

Infrared Lens Assemblies

- Molded lenses using Black Diamond™ chalcogenide glass
- Wavelength range 8 μm – 14 μm
- Passive athermalization for -40°C to +85°C
- High volume, cost effective manufacturing
- Designed for uncooled IR sensors

LightPath's Infrared Lens Assemblies are specifically designed to be a lower cost replacement for standard IR optical assemblies. These lens assemblies integrate our Black Diamond molded lenses into a complete ready-to-use package. Molded IR lenses are a lower cost substitute for traditional high volume diamond-turned optics.



Part Number 7100109: Athermalized Black Diamond™ Lens Assembly

Drawing	Optical Properties	
	Focal Length	19 mm (nominal)
	f/#	1.1
	Back Focal Distance	14.1 mm
	Diagonal FOV	30° (maximum)
	Diagonal Image Size	10 mm (maximum)
	Transmission	~ 90% (average)
	Glass Material	BD-2
	Focus	Fixed Focus, Manually Adjusted
	Focus Range	0.5 m to Infinity
	Athermalized	✓
	Mechanical Properties	
	Weight	25 g
	Lens Mount	M25 x 0.5
	Environmental Properties	
Operating Temperature	-40°C to +85°C	

Custom Lens Assembly Specifications

Wavelength of Application microns
 f/#
 Field of View (FOV) degrees
 Effective Focal Length mm
 MTF % @ lp/mm
 Detector Type

Detector # of Pixels ×
 Detector Pixel Size microns
 Working Distance mm
 Mechanical Interface
 Environmental Constraints