

EPIGAP Optronik GmbH

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Data Sheet

Preliminary

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High Power LED

EOLS-680-227

Rev. 04, 2018

Radiation	Type	Case
Deep red	AllnGaP/GaAs	SMD 6046 (2418), ceramics

<p style="text-align: center;">All dimensions in mm</p>	<p style="text-align: center;">Description:</p> <ul style="list-style-type: none"> - 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
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Maximum Ratings

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

Parameter	Test conditions	Symbol	Value	Unit
Forward current		I_F	700	mA
Peak forward current	$t_p \leq 100 \mu\text{s}$, $\tau = 1:10$	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	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-40 to +85	$^{\circ}\text{C}$

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

Optical and Electrical Characteristics

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

Parameter	Symbol	Conditions	Min	typ	max	Unit
Forward voltage	V_F	$I_F = 350 \text{ mA}$		2.0	2.35	V
Radiant power*	Φ_e	$I_F = 350 \text{ mA}$		200		mW
Radiant intensity*	I_e	$I_F = 350 \text{ mA}$		850		mW/sr
Peak wavelength	λ_p	$I_F = 350 \text{ mA}$	672	680	688	nm
FWHM	$\Delta\lambda_{0,5}$	$I_F = 350 \text{ mA}$		19		nm
Reverse current	I_R	$I_R = 5 \text{ V}$			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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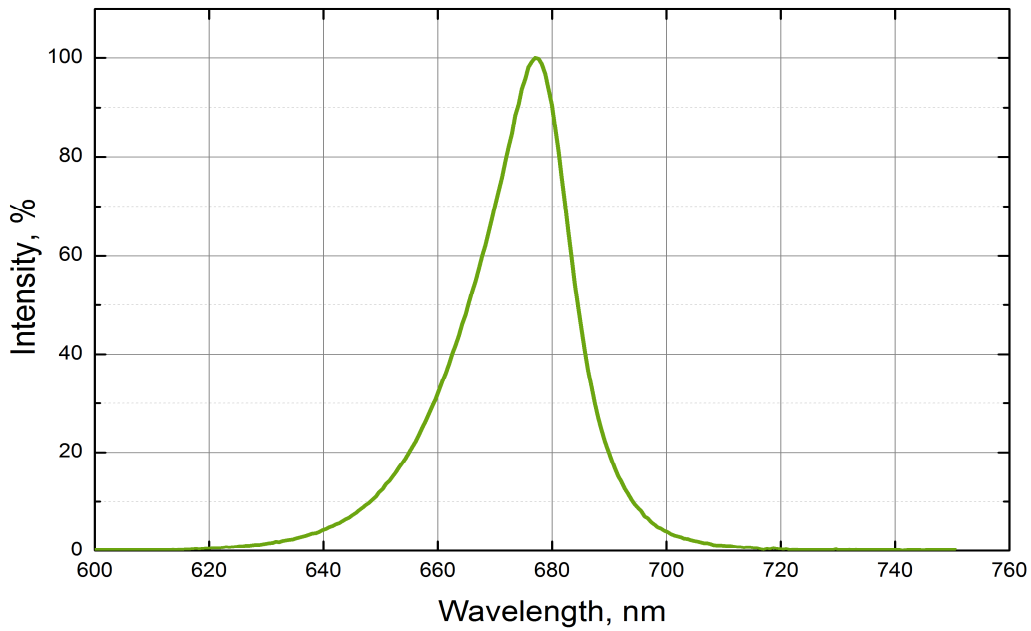
Preliminary

