

# High precision red light LED - type L-18

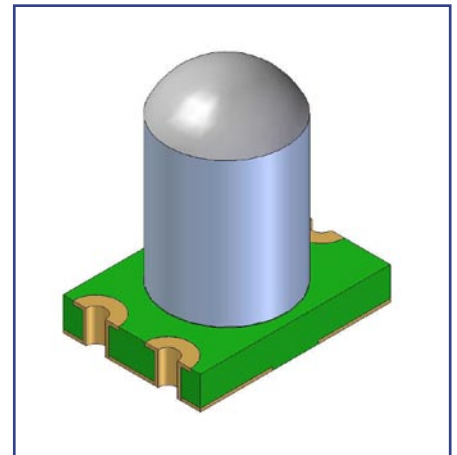


## CHARACTERISTICS

- ▶ microSPOT is the latest LED technology by STM
- ▶ Integrated, coordinated high-efficiency optics
- ▶ No additional lenses required
- ▶ Sharply defined light spot
- ▶ Extremely small reception and squint angles
- ▶ 1,8mm model, metal housing

## APPLICATION

- ▶ For all optical sensors
- ▶ For precise lighting



micro ● SPOT™

### ▶ MAXIMUM RATINGS (T=25°C)

Parameter	Test conditions	typ. value	Unit
Operating temperature ( $T_{Op}$ )		-10 / + 60	°C
Forward current ( $I_f$ )		35	mA
Thermal resistance (R)	Junction/soldering pad	240	K/W
Surge current ( $I_{FM}$ )	$t_p = 70\mu s, t_p/T = 0,143$	180 - 200	mA

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

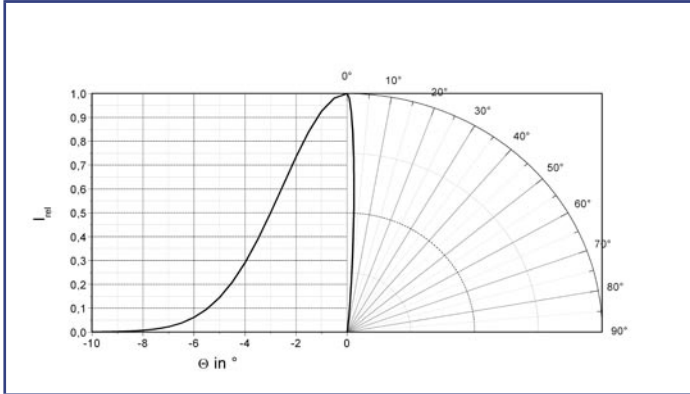
Parameter	Test conditions	typ. value	Unit
Peak wavelength ( $\lambda$ )	$I_f = 20 \text{ mA}$	655	nm
Radiant power ( $\Phi_e$ )	$I_f = 20 \text{ mA}$	0,45	mW
Spectral range of sensitivity (by 50%) ( $\Delta\lambda$ )	$I_f = 20 \text{ mA}$	20	nm
Half power angle ( $\theta$ )	$I_f = 60 \text{ mA}, (t_p/T = 1/12)$	3	deg
Forward voltage ( $V_f$ 20)	$I_f = 20 \text{ mA}$	2,25	V
Reverse voltage ( $V_R$ )	$I_R = 100 \mu A$	5	V



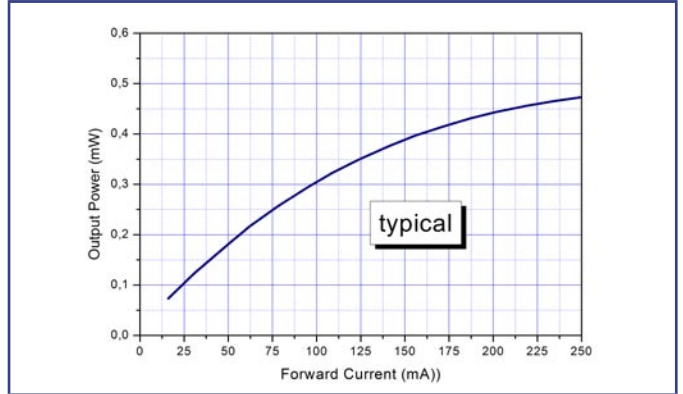
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► GRAPHS

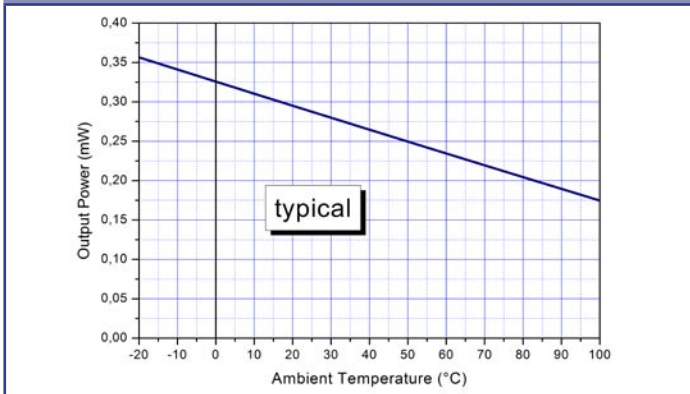
**RADIATION CHARACTERISTIC :  $I_{rel} = f(\theta)$**



