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DigIR CAMERA

The DigIR offers significantly higher infrared sensitivity compared to conventional cameras. This performance is achieved through an optimized photodiode design, which features an enhanced surface area and depth, combined with proprietary microlenses on each diode to maximize light capture and focus.

This advanced design delivers a higher saturation signal, reduced smear and noise, and improved quantum efficiency, particularly in low-light conditions. Additionally, its automatic contrast control system enhances contrast by up to 20 times, ensuring optimal performance across a wide range of illumination settings.

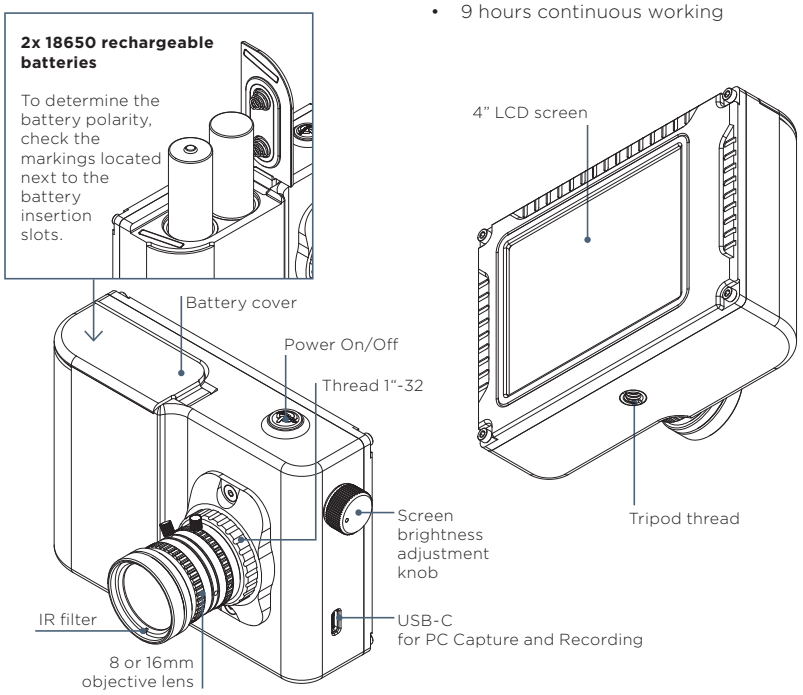
APPLICATIONS:

- Location and alignment of Nd:YAG Yb:YAG, Yb:KGW, Ti:Sapphire and other IR lasers
- Identification of stray IR reflections
- Observation of GaAs laser diodes, IR LEDs, dye and other IR-sources
- Forensic analysis of inks, pigments

MAIN FEATURES:

- Built-in 4" LCD screen
- Operates up to 1900 nm
- High contrast and sensitivity(-70dB)
- USB Video Output for PC Capture and Recording
- Compatible with C-mount lenses
- Detects pulsed and continuous wave (CW) light
- Hands-free operation
- 9 hours continuous working

RoHs
CE



TECHNICAL INFORMATION

	MODEL (1X)	MODEL (2X)
Spectral sensitivity	400**-1900 nm	
Power densities for effective viewing:	5 mW/cm² at 1310nm 10 mW/cm² at 1500nm 200 mW/cm² at 1900nm	
Resolution (center)	30 Lp/mm	
Field of view	38°	19°
Magnification	1X	2X
Objective filter thread	F1.3/8mm M25.5x0.5	F1.4/16 mm M27x0.5
Objective thread	C-Mount 1"-32 UN	
Adjustable iris	Included	
MOD	0.1m to ∞ *	0.5m (0.15m) to ∞ *
Distortion of image	0.5%	
LCD Display	4" LCD	
Video interface	USB - C	
Battery	2 x 18650 batteries // Continuous operation for up to 9 hours	
Weight	0.64 kg	
Dimensions	134 x 90 x 42 mm	
Tripod thread	¼"-20 UNC	

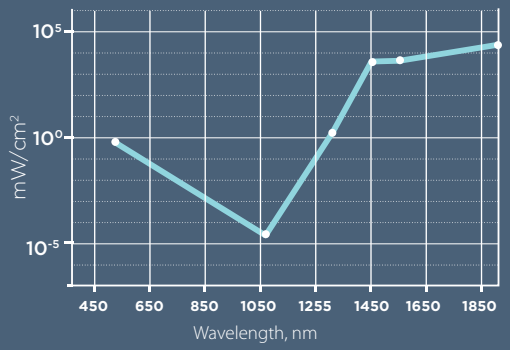
* Minimum object distance (MOD) can be customized upon request.
** sensitivity from 400nm only upon request, standard 670 nm.

Lenses 1X (F1.3/8 mm) and 2X (F1.4/16 mm) are exchangeable.

