irvi infrared viewers

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MiniC camera

The MiniC camera captures radiation within the 400–1900 nm spectral range, enabling detailed observation, registration, and recording in the near-infrared zone. It is ideal for infrared microscopy, luminescence studies, document analysis, forensics, art restoration (infrared reflectography), and instrument alignment applications. Equipped with a SONY sensor optimized for IR sensitivity, the camera features microlenses on photocells to enhance photon absorption and amplify pixel performance. The camera connects via USB-C and operates in a plug-and-play mode, compatible with Linux and Windows systems using universal drivers.

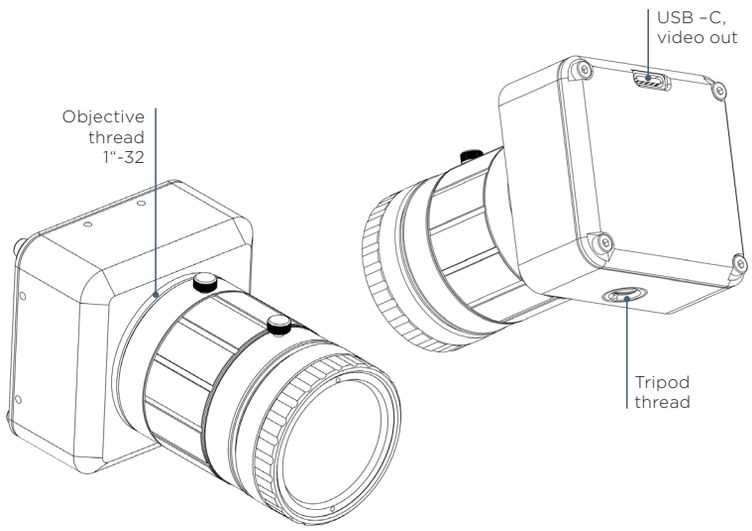
RoHs
CE

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 LED's, dye and other IR-sources
- Forensic analysis on inks, pigments

MAIN FEATURES:

- Operates up to 1900 nm
- High contrast and sensitivity
- Recording and snapshot capabilities
- USB-C connectivity
- Compatible with C-mount lenses
- Detects pulsed and continuous wave (CW) light



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 tread	F1.3/8mm M25.5x0.5	F1.4/16 mm M27x0.5
Objective thread	C-Mount 1"-32 UN	
Adjustable iris	Included	
Minimum object distance	0.1m to ∞ *	0.5m (0.15m) to ∞ *
Distortion of image	0.5%	
Video interface	USB - C	
Weight	0.11 kg	
Dimensions	45 x 45 x 27,5 mm	
Tripod thread	¼"-20 UNC	

* - MOD can be customized upon request

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.***

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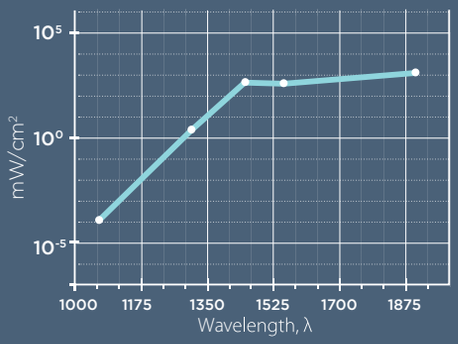
Power density

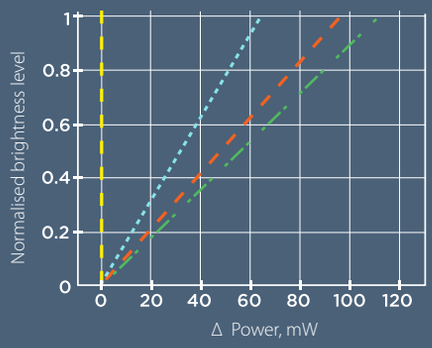
Threshold power density dependance on wavelength. The threshold power density is defined by measuring a laser beam spot on a paper, which exhibits 20% of the overall brightness (calculated as 255 × 20% = 51), in contrast to the background. The measurements were taken with the camera positioned 1.15 meters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

