



New Products 2010

LightPath®
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Thermal Imaging Lens Assemblies

- Optimized for LWIR Thermal Imaging over $8\ \mu\text{m}$ – $14\ \mu\text{m}$
- Molded lenses using Black Diamond™ chalcogenide glass
- Reduced focal shift with temperature due to inherent glass properties
- Molded lenses for repeatable, 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 7100108: Black Diamond™ Lens Assembly

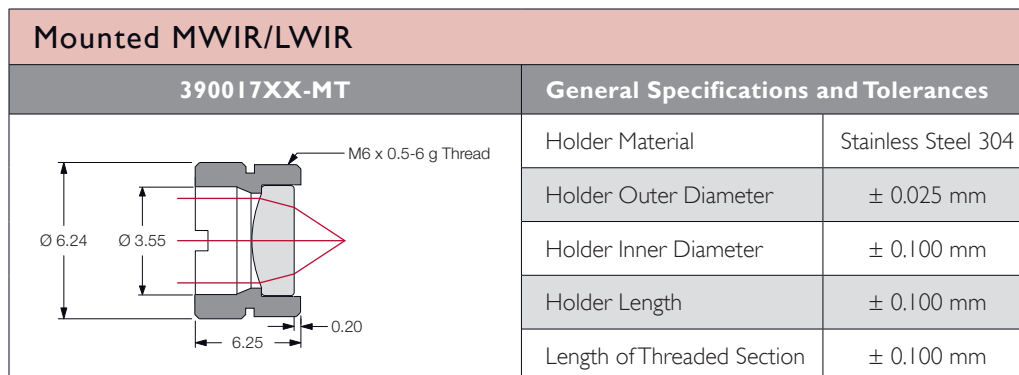
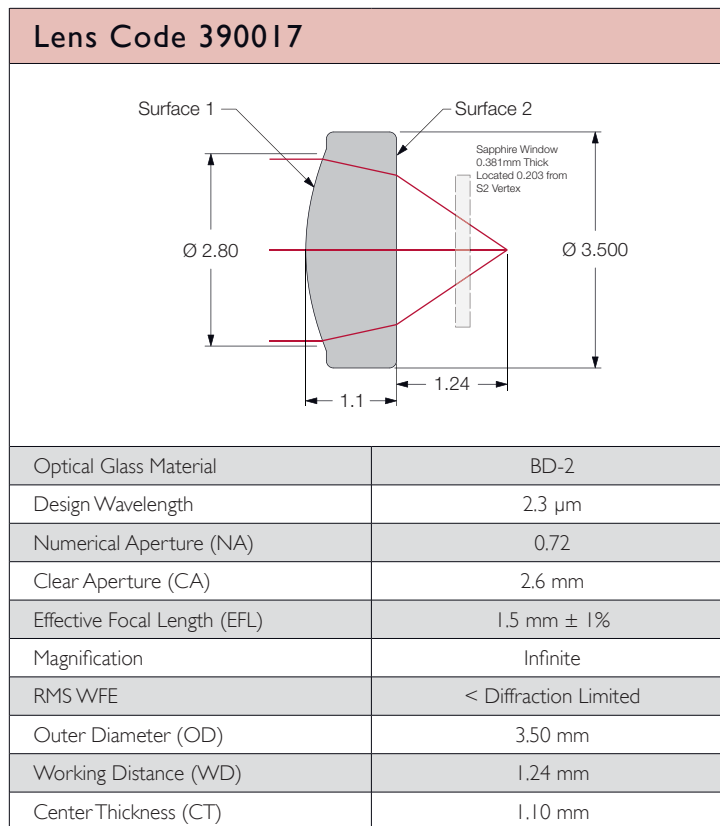
Drawing	Optical Properties		
	Focal Length	10.65 mm	
	f/#	1.0	
	Back Focal Distance	8.53 mm to Housing / 8.82 mm to Lens	
	Diagonal FOV	52°	
	Diagonal Image Size	10 mm	
	Pixel Pitch	25 microns	
	Transmission	~ 90% (average)	
	Wavelength Range	8 μm – 14 μm	
	Glass Material	BD-2	
	Focus	Fixed Focus	
	Athermalized	No	
	Mechanical Properties		
	Weight	10.9 g	
	Lens Mount	M20 x 1.0 - 6g	
	Environmental Properties		
Operating Temperature	25°C to 75°C		

MWIR / LWIR Collimating Lenses

- High numerical aperture for maximum collection efficiency
- Compact, single lens design
- Diffraction limited performance
- RoHS Compliant



MWIR/LWIR collimating lenses have a high numerical aperture for maximum light collection for collimating light from MWIR and LWIR lasers, including quantum cascade lasers (QCL). The aspheric design enables a single lens to replace a complex multiple component optical system.



RoHS Compliant Glass Aspheres for Telecommunