

# High precision red light LED - type L-30

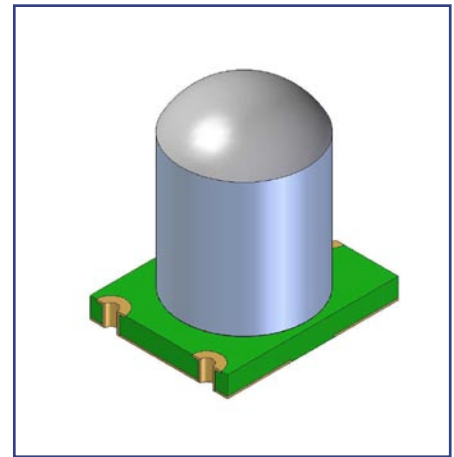


## CHARACTERISTICS

- ▶ nanoSPOT is the latest LED technology by STM
- ▶ Integrated, coordinated microoptics
- ▶ No additional lenses required
- ▶ Laser like light spot
- ▶ Beam angle < 1°
- ▶ 3mm model, metal housing

## APPLICATION

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



nano • SPOT®

### ▶ MAXIMUM RATINGS (T=25°C)

Parameter	Test conditions	typ. value	Unit
Operating temperature (T <sub>Op</sub> )		-10 / + 60	°C
Forward current (I <sub>F</sub> ) *		15	mA
Thermal resistance (R)	Junction/soldering pad	200	K/W
Surge current (I <sub>FM</sub> )	t <sub>p</sub> =30µs, t <sub>p</sub> /T=0,111	30 - 60	mA

\* for continuous operation

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

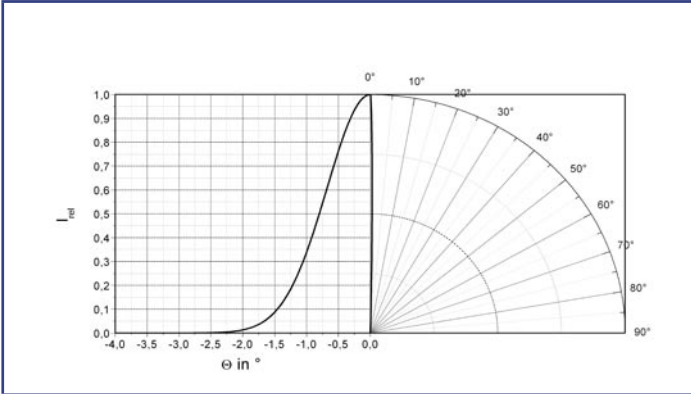
Parameter	Test conditions	typ. value	Unit
Peak wavelength (λ)	I <sub>F</sub> =20 mA	655	nm
Radiant power (Φ <sub>e</sub> )	I <sub>F</sub> =20 mA	150	µW
Spectral range of sensitivity (by 50%) (Δλ)	I <sub>F</sub> =20 mA	20	nm
Half power angle (θ)	I <sub>F</sub> =60 mA, ( t <sub>p</sub> /T=1/12 )	0,8	deg
Forward voltage (V <sub>F 20</sub> )	I <sub>F</sub> =20 mA	1,9	V
Reverse voltage (V <sub>R</sub> )	I <sub>R</sub> =100 µA	5	V



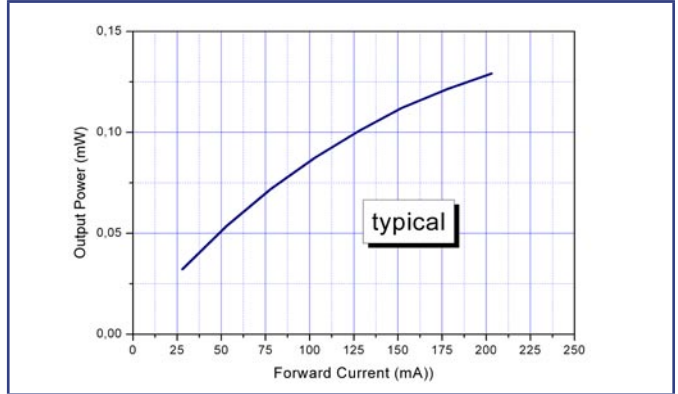
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► GRAPHS

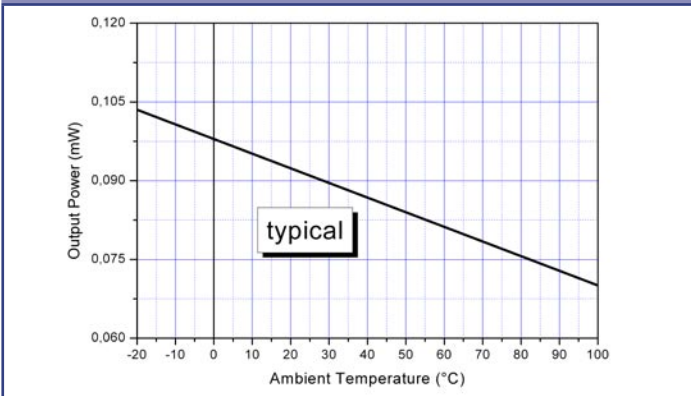
**RADIATION CHARACTERISTIC :  $I_{rel} = f(\theta)$**