NB! ***Use only for laser beam alignment and observation of the beam from surfaces and not for direct light pointing to sensor.***

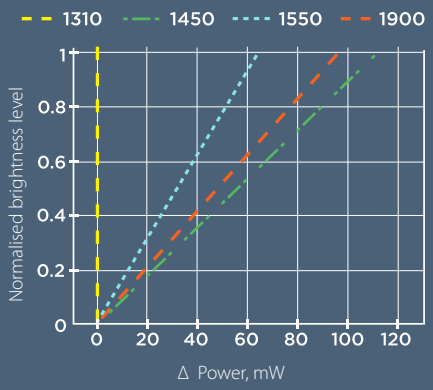
Minimal Power density

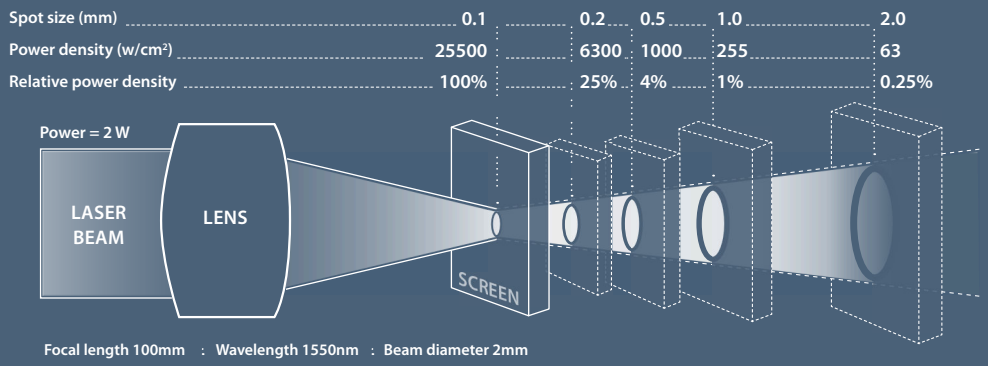
Threshold power density dependance on wavelength. The threshold power density is defined by measuring a laser beam spot on a paper, which exhibits 20% of the overall brightness (calculated as 255 × 20% = 51), in contrast to the background. The measurements were taken with the camera positioned 1.15 meters away from the piece of paper.



Brightness levels

Normalised brightness dependence on power difference from the minimum value. The power level of 0 signifies the theoretical minimal value at which the laser beam spot becomes observable on a piece of paper. Note: camera sensitivity to laser light decreases at 1450 nm compared to 1550 nm and 1900 nm.





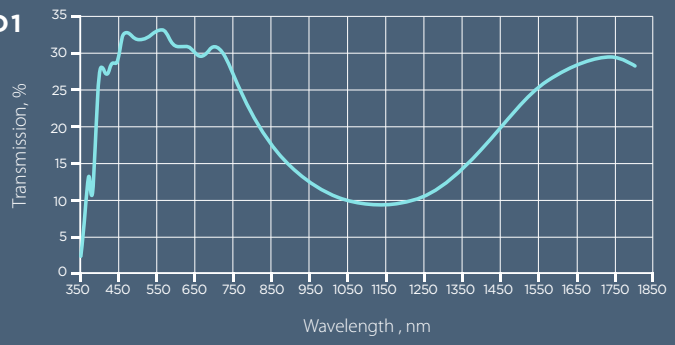
Approximate minimum power density required to observe an infrared laser source from a distance of one meter:

20 µW/cm² for a 1060 nm

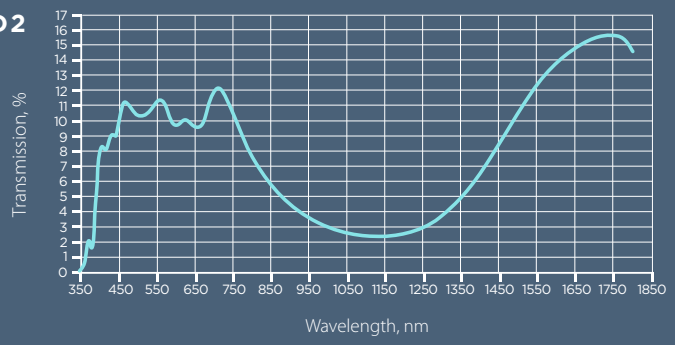
500 µW/cm² for a 1300 nm

Neutral density filters transmission curves

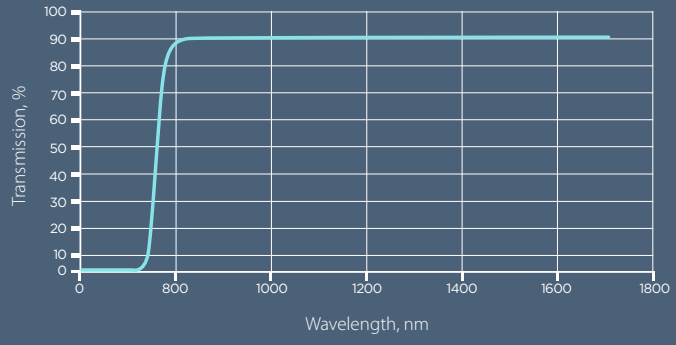
OD1



OD2

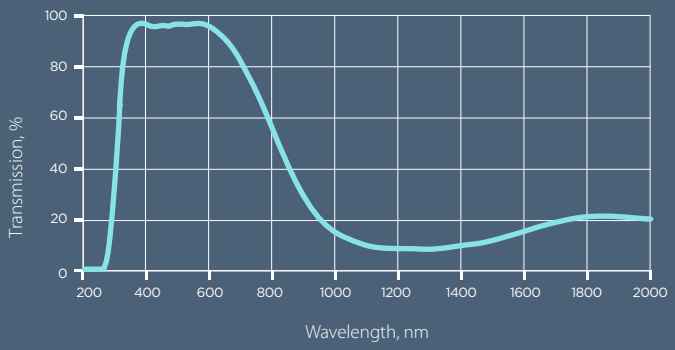


LP760 Filter



For optional use at higher than about 200 mW lasers (@1064nm) (does vary with wavelength, refer to spectral sensitivity curve), you may consider using following filters to avoid sensor overfilling („light flooding") issues and still ensure high visibility of your surroundings as the filter maintains high transmittance in the visible region compared to regular neutral density filters.

BP 39 Filter



BP 212 Filter