

MWIR Continuous zoom – Commercial off the shelf lens

NEPTUNE

MWIR 40-1000mm F/4.0 Continuous zoom Lens
for 1280 x 1024 x 10 μ HD cooled detectors



FEATURES / APPLICATIONS / CAPABILITIES

- X25 optical zoom lens for HD 10 μ sensors
- Focus is maintained through the entire zoom range providing extremely fast zoom and focus response
- Actively Athermalized to maintain focus to infinity through temperature changes

| | HFOV for Wide (40mm) | | | | HFOV for Narrow (1000mm) | | | |
|-----|----------------------|----------|-----------|-------------|--------------------------|----------|-----------|-------------|
| | 640x512 | 1024x768 | 1280x1024 | IFOV (mrad) | 640x512 | 1024x768 | 1280x1024 | IFOV (mrad) |
| 10u | 9.15° | 14.6° | 18.1° | 0.014 | 0.4° | 0.6° | 0.73° | 0.0057 |
| 12u | 10.9° | | | 0.017 | 0.44° | | | 0.0069 |
| 15u | 13.7° | | | 0.021 | 0.55° | | | 0.0086 |
| 16u | 14.6° | | | 0.023 | 0.6° | | | 0.0092 |

| PARAMETER | | VALUE | NOTES |
|-----------|-----|-------|-------|
| Main | Sub | | |

| OPTICAL | | | |
|---|-----------------------|---|-------------------------------|
| Focal Length / F# | | 40-1000mm F/4.0 | |
| Detector (FPA) type / size | | Up to 1,280 x 1,024 x 10 μ | |
| Working Spectral Range | | 3.6 – 4.8 μ | |
| Optical Coatings | All internal surfaces | High Efficiency AR coating | |
| | Front surface | High Durability AR coating | DLC is available upon request |
| CSH | | 19-22mm | |
| MECHANICAL | | | |
| Focus / Zoom mechanism | | Motorized | |
| Focus Range | | 30m / 250m – Infinity | For WOFV / NFOV accordingly |
| Through zoom boresight | | \leq 0.15mm radius at the focal plane | |
| NFOV boresight retention | | \leq 0.045 mm at the focal plane | |
| Total Weight | | 8 kg | |
| Ext. Dimensions \varnothing x length (mm) | | 285 x 300 | |
| ELECTRICAL | | | |
| Power Input | | 12VDC, 3.0A | |
| Communication Protocol | | RS-422/232 Full Duplex | |
| ENVIRONMENTAL | | | |
| Operating / Storage Temperature | | -25°C to +55°C / -40°C to +70°C | |
| Shock and Vibrations | | Per applicable standard | |
| Front lens sealing | | IP66 | IP67 By request |

*All values are nominal: to within \pm 5%