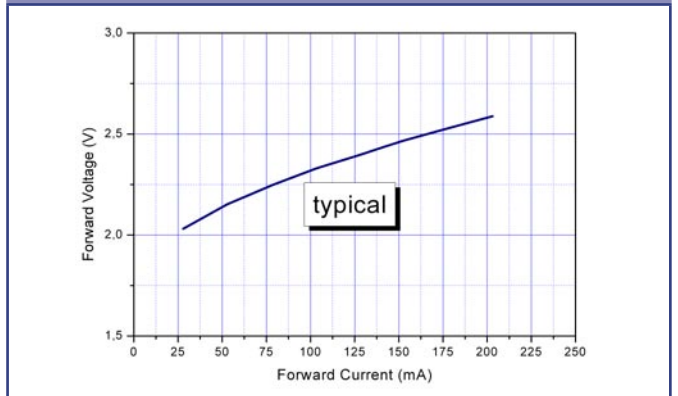
**RADIANT OUTPUT POWER ( $t_p=70\mu s, t_p/T=0,143, T=25^\circ C$ )**



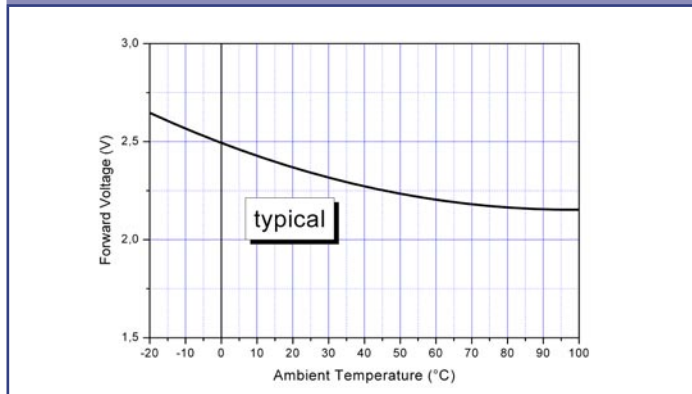
**RADIANT OUTPUT POWER ( $t_p=70\mu s, t_p/T=0,143, I=100mA$ )**



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



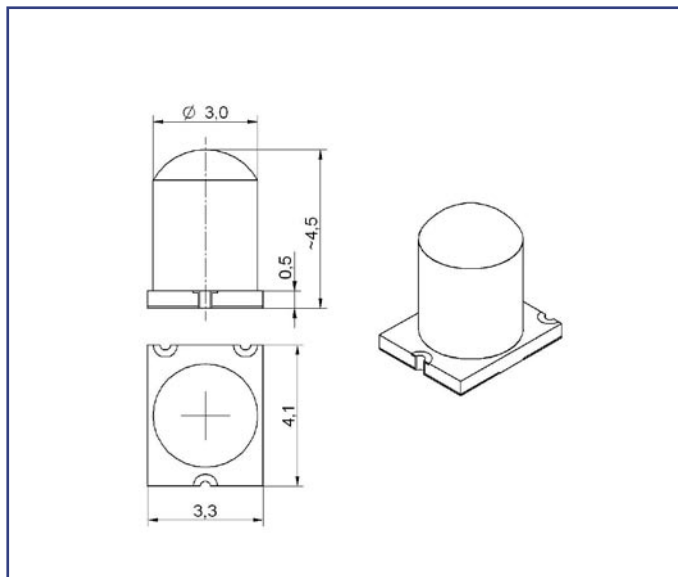
**FORWARD VOLTAGE ( $t_p=70\mu s, t_p/T=0,143, I=100mA$ )**



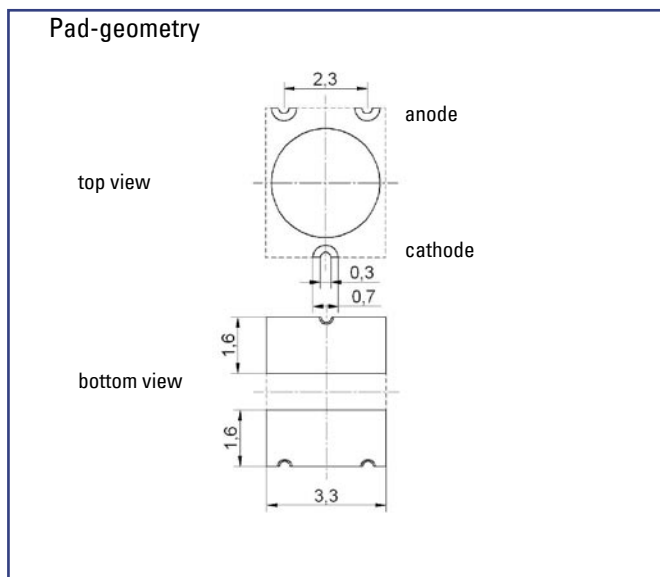


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### ► DIMENSIONS



### ► CONNECTOR PIN-ASSIGNMENT



**PART DESIGNATION**

**OE-L-30-VA1-SL21-6-0131**