



## Jumbo® LEDs

# Powerful and customer-specific beam angle thanks to small size Jumbo® LEDs. SHARING EXCELLENCE

Jumbo® LEDs are „miniature spotlights“ for applications in the ultraviolet (UV), visible (VIS) and near infrared (NIR) spectral regions.

They are ideally suited to application areas where space is limited and a high radiant intensity is required. Depending on the customer-specific color and wavelength requirements in the UV, VIS and NIR ranges of 365 nm - 1800 nm, the following applications are available:

- Camera monitoring in VIS and NIR spectral region
- Efficient paint/lacquer curing in hard-to-reach places
- Indoor and outdoor lighting design
- Medical light therapy
- Plant cultivation
- Microscopy and other technical lighting applications

Polycarbonate or glass lenses allow for a standard angle of radiation ( $2\phi$ ) of typically 15°, 25°, 35° and 90°.

The robust housing is splash proof (IPX4 and IPX6), meaning the LEDs continue to function reliably, even in tough environmental conditions. Using copper and aluminum for the housing ensures very low thermal resistance values ( $R_{th} < 10 \text{ K/W}$ ), meaning operating currents of up to 1.5 A and power dissipation of up to 5 W can be conducted. Moreover, excellent heat conduction results in very low degradation rates and long life spans – typically 50,000 hours.



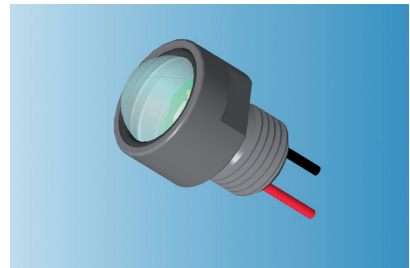
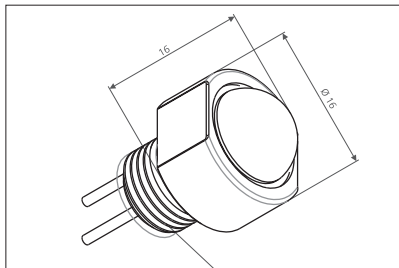
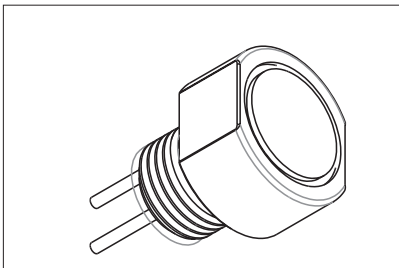
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Specifications	Typical Characteristics at max. Driving Current							
	Product Groups	Radiant Power [mW]	Luminous Flux [lm]	Color Temperature [K]	Peak Wavelength [nm]	max. Driving Current [A]	Forward Voltage [V]*	Total Viewing Angle [°]
UV	150 – 500				365 – 405	0.5 – 0.7	3.8 – 3.5	90
VIS			30 – 90		445 – 660	1	3.5 – 2.5	25
White			250 – 170	2700 – 7000		1	3.1	25
NIR	200 500 400 30				730 – 770 810 – 880 940 1020 – 1650	1 – 1.5	2.5 – 1.0	15, 25, 35

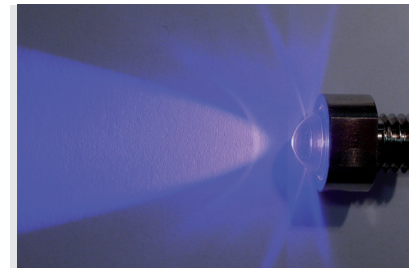
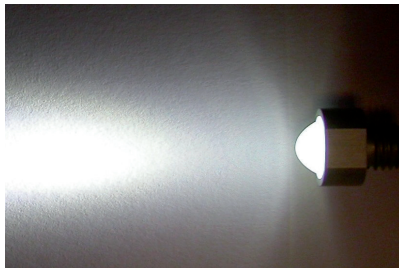
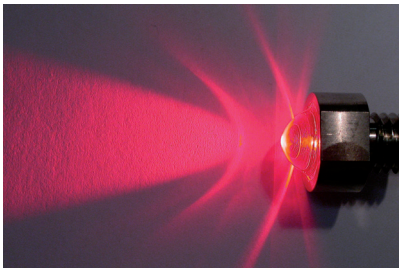
\* Forward voltage depends on operating wavelength.

Degree of water protection according to DIN EN 60529 IP X4  
 New package IP X6

Application	Product Groups			
	UV	VIS	White	NIR
Lacquer Hardening	x			
Technical Illumination	x	x	x	
Illumination for Microscopy	x	x	x	
Medical Device	x	x	x	x
Night Vision				x
Automotive		x	x	x
Security and Defence				x



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It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.