

HYPERSPECTRAL FORE LENSES

SPECIM provides specifically designed, high quality fore lenses which are optimized to produce uniform, high performance images in the broad spectral ranges covered by hyperspectral imaging systems. All the lenses employ broadband AR coatings to minimized stray light and locked adjustments, to withstand harsh operating environments.

VNIR 400 - 1000 nm

OPTICAL CHARACTERISTICS					
Fore lens	OLE9	OLE17	OLE18.5	OLE23	OLE140
Focal length	9mm ¹⁾	17mm	18.5mm	23mm	140mm
Spectral range	Corrected for the full 400 - 1000nm range Multilayer AR -coated for 400 - 1000 nm				
Optical output	Telecentric				
Spatial image size	Max. 14.3mm				
Spatial resolution	rms spot radius <7.5µm				
Distortions	Spatial distortion ¹⁾	No distortions			
Numerical aperture	F/2.4 (fixed)				
Transmission	> 85%				
Minimum working distance	30cm (10 cm with extension ring)				
MECHANICAL CHARACTERISTICS					
Dimensions	(L) 49 x diam. 47mm	(L) 40 x diam. 53mm	(L) 48 diam. 53mm	(L) 43 x diam. 41mm	(L) 162 x diam. 65mm
Body	Anonized aluminium				
Mount	Standard C-mount				
NOTE:					
1)	In this wide field-of-view lens the pixel size on the target increases towards the edges of the field of view due to spatial distortion, and thus the effective focal length depends on the spatial image size (detector size) used. The spatial distortion can be calibrated and corrected in image processing.				



OLE9 fore lens



OLE18.5 fore lens



OLE23 fore lens

SWIR 900 - 2500 nm

OPTICAL CHARACTERISTICS				
Fore lens	OLES15	OLES22	OLES30	OLES56
Focal length	15mm	22.5mm	30.7mm	56mm
Spectral range	Corrected for the full 900 - 2500nm range Multilayer AR -coated for 900 - 2500 nm			
Optical output	Telecentric			
Spatial image size	Max. 12.8mm			
Spatial resolution	rms spot radius < 7.5µm			
Distortions	No distortions			
Numerical aperture	F/2.0 (fixed)			
Transmission	> 82%			
Minimum working distance	30cm (10 cm with extension ring)			
MECHANICAL CHARACTERISTICS				
Dimensions	(L) 60 x diam. 45 mm	(L) 48.5 x diam. 47mm	(L) 41.6 x diam. 53mm	(L) 84 x diam. 53mm
Body	Anonized aluminium			
Mount	Standard C-mount			



OLES22 fore lens



OLES30 fore lens

LWIR 8000 - 12000 nm - PRELIMINARY

OPTICAL CHARACTERISTICS	
Fore lens	OLEL16
Focal length	16.5mm
Spectral range	Corrected for the full 8000 - 12000 nm range AR -coated for 8000 - 12000 nm
Optical output	Telecentric
Spatial image size	Max. 13.4 mm (TBR)
Spatial resolution	rms spot radius < 100 µm (TBR)
Distortions	No distortions
Numerical aperture	F/2.2 (fixed)
Minimum working distance	30cm (10 cm optionally)
MECHANICAL CHARACTERISTICS	
Dimensions	(L) 30 x diam. 17 mm
Body	Stainless steel/anonized aluminium (TBR)
Mount	Standard C-mount



OLE30 and OLE23 fore lenses