

--- MWIR Continuous zoom

LRC3Z - Compact

Compact 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

RP proposes a compact version for its 330mm F/4 & 435mm F/5.5 Continuous zoom lens front covered and sealed with a DLC coated window.

Also available in “open frame” configuration – without enclosure & front window.

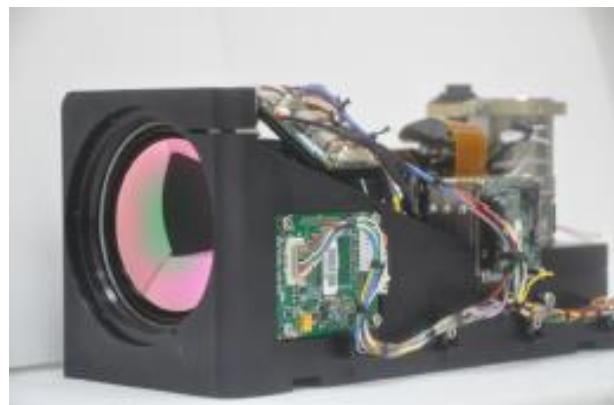
The rugged enclosure is backfilled with dry nitrogen and environmentally sealed, eliminating the need for additional enclosures.

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 FEATUTES:

- 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



**Open frame configuration (no enclosure)*



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	~7.5 Kg			
External Dimensions	340mm (Length) x 140mm (Width) x 140mm (Height) excluding connectors.			
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		
Cooler life time MTBF	8,000 hrs for standard cooler	18,000 hrs for long life cooler.		
Detector cooling time	< 7 minutes			
👁️ OPTICAL		🛒 ORDERING INFORMATION		
F#	F/4 or F/5.5	NAME-X-YYYY		
Spectral Range	3 – 5 μm			
Zoom / Focus readout	Zoom and focus position values are transmitted over the RS422 control communication bus.	“X” - Video Output		
Zoom position repeatability	To within ± 2%	P N		
Thru zoom boresight (from NFOV to WFOV and from WFOV to NFOV)	Better than 1mRad	PAL NTSC		
Boresight Retention accuracy	Better than 0.2mRad.	C330		
ODEM 15 – 330mm lens	WFOV: 35.4°(H) x 27.0°(V) (±10%)	Continuous 15 – 330 F/4		
	NFOV: 1.67°(H) x 1.33°(V) (±10%)			
DIAMOND 18 – 435mm F/5.5	WFOV: 29.8°(H) x 24.0°(V) (±10%)	D435		
	NFOV: 1.3°(H) x 1 °(V) (±10%)	Continuous 18 – 435 F/5.5		
Focus / Zoom mechanism	Motorized, remotely controlled			
RANGE PERFORMANCE				
Lens Model	C330		D435	
	Range (Km)		Range (Km)	
Target	Human	NATO	Human	NATO
Detection	11	18.1	13.1	19.1
Recognition	3.6	7.5	4.6	9.0
Identification	1.7	4.2	2.3	5.5

