

--- LWIR A-Thermal – commercial off the shelf lens

RP-042A

LWIR 4.2 mm Ultra Wide FOV
A-Thermal Lens



FEATURES / APPLICATIONS / CAPABILITIES

- Widest FOV available for QVGA detectors
- Suitable for applications where single camera should cover large area
- A-Thermal design with excellent performance over the entire FOV
- Supports multiple detector types: 384 x 288 x 25μ pitch / 640 x 480 x 17μ pitch

PARAMETER		VALUE	NOTES
Main	Sub		

🔍 OPTICAL			
Focal Length / F#		4.2 mm / F1.1	Nominal values.
Detector (FPA) type / size		384 x 288 pixels x 25 microns 640 x 480 pixels x 17 microns	For 17 microns detector applications please inquire " RP-042A / 17 grade " lens
FOV (degrees)		FOV: 140°(H) x 97° (V)	For detector size of 9.6 x 7.2 mm (384 x 288 x 25μ)
		FOV: 152°(H) x 112° (V)	For detector size of 10.88 x 8.16 mm (640 x 480 x 17μ)
🔧 MECHANICAL			
Optical Coatings			
	All internal surfaces	High efficiency AR coating	Average transmission: 92%
	Front surface	High durability AR coating	DLC is available upon request
Optical Total lens track		48 mm	Nominal
Optical Back Focal Length		11 mm	Nominal
Mechanical Back Focal Length		9 mm	Nominal
Focus Range		0.5 - Infinity	
Total Weight		140 gram	Nominal
External Dimensions		Front Diameter: 45 mm; Rear Diameter: 85 mm Length: 39 mm	
🌡 ENVIRONMENTAL			
Operating Temperature		-30°C to +50°C	A-Thermal lens over 80°C span
Storage Temperature		-40°C to +70°C	
Shock and Vibrations		Per applicable standard	
Front lens sealing		IP67	By request

