

# IMT Power Light

## Technical Datasheet



IMT Masken und Teilungen AG  
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	PL22	PL25	PL25+
<b>Reticle glass body</b>			
Material	Schott B270®i	Schott B270®i	Schott B270®i
Refractive Index	1.52	1.52	1.52
Transmission (avg.) @415nm – 685nm	> 98.5 %	> 98.5 %	> 98.5 %
Reflection (avg.) @415nm – 685nm	< 0.4 %	< 0.4 %	< 0.4 %
Diameter	Ø 18 mm (-0.006 /-0.033)	Ø 20 mm (-0.007 /-0.040)	Ø 24 mm (-0.007 /-0.040)
Thickness	4.0 mm ± 0.05 mm	4.0 mm ± 0.05 mm	5.5 mm ± 0.05 mm
Clear aperture	Ø 17 mm (exact outline see drawing)	Ø 19 mm (exact outline see drawing)	Ø 23 mm (exact outline see drawing)
Illumination pattern layout (diameter up to 0.4 mm, centered)	Customer specific	Customer specific	Customer specific
Passive chrome pattern layout (max. diameter up to clear aperture)	Customer specific	Customer specific	Customer specific
Centering accuracy (pattern to glass body)	±0.025 mm	±0.025 mm	±0.025 mm
Cleaning	Use of neutral cleaning agents recommended, such as Isopropyl alcohol (IPA). Wipe cleaning only. DO NOT use alkaline cleaning agents!		

### Light Engine

Operating wavelength	633 nm ± 5 nm (super red)	633 nm ± 5 nm (super red)	633 nm ± 5 nm (super red)
Brightness level	Continuously adjustable	Continuously adjustable	Continuously adjustable
LED type	OSRAM LS M67F	OSRAM LS M67F	OSRAM LS M67F
LED operation / constant current	It is recommended to operate the LED with constant current and pulse width modulation (PWM) at the nominal current of 20 mA because this is the most energy efficient operating point of the LED. Constant current LED drivers with PWM are available as integrated circuits.		
LED operation / continuous current	Alternatively the LED can be controlled with continuous current The LED must always be operated with a series resistor as a current limiter.		
Max. permissible forward current	For constant current with PWM operation see LED datasheet. Max. 20 mA for continuous current operation. Please note: non-observance shortens the service life of the LED significantly!		
ESD	2 kV acc. to ANSI/ESDA/JEDEC JS-001 (HBM, Class 2)		
Cable type	AWG 28 – AWG 32 (standard AWG 31)	AWG 28 – AWG 32 (standard AWG 31)	AWG 28 – AWG 32 (standard AWG 31)
Cable length	Customer specific (standard 240 mm)	Customer specific (standard 240 mm)	Customer specific (standard 240 mm)
Electrical connector (optional)	Customer specific	Customer specific	Customer specific

### Assembly

Material of attachment	ABS	ABS	Aluminum
Operating temperature range	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C
Total weight (without cable / connector)	2.8 g	3.5 g	6.7 g
Shock tested	1000 G half sine	1000 G half sine	1000 G half sine
Scope of delivery	Packed in shells of 5 pcs.	Packed in shells of 5 pcs.	Packed in shells of 5 pcs.
IMT Power Light platform consist of	Reticle glass body, illumination unit, cable and optional an electrical connector		
Assembly / Operation	The prism of the IMT Power Light must not be covered. Front and rear of reticle glass body and as well the prism must be operated in air/gas with refractive index $\approx 1$ .		
Angular reference	Optionally, the IMT Power Light is available with an additional flattening on the circumference of the glass body to have an angular reference on the round reticle.		