

--- MWIR Continuous zoom

LRC3Z

MWIR Continuous zoom Long range
Cooled Thermal imaging camera

Technical Specification

LRC³Z is a continuous zoom, high performance thermal camera designed for long range surveillance and tracking in mobile systems or field installations, delivered in a ruggedized package and it is equipped with a high resolution, InSb, 640x512 pixels, 15µm pitch focal plane array operating in the 3-5µm waveband

The camera provides few **continuous zoom** lenses alternative both for F/4 as well as F/5.5 detector:

- F/4 alternatives: 15 – 330mm / 30 – 660mm / 36 – 725mm or 40– 825mm
- F/5.5 alternatives: 18 – 430mm / 36 – 860mm or 45-1075mm

The rugged enclosure is backfilled with dry nitrogen and environmentally sealed, eliminating the need for additional enclosures.

The RS-232/422 remote control capability permits ease of integration into any client-based security system.

RP Optical Lab provides leading-edge IR equipment to the security and surveillance sector. RP's proprietary optical designs, state-of-the-art laboratories, ensure maximum performance and dependability.

SYSTEM MAIN FEATURES:

- Motorized focus/zoom
- Continuous zoom
- Auto & Manual focus
- Focus maintained while zooming
- Unique zoom module with zero optical artifacts
- Optical NUC & 1 command "1 point NUC Calibration"
- Image enhancement including local DRC
- Remote control Capability
- Dry Nitrogen Backfilled
- Ruggedized construction
- Digital output option – Camera link



SYSTEM SPECIFICATIONS

| PARAMETER | VALUE | NOTES |
|------------------------------|---|---|
| SYSTEM | | |
| Video Format | NTSC or PAL | |
| Communication Protocol | RS-232/RS-422 Full Duplex | Baud rate 115,200 (other rates available) |
| Power Requirements | 14 – 32VDC, 35W | Average nominal power |
| Controls | Fully Remote controlled | |
| Electronic Zoom | X2 / X4 | |
| Focus control | Manual / Automatic | |
| Total Weight | C725, C825, D1075: ~14 Kg C660, D860: ~ 11.5Kg / C330, D430: ~10Kg | |
| External Dimensions (Ø x L) | C725, C825, D1075: ø230x460 mm C660, D860: ø220x430 mm / C330, D430: ø220x400 mm | |
| Mount / Mechanical Interface | Please refer to Mechanical ICD | Customized interfacing - available |
| Operating / Storage Temp | -32°C to +65°C / -40°C to +71°C | |
| Shock and Vibrations | Per MIL-STD-810E | |
| Sealing | As per IP65 | IP66/IP67 available on request |

SENSOR

| | | |
|--------------|-----------------------------------|---------------------------------------|
| Detector FPA | InSb, 640x512 pixels, 15 um pitch | See ordering information below |
| Sensitivity | < 25mK | Please consult for better sensitivity |

OPTICAL

ORDERING INFORMATION

| F# | F/4 or F/5.5 | | NAME-X-Y | |
|------------------------|-------------------|---|--------------------|----------------------------|
| Spectral Range | 3 – 5 µm | | | |
| FOV (Deg.) | 15 – 330 mm lens | Wide FOV: 36.7°(H) x 29.3° (V) Narrow FOV: 1.67° (H) x 1.33° (V) | "X" - Video Output | |
| ODEM (base lens) | 30 – 660 mm lens | Wide FOV: 18.2°(H) x 14.6° (V) Narrow FOV: 0.9° (H) x 0.7° (V) | P | PAL |
| | 36 – 725 mm lens | Wide FOV: 15.2°(H) x 12.2° (V) Narrow FOV: 0.77° (H) x 0.61° (V) | N | NTSC |
| DIAMOND (base lens) | 40 – 825 mm lens | Wide FOV: 14.4°(H) x 11.5° (V) Narrow FOV: 0.65° (H) x 0.5° (V) | "Y" - Optics | |
| | 18 – 430 mm lens | Wide FOV: 29.8°(H) x 24° (V) Narrow FOV: 1.3° (H) x 1° (V) | D430 | Continuous 18 – 430 F/5.5 |
| | 36 – 860 mm lens | Wide FOV: 15.2°(H) x 12.2° (V) Narrow FOV: 0.57° (H) x 0.46° (V) | D860 | Continuous 36 – 860 F/5.5 |
| Focus / Zoom mechanism | 45 – 1075 mm lens | Wide FOV: 12.2°(H) x 9.75° (V) Narrow FOV: 0.5° (H) x 0.4° (V) | D1075 | Continuous 45 – 1075 F/5.5 |
| | | Motorized, remotely controlled | C330 | Continuous 15 – 330 F/4 |
| | | | C660 | Continuous 30 – 660 F/4 |
| | | | C725 | Continuous 36 – 725 F/4 |
| | | | C825 | Continuous 40 – 825 F/4 |

| Lens Model | C330 | | C660 | | C725 | | C825 | | D430 | | D860 | | D1075 | |
|----------------|------------|------|------------|------|------------|------|------------|------|------------|------|------------|------|------------|------|
| | Range (Km) | | Range (Km) | | Range (Km) | | Range (Km) | | Range (Km) | | Range (Km) | | Range (Km) | |
| Target | Human | NATO | Human | NATO | Human | NATO | Human | NATO | Human | NATO | Human | NATO | Human | NATO |
| Detection | 11 | 18.1 | 14.7 | 19.6 | 15.7 | 20.4 | 16.5 | 21.1 | 13.1 | 19.1 | 16.4 | 21 | 17.1 | 21.5 |
| Recognition | 3.6 | 7.5 | 6.3 | 11.1 | 7.5 | 13 | 8.5 | 14.5 | 4.6 | 9.0 | 8.2 | 13.5 | 9.1 | 14.5 |
| Identification | 1.7 | 4.2 | 3.0 | 7.5 | 4 | 8.9 | 4.7 | 9.9 | 2.3 | 5.5 | 4.7 | 9.1 | 5.3 | 9.9 |