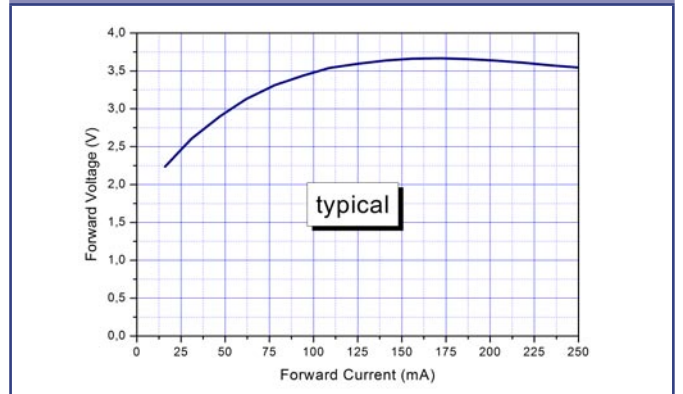
**RADIANT OUTPUT POWER ( $t_p=70\mu s, t_p/T=0,143, T=25^\circ C$ )**



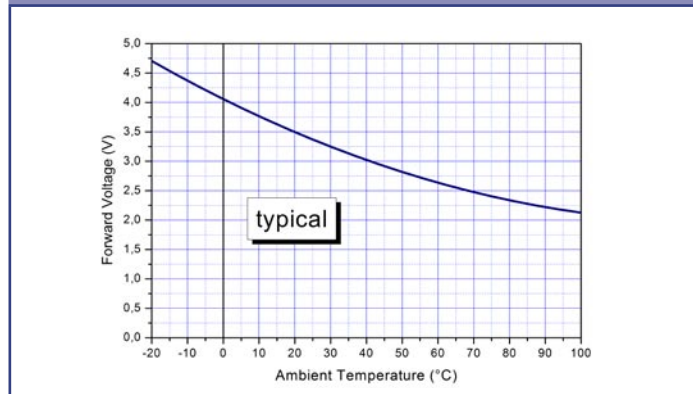
**RADIANT OUTPUT POWER ( $t_p=70\mu s, t_p/T=0,143, I=100mA$ )**



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



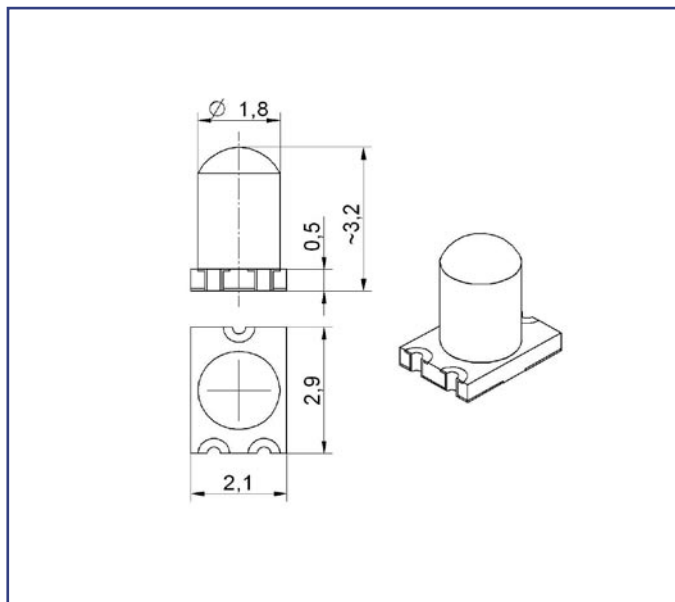
**FORWARD VOLTAGE ( $t_p=70\mu s, t_p/T=0,143, I=100mA$ )**



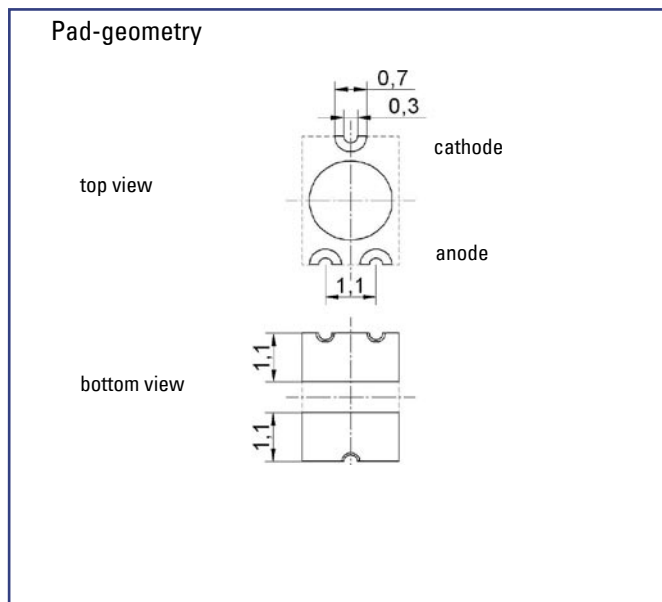


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### ► DIMENSIONS



### ► CONNECTOR PIN-ASSIGNMENT



**PART DESIGNATION**

**OE-L-18-VA1-SL20-8-0107**