

FoldIR 30-450mm f/3.4 Folded-Optics Cont. Zoom Lens*

Designed for MWIR 10 μ m SXGA (PN 680465)

NEW

mks | ophir®

The folded optical design of the FoldIR 30- 450mm f/3.4 continuous zoom lens significantly shrinks the lens' size, and reduces the overall volume of the integrated system. This folded design allows for long optical lengths, which produce a reduced sensitivity to tolerances in compact configurations. In addition, the innovative optical and mechanical design allows , and enables near diffraction-limit performance in harsh environments, addressing challenges such as line-of-sight (LOS) stabilization and athermalization.

The unique aperture of f/3.4 ensures the highest diffraction limit MTF and IR signal collected by the lens, providing superior image quality in comparison to other larger aperture continuous zoom lenses.

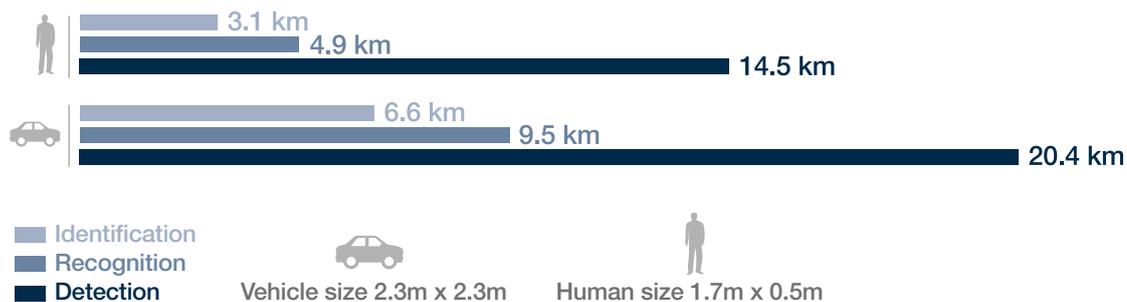
A built-in mechanical shutter enables NUC to be controlled by the lens with Ophir's unique control system, resulting in optimized image quality.

With the unrivalled combination of compact form-factor, a detection range exceeding 20km, and crisp, clear images, this lens is ideal for advanced unmanned aerial systems IR cameras.



KEY PRODUCT FEATURES

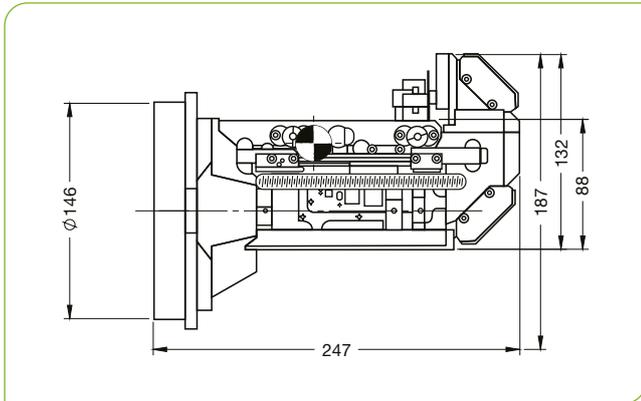
- Efficient folded optics design for max. volume use
- Physical shutter for mechanical NUC performance
- Designed for MWIR 10 μ m SXGA sensors
- Ideal for small size aerial gimbals
- Detection range exceeds 20km*



Assumptions: 30Hz frame rate | 0.2km⁻¹ atmospheric attenuation coefficient | 50% detection probability

*Requires export license

TYPICAL ICD



WFOV

HFOV	640x480	1280x1024
15μ	19.3°	
10μ	12.5°	26.9°

NFOV

HFOV	640x480	1280x1024
15μ	1.3°	
10μ	0.8°	1.7°

Property	Value	
Optical	WFOV	NFOV
Focal Length	30mm	450mm
F#	3.4	
Average transmission (3.4-4.2μm)	80% (HC)	
Cold stop to FPA Distance	19.4mm	
Cold Stop CA	Ø5.7mm	
Minimum Focusing Range	20m	50m
Nuc (by defocus)	Yes	
Mechanical		
Focus Mechanism	Motorized	
Focus Time (minimum range to ∞)	<1sec	
Zoom Time (NFOV to WFOV)	<5sec	
Max. Dimensions	Ø146 x 247mm	
Weight	2kg	
Electrical		
Lens Control	Designated lens controller	
Supply Voltage	12V	
Current Consumption	<0.5A average, 1.0A peak	
Communication Protocol	RS422, RS232	
Environmental		
Operation Temperature	-20°C to +55°C	
Storage Temperature	-40°C to +70°C	
Sealing	IP67 front element only	
Configurations		
680465-001	High durability	
680465-002	Hard carbon	

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