

# MWIR HD Continuous Zoom – Commercial off the shelf lens

## PARAGON

MWIR 22-480mm F/4.7 Continuous zoom Lens  
for HD 1280 x 1024 x 15 $\mu$  cooled detectors

### Features:

- Supports FHD 10 $\mu$  detectors and sensors with up to 24.59mm diagonal
- Highest resolution performance over entire zoom range
- Rugged design to comply with different applications
- X21 optical zoom

| HFOV for Wide (22mm) |         |           |             | HFOV for Narrow (480mm) |         |           |             |        |
|----------------------|---------|-----------|-------------|-------------------------|---------|-----------|-------------|--------|
|                      | 640x512 | 1280x1024 | 1920 x 1536 | IFOV                    | 640x512 | 1280x1024 | 1920 x 1536 | IFOV   |
| 10u                  | 16.5°   | 32.4°     | 47.1°       | 0.026                   | 0.8°    | 1.55°     | 2.3°        | 0.0012 |
| 12u                  | 19.8°   | 38.5°     |             | 0.031                   | 0.92°   | 1.85°     |             | 0.0014 |
| 15u                  | 24.6°   | 47.1°     |             | 0.039                   | 1.15°   | 2.3°      |             | 0.0018 |

| Optical                              |   |
|--------------------------------------|---|
| Focal Length / F#                    | 22-480 mm / F4.7  |
| Detector (FPA) type / size           | Up to 1280 x 1024 x 15 $\mu$                                    |
| Working Spectral Range               | 3 – 5 $\mu$   |
| Optical Coatings                     | All internal surfaces High efficiency AR coating                |
|                                      | Front surface High Durability AR DLC is optional                |
| CSH                                  | 28 $\pm$ 1mm  |
| Mechanical                           |   |
| Focus / Zoom mechanism               | Motorized   |
| Through zoom boresight               | $\leq$ 0.15 mm radius at the focal plane                        |
| NFOV boresight retention             | $\leq$ 0.075 mm radius at the focal plane                       |
| Focus Range                          | WFOV 20mm infinity NFOV 100mm infinity                          |
| Total Weight                         | 1.5Kg   |
| Ext. Dimensions $\phi$ x length (mm) | 120 x 225   |
| Electrical                           |   |
| Power Input                          | 12VDC, 3.0 A  |
| Communication Protocol               | RS-422/232 Full Duplex  |
| Environmental                        |   |
| Operating / Storage Temperature      | -25 $\circ$ C to +55 $\circ$ C / -40 $\circ$ C to +70 $\circ$ C |
| Shock and Vibrations                 | Per applicable standard   |
| Front lens sealing                   | IP66 (IP67 by request)  |

\*IFOV is indicated in mrad

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