

High precision red light LED - type L-18

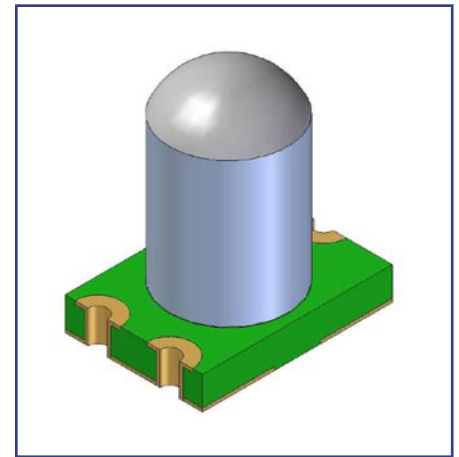


CHARACTERISTICS

- ▶ nanoSPOT is the latest LED technology by STM
- ▶ Integrated, coordinated high-efficiency optics
- ▶ No additional lenses required
- ▶ Laser like light spot
- ▶ Beam angle < 1,5°
- ▶ 1,8mm model, metal housing

APPLICATION

- ▶ For all optical sensors
- ▶ Precise spot lighting
- ▶ For use in measurement devices



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▶ MAXIMUM RATINGS (T=25°C)

Parameter	Test conditions	typ. value	Unit
Operating temperature (T _{Op})		-10 / + 60	°C
Forward current (I _F) *		15	mA
Thermal resistance (R)	Junction/soldering pad	240	K/W
Surge current (I _{FM})	t _p =30µs, t _p /T=0,111	30 - 60	mA

* for continuous operation

▶ OPTICAL AND ELECTRONIC VALUES (T=25°C)

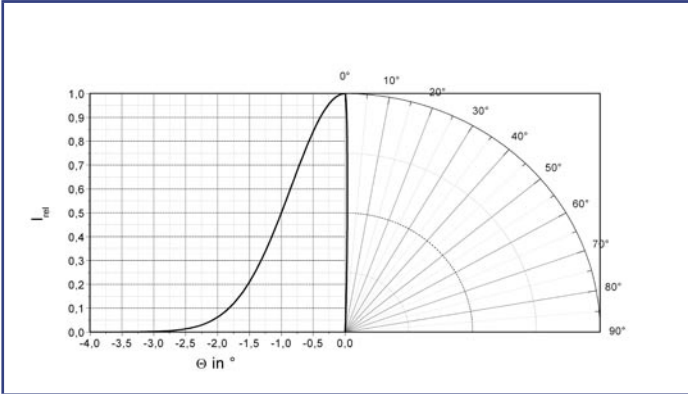
Parameter	Test conditions	typ. value	Unit
Peak wavelength (λ)	I _F =20 mA	655	nm
Radiant power (Φ _e)	I _F =20 mA	130	µW
Spectral range of sensitivity (by 50%) (Δλ)	I _F =20 mA	20	nm
Half power angle (θ)	I _F =60 mA, (t _p /T=1/12)	1	deg
Forward voltage (V _F 20)	I _F =20 mA	1,9	V
Reverse voltage (V _R)	I _R =100 µA	5	V



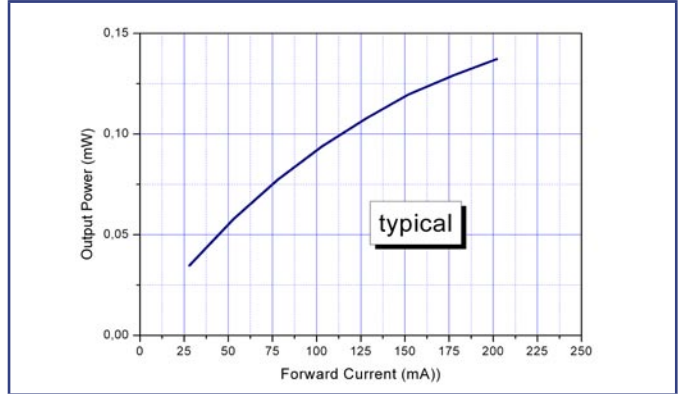
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► GRAPHS

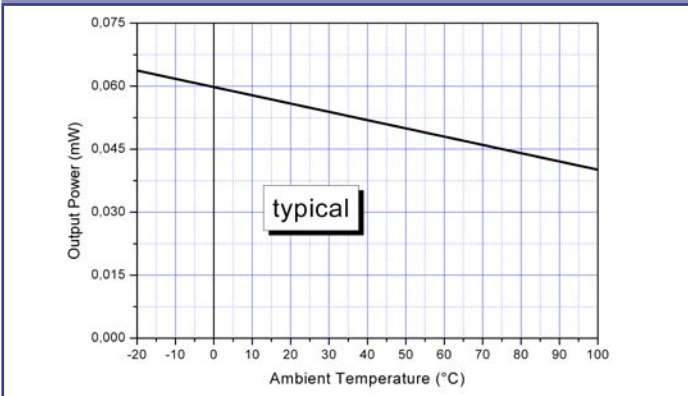
RADIATION CHARACTERISTIC : $I_{rel} = f(\theta)$



