## MWIR Continuous zoom – commercial off the shelf lens

## NEPTUNE

MWIR 40 - 1000mm F/4.0 Continuous zoom Lens for 10µ HD sensors

## FEATURES / APPLICATIONS / CAPABILITIES

- X25 optical zoom lens for HD  $10\mu$  sensors
- Compatible with F#4.0 detectors
- 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

| PARAMETER                       |                       | VALUE  | NOTES                                 |
|---------------------------------|-----------------------|--|---------------------------------------|
| Main                            | Sub                   |  |                                       |
| OPTICAL                         |                       |  |                                       |
| Focal Length / F#               |                       | 40 - 1000 mm / F 4.0   |                                       |
| Detector (FPA) type / size      |                       | For 1,280 x 1,024 x 10µ F/4.0 cooled detectors with 19-20.5 mm cold stop |                                       |
| Working Spectral Range          |                       | 3 – 5µ   |                                       |
| FOV Horizontal (degrees)        |                       | 19° x 0.75°  | All values to within ±5%              |
| Optical<br>Coatings             | All internal surfaces | High Efficiency AR coating   | Average transmission: 70%             |
|                                 | Front surface         | High Durability AR coating   | DLC is available upon request         |
| Optical Total lens track        |                       | 325 mm   | Nominal                               |
| Ø MECHANICAL                    |                       |  |                                       |
| Mechanical Back Focal Length    |                       | 24 mm  | Nominal                               |
| Mechanical air gap to detector  |                       | 3 mm   | Optional motorized NUC flag (shutter) |
| cover glass                     |                       |  |                                       |
| Zoom / Focus mechanism          |                       | Motorized  |                                       |
|                                 |                       | 30 m to ∞ for Wide   |                                       |
| Focus Range                     |                       | 250 m to ∞ for Narrow  |                                       |
| Thru zoom boresight             |                       | ≤ 0.15mm radius at the focal plane                                       |                                       |
| NFOV boresight retention        |                       | ≤ 0.04 mm at the focal plane   |                                       |
| Total Weight                    |                       | Approx 8 kg  |                                       |
| Ext. Dimensions ø x length (mm) |                       | 285 x 300 (Please refer to MICD for details)                             |                                       |
| P ELECTRICAL                    |                       |  |                                       |
| Power Input                     |                       | 12VDC, 3.0A  | Nominal                               |
| Communication Protocol          |                       | RS-422 or 232  |                                       |
| C 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                       |

