

LightIR 10-135mm f/3.6

The Smallest and Lightest Continuous Zoom Lens
Designed for MWIR 10µm VGA Detectors
PN 680451

NEW

mks | ophir®

The Ophir LightIR 10-135mm MWIR f/3.6 continuous zoom lens is a compact thermal imaging lens, optimized for 10µm pitch VGA FPA (focal plane array) detectors. It weighs only 250gr, which makes it 20% lighter than existing similar lenses.

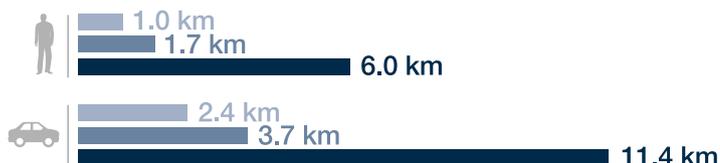
Its compact optic design significantly decreases the length and weight of the lens, and therefore, the overall size and weight of the optical system in which it is incorporated.

With its unparalleled combination of SWaP capabilities, detection range exceeding 11km, rugged design and a specialty coating to withstand harsh, humid and salty environments, the LightIR 10-135mm f/3.6 continuous zoom lens is an enabler for advanced drone, tactical UAV IR cameras, and micro/mini tactical payloads in the commercial, homeland security, and defense markets.

KEY PRODUCT FEATURES



- Lightweight, 250gr
- Detection range exceeds 11km
- Efficient compact optics design for max. volume use
- Designed for MWIR 10µm pitch VGA detectors
- Designed to withstand harsh environmental conditions
- Ideal for mini/micro tactical payloads



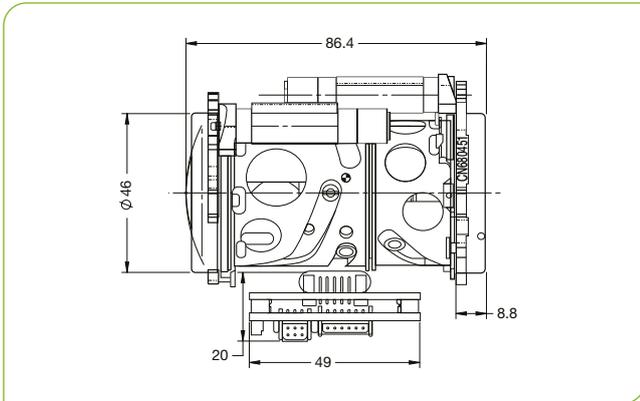
■ Identification
■ Recognition
■ Detection

Vehicle size 2.3m x 2.3m

Human size 1.7m X 0.5m

Assumptions: 30Hz frame rate | 0.2km⁻¹ atmospheric attenuation coefficient | 32mK NETD

TYPICAL ICD



WFOV (10mm)

HFOV	640x512
10μ	37.0°

NFOV (135mm)

HFOV	640x512
10μ	2.67°

Property	Value	
Optical	WFOV	NFOV
Focal Length	10mm	135mm
F#	3.6	
Average transmission (3.4-4.2μm)	>87% (HD) / ≥80% HC	
Cold stop to FPA Distance	12mm	
Cold Stop CA	Ø12mm	
Back Focal Length	≥17mm in air	
Distortion in diagonal	2.5%	2%
Minimum Focusing Range	5m	50m
Nuc (by defocus)	Blur to 7mm diameter	
Mechanical		
Focus Mechanism	Motorized. Adjustable	
Focus Time (minimum range to ∞)	<1 sec.	
Zoom Time (NFOV to WFOV)	<4 sec.	
Max. Dimensions	Ø46x86.4mm	
Weight	250gr	
Electrical		
Lens Control	Designated lens controller	
Drive Voltage	6-12VDC	
Current Consumption	< 0.5A average, 1.0A peak	
Communication Protocol	RS422	
Environmental		
Operation Temperature	-32°C to +75°C	
Storage Temperature	-54°C to +85°C	
Sealing	IP67 front lens only	
Configurations		
680451-001	High Durability	
680451-002	Hard Carbon	