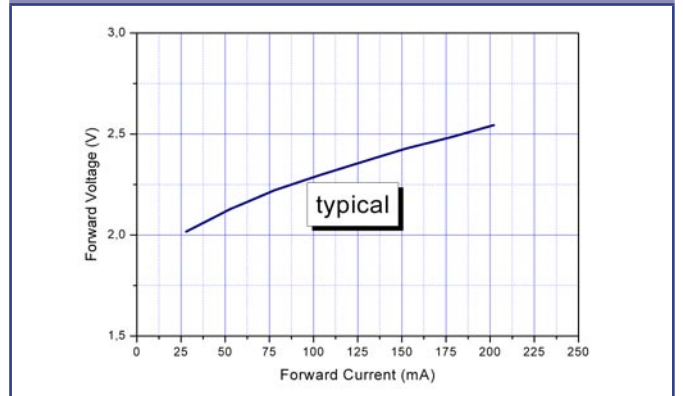
RADIANT OUTPUT POWER ($t_p=70\mu s, t_p/T=0,143, T=25^\circ C$)



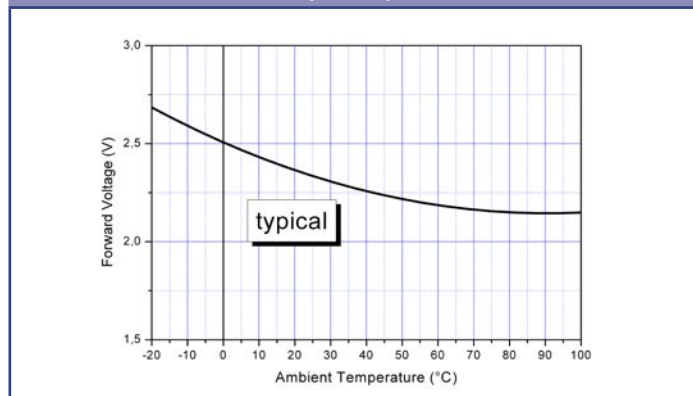
RADIANT OUTPUT POWER ($t_p=70\mu s, t_p/T=0,143, I=100mA$)



FORWARD VOLTAGE ($t_p=70\mu s, t_p/T=0,143, T=25^\circ C$)



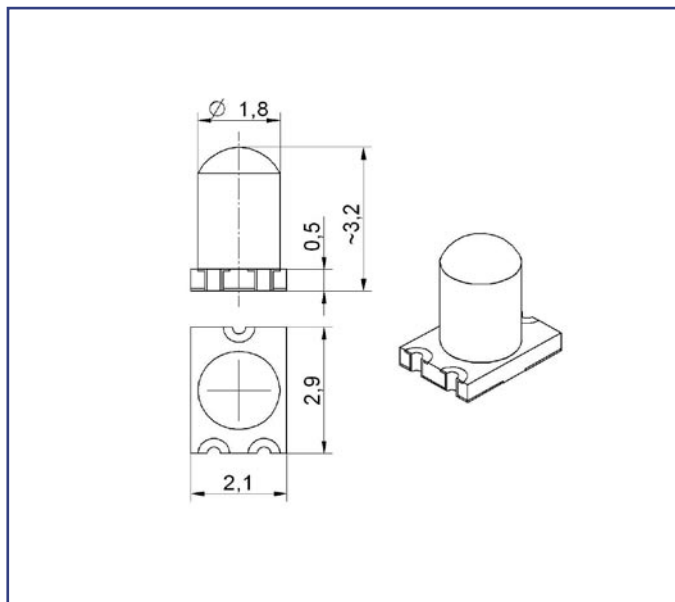
FORWARD VOLTAGE ($t_p=70\mu s, t_p/T=0,143, I=100mA$)



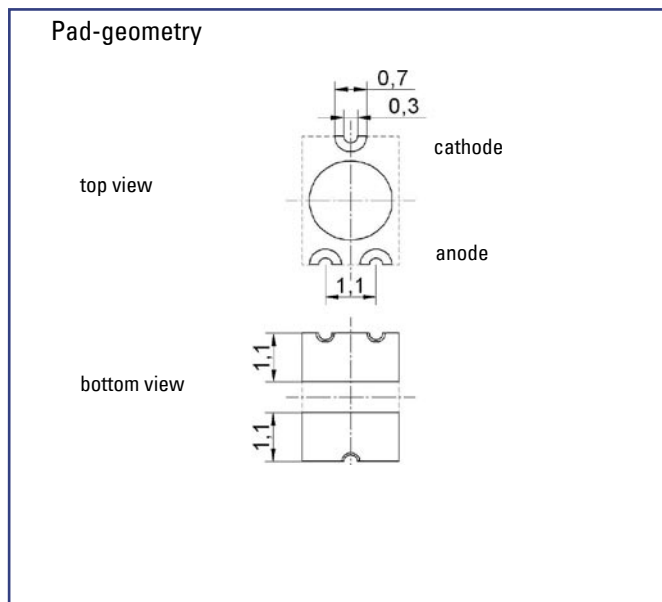


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► DIMENSIONS



► CONNECTOR PIN-ASSIGNMENT



PART DESIGNATION

OE-L-18-VA1-SL20-6-0130