

LWIR Dual FOV – Commercial off the shelf lens

BARKAT

LWIR 45/135mm F1.1/1.6 Dual FOV Lens
for 640 x 480 x 17 μ uncooled detectors



FEATURES / APPLICATIONS / CAPABILITIES

- Rugged design for demanding payloads
- Optimized for relatively short total track and low weight
- Supports detector types with up to 13.6mm diagonal

	HFOV for Wide (45mm)				HFOV for Narrow (135mm)			
	640x480	1024x768	1280x1024	IFOV (mrad)	640x480	1024x768	1280x1024	IFOV (mrad)
12u	10°			0.015	3.2°			0.0051
17u	14.3°			0.022	4.6°			0.0072

PARAMETER		VALUE	NOTES
Main	Sub		

OPTICAL			
Focal Length / F#		45/135 mm F1.1 / 1.6	
Detector (FPA) type / size		Up to 640 x 480 x 17 μ	
Working Spectral Range		8-12 μ	
Optical Coating	All internal surfaces	High efficiency AR coating	
	Front surface	DLC coating	HDAR is available upon request
MECHANICAL			
Mechanical Back Focal Length		9.25 (\pm 0.56) mm	Please refer to MICD for details
Focus / Zoom mechanism		Motorized	With single motor
Focus range		10m – Infinity	
NFOV boresight retention		\leq 0.045mm radius at the focal plane	
Total Weight		1.6Kg	
Structure		Sealed configuration	Open frame/ no bottom plate upon request
Ext. Dimensions L x W x H (mm)		142 x 99 x 110	Please refer to MICD for details
ELECTRICAL			
Power Input		12VDC, 1A	
Communication Protocol		RS-422/232 Full Duplex	
ENVIRONMENTAL			
Operating / Storage Temperature		-25°C to +55°C / -40°C to +70°C	
Shock and Vibrations		Per applicable standard	
Front lens sealing		IP66	IP67 By request

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

