# SupIR 10-135mm f/1.8

**MWIR cont. zoom lens for next-gen cooled MWIR 5µm SXGA detectors (PN 680540)**

NEW

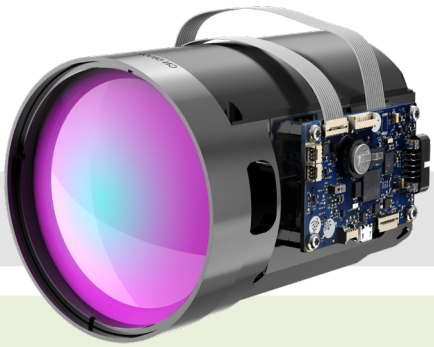
mks | Ophir

The SupIR 10-135mm f/1.8 is the first zoom lens designed specifically for next-generation cooled MWIR detectors with a 5µm pixel pitch, delivering unparalleled image clarity, detection range, and integration flexibility.

As cooled infrared technology advances, systems require optics that can fully harness higher-resolution sensors while maintaining a compact footprint. This lens bridges the gap between performance and portability, bringing a high-performance, long-range zoom capability previously unavailable for cooled infrared systems.

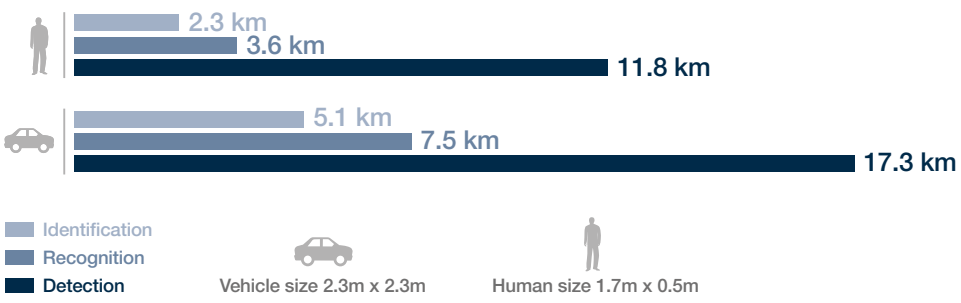
Optimized for 1280×1024 SXGA cooled detectors, the SupIR 10-135mm f/1.8 lens enables precise target acquisition, extended-range surveillance, and superior thermal imaging across defense, security, industrial, and aerospace applications. Its combination of extended focal range, high modulation transfer function (MTF), and environmental durability ensures mission-critical performance even in extreme operating conditions. Designed for UAVs, UCV, RCWS and mobile surveillance platforms, it provides unmatched flexibility for tactical and autonomous thermal imaging systems.

By setting a new benchmark for cooled MWIR zoom optics, the SupIR 10-135mm f/1.8 lens delivers enhanced situational awareness, increased detection capabilities, and a compact integration footprint, making it the preferred choice for OEMs, electro-optics and camera integrators, as well as system developers seeking a next-generation infrared imaging solution.



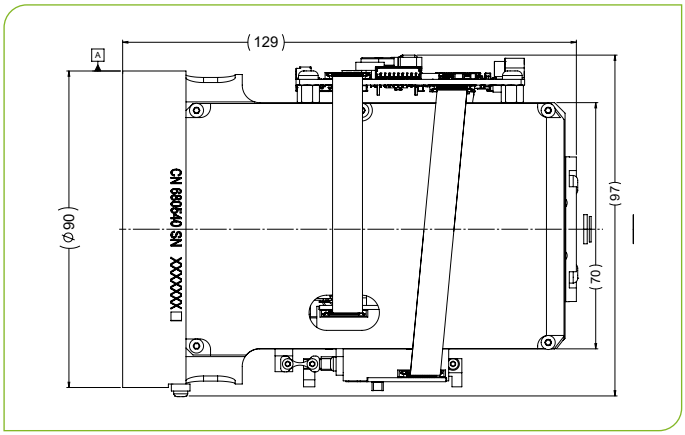
## KEY PRODUCT FEATURES

- Optimized for 1280x1024 resolution, 5µm pixel pitch MWIR cooled detectors
- Detection range exceeding 17km, NATO vehicle detection
- Continuous zoom lens with 14x zoom ratio
- High Modulation Transfer Function (MTF) maximizing image clarity for long-range target detection and thermal contrast enhancement.
- High-durability coatings for abrasion, humidity, and thermal stability in extreme environments
- Athermalized optical design maintaining consistent focus and image stability across wide temperature ranges.




*Note: Assumptions: Calculations are based on Johnson Criteria | real world performance may vary depending on weather conditions | FLIR92 model | detector MWIR cooled 5µm pixel pitch | 49mK NETD at f/1.8 | 30Hz frame rate | 0.2km$^{-1}$ atmospheric attenuation coefficient | 50% detection probability | Johnson Criteria for DRI: Detection – 1 spatial cycle on target; Recognition – 4 spatial cycles on target; Identification – 6.4 spatial cycles on target | 5°C human size and ΔT; 2°C vehicle size and ΔT

TYPICAL ICD




### WFOV (10mm)

| HFOV | 1280x1024 |
|---|---|
| 5µ | 2.67° |

### NFOV (135mm)

| HFOV | 1280x1024 |
|---|---|
| 5µ | 37.7° |

| Property | Value | |
|---|---|---|
| **Optical** | WFOV | NFOV |
| Focal Length | 10mm | 135mm |
| F# | 1.8 | |
| Average transmission (3.6-4.9µm) | >82% (HD) / ≥80% (HC) | |
| Cold Stop to FPA Distance | 12mm | |
| Back Focal Length | 21mm in air | |
| Minimum Focusing Range | 5m | 50m |
| NUC (by defocus) | Yes | |
| **Mechanical** | | |
| Focus Mechanism | Motorized. Adjustable | |
| Focus Time (minimum range to ∞) | ≤1sec. | |
| Zoom Mechanism | Motorized | |
| Zoom Time (NFOV to WFOV) | ≤5 sec. | |
| Max. Dimensions | Ø90mm x 129mm | |
| Weight | 780gr | |
| **Electrical** | | |
| Lens Control | Designated lens controller | |
| Drive voltage | 12VDC | |
| Communication Protocol | RS485; RS232 | |
| **Environmental** | | |
| Operation Temperature | -32ºC to +70ºC | |
| Storage Temperature | -40ºC to +80ºC | |
| Sealing | IP67 front element only | |
| **Configurations** | | |
| 680540-001 | High Durability | |
| 680540-002 | Hard Carbon | |

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SupIR 10-135mm f/1.8 datasheet_03/25