

## MWIR Continuous zoom – Commercial off the shelf lens

# MERCURY SERIES

MWIR 15-330mm, 18-430mm, 18 – 330 mm F/4.0  
 High Accuracy Continuous Zoom Lens series  
 for up to 640 x 512 x 15μ cooled detectors



### FEATURES / APPLICATIONS / CAPABILITIES

- Special lens for low boresight and retention error
- Rugged and robust built for harsh environmental conditions
- Available with different types of front Beam Expander (x1.5, x2, x2.5)

|     | HFOV for Wide |       |         |       | HFOV for Narrow |        |         |        |
|-----|---------------|-------|---------|-------|-----------------|--------|---------|--------|
|     | 15mm          |       | 18mm    |       | 330mm           |        | 430mm   |        |
|     | 640x512       | IFOV  | 640x512 | IFOV  | 640x512         | IFOV   | 640x512 | IFOV   |
| 10u | 24.1°         | 0.038 | 20.1°   | 0.032 | 1.11°           | 0.0017 | 0.85°   | 0.0013 |
| 12u | 28.7°         | 0.046 | 24.1°   | 0.038 | 1.33°           | 0.0021 | 1.05°   | 0.0016 |
| 15u | 35.4°         | 0.057 | 29.8°   | 0.048 | 1.7°            | 0.0026 | 1.3°    | 0.002  |

\*IFOV is indicated in mrad

| PARAMETER                       |                       | VALUE  |
|---------------------------------|-----------------------|--|
| Main                            | Sub                   |  |
| <b>OPTICAL</b>                  |                       |  |
|                                 |                       | <b>MERCURY O      MERCURY I      MERCURY D</b>                           |
| Focal Length / F#               |                       | 15-330mm F/4.0      18-330mm F/4.0      18-430mm F/5.5                   |
| Detector (FPA) type / size      |                       | Up to 640 x 512 x 15μ  |
| Working Spectral Range          |                       | 3 – 5μ   |
| Optical Coatings                | All internal surfaces | High efficiency AR coating   |
|                                 | Front surface         | HDAR coating (please note: DLC is available upon request)                |
| CSH                             |                       | 19-22mm  |
| <b>MECHANICAL</b>               |                       |  |
| Focus / Zoom mechanism          |                       | Motorized  |
| Through zoom boresight          |                       | ≤0.075 mm radius at the focal plane                                      |
| NFOV boresight retention        |                       | ≤0.03 mm radius at the focal plane                                       |
| Focus Range                     |                       | 10m / 50m - Infinity      10m / 100m - Infinity      1m / 30m - Infinity |
| Total Weight                    |                       | 945gr      940gr      930gr  |
| Ext. Dimensions ø x length (mm) |                       | 96 x 127.65      96 x 131.45      96 x 124.82                            |
| <b>ELECTRICAL</b>               |                       |  |
| Power Input                     |                       | 12VDC, 1.0 A   |
| Communication Protocol          |                       | RS-422/232 Full Duplex   |
| <b>ENVIRONMENTAL</b>            |                       |  |
| Operating / Storage Temperature |                       | -25°C to +55°C / -40°C to +70°C  |
| Shock and Vibrations            |                       | Per applicable standard  |
| Front lens sealing              |                       | IP67   |

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

