltage		V _R	5	V
Thermal resistance		R _{th_JA}	5	K/W
Operating temperature range		T _{amb}	-40 to +85	°C
Storage temperature range		T _{stg}	-40 to +85	°C

Electrostatic discharge classification (MIL-STD-883) - class 1

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		1.7	2.2	V
Radiant power*	Φ _e	I _F = 350 mA		52		mW
Radiant intensity*	I _e	I _F = 350 mA		170		mW/sr
Peak wavelength	λ _p	I _F = 350 mA	770	780	790	nm
FWHM	Δλ _{0,5}	I _F = 350 mA		31		nm
Reverse current	I _R	I _R = 5 V			100	μA

*measured on star board



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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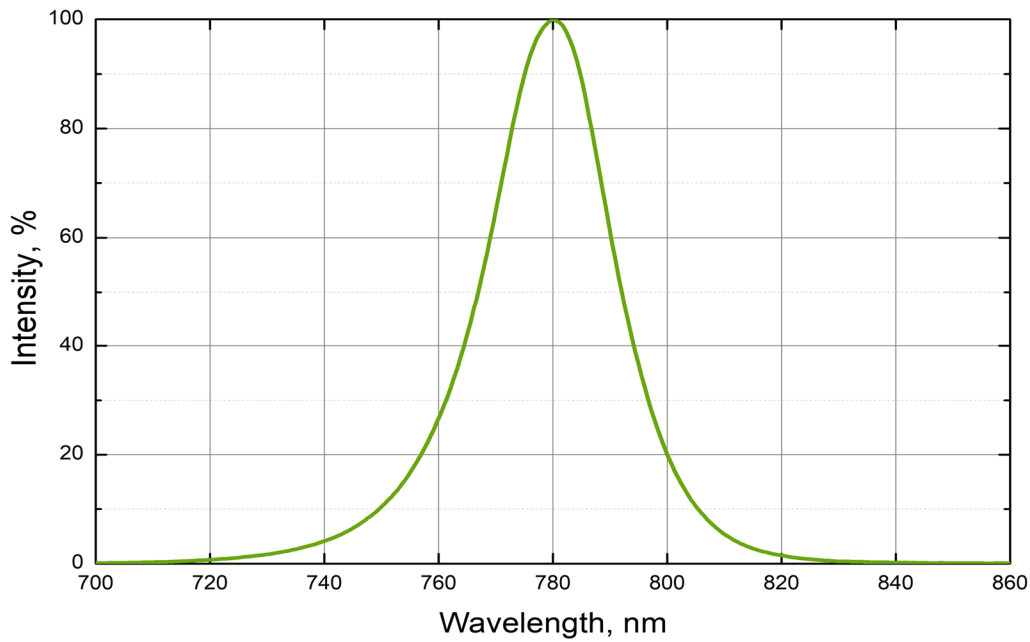


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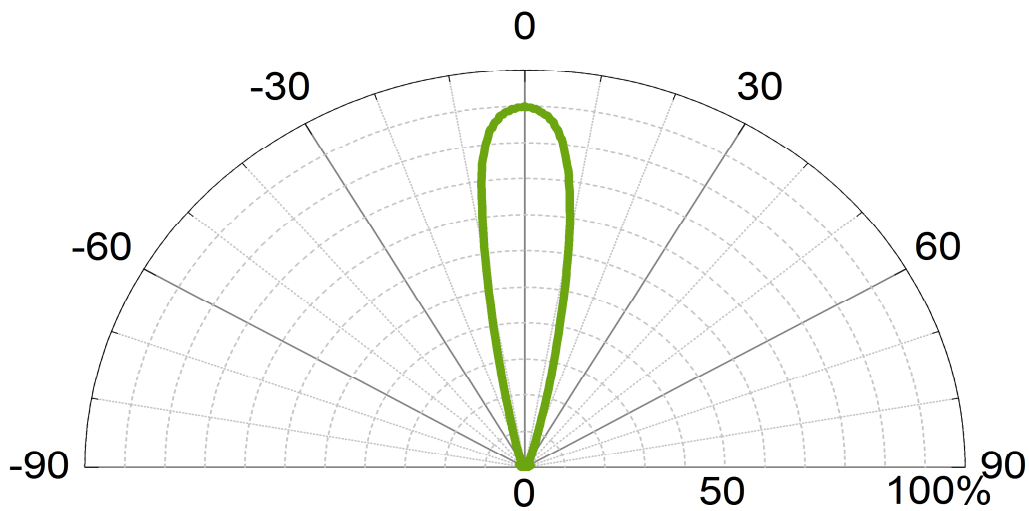
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Typical radiation spectrum at 350 mA



Radiation pattern



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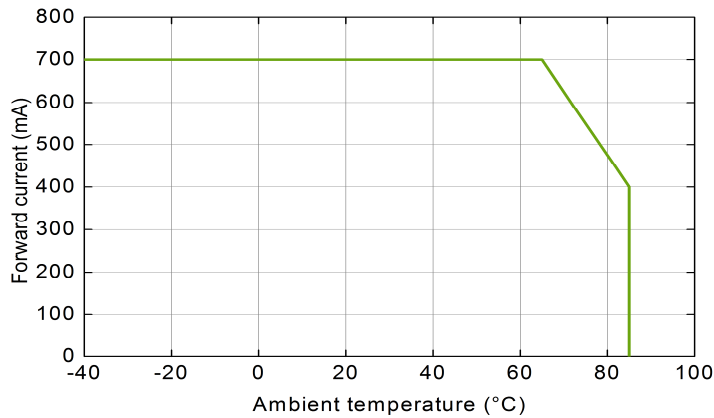


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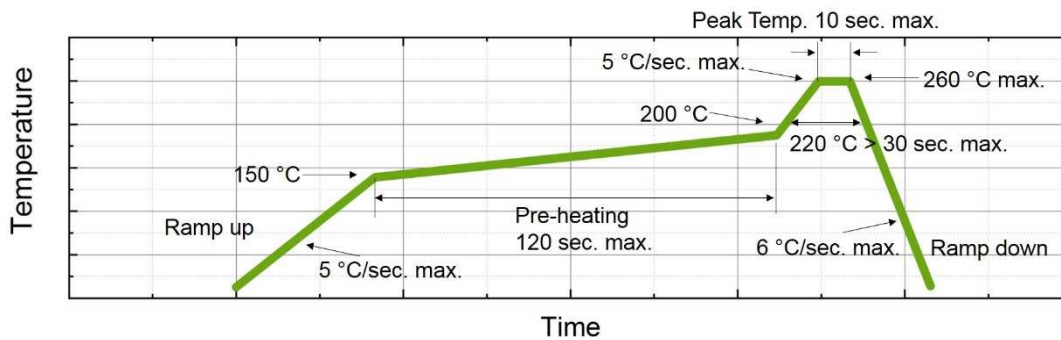
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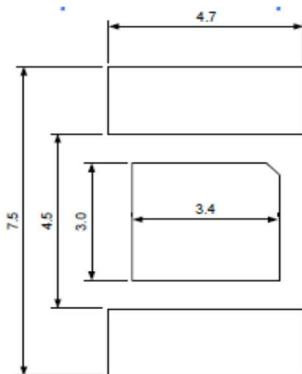
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Maximum allowable forward current vs. operating temperature



Recommended reflow soldering profile



Recommended soldering pad

Thermal pad needs to be connected to a heat sink with less than 10 K/W thermal resistance.

Art. No. 133 174



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