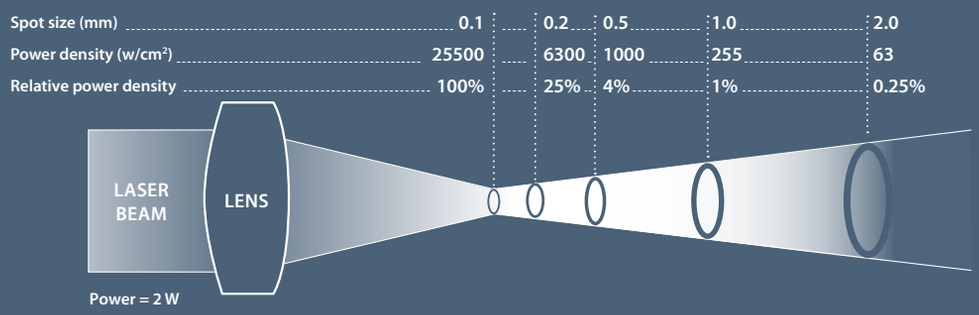


Brightness levels

1310 1450 1550 1900

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. It's worth noting that the camera exhibits lower sensitivity to laser light at 1450nm compared to 1550nm or even 1900nm.





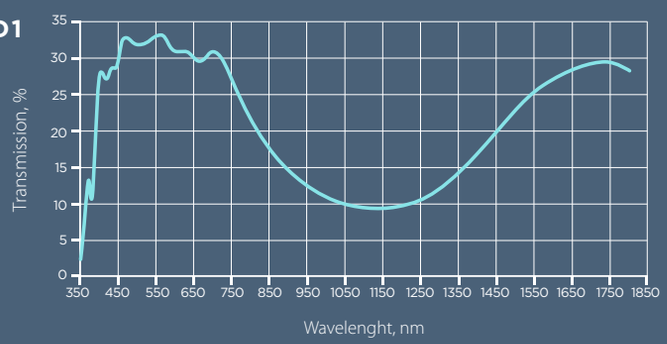
Approximate minimum power density required to observe an infrared laser source from a distance of one meter:

20 µW/cm² for a 1060 nm

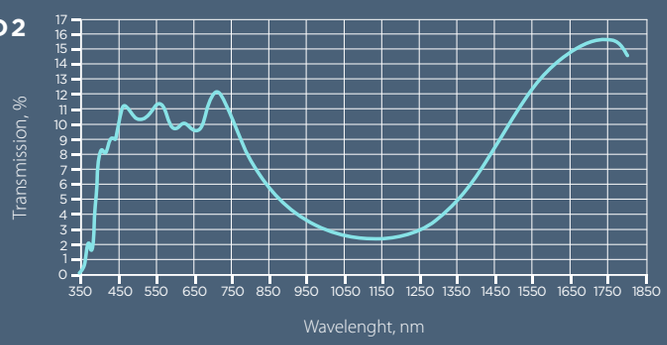
500 µW/cm² for a 1300 nm

Neutral density filters transmission curves

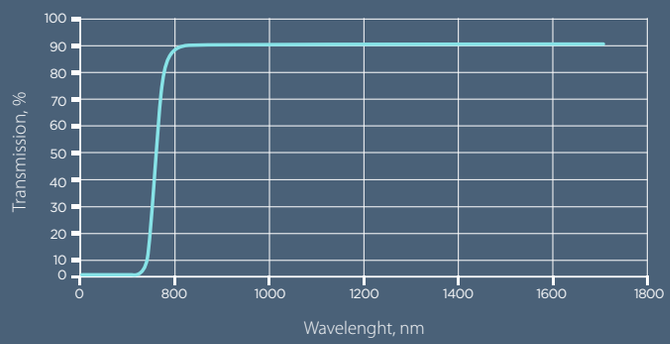
OD1



OD2

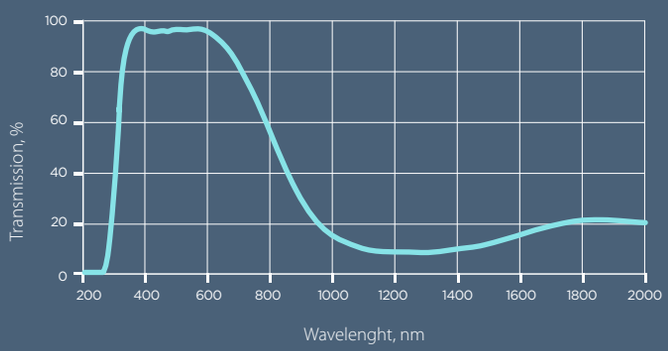


80 LP760 Filter



For optional use at higher than about 200 mW lasers (@1064nm) (does vary with wavelenght, 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
Internal Transmittance 1 mm Thickness



BP 212 Filter
Internal Transmittance 2 mm Thickness