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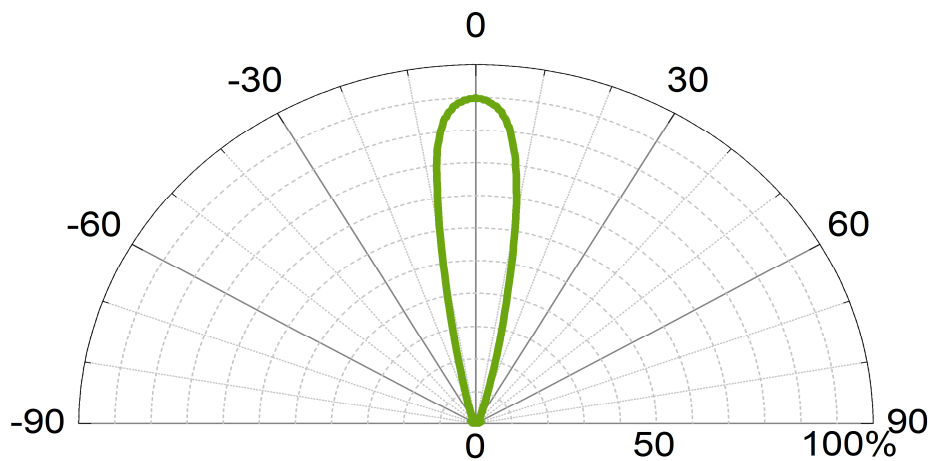
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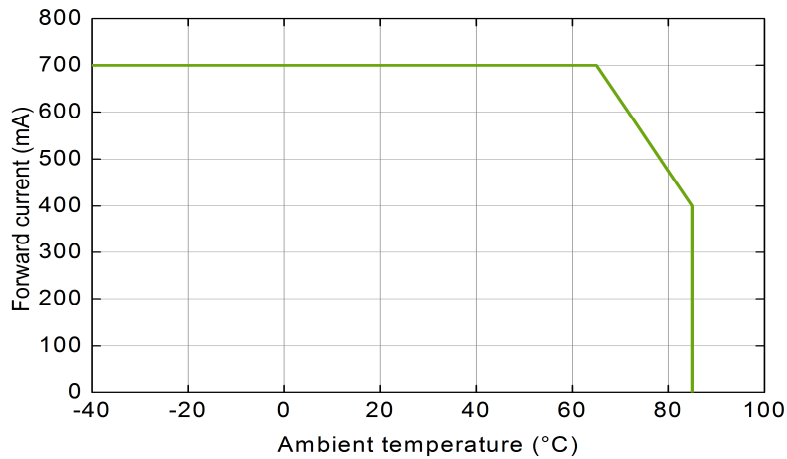
Typical radiation spectrum at 350 mA



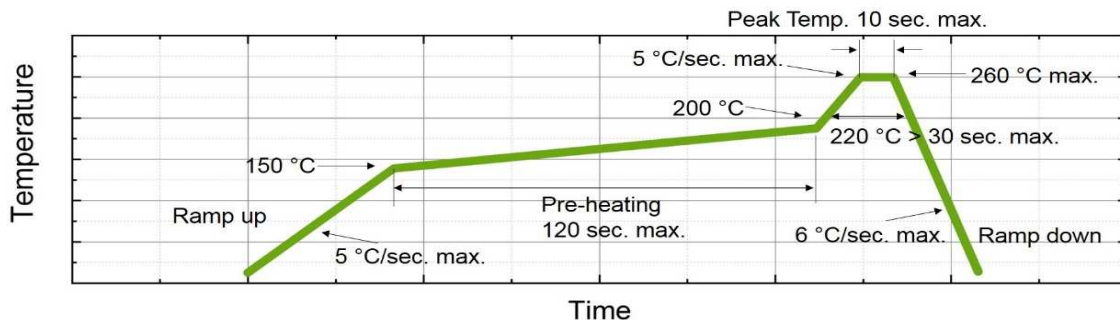
Radiation pattern



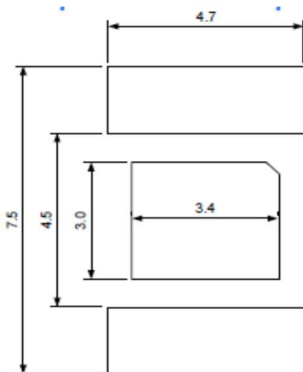
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Max. forward current vs. ambient temperaturte



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. 133 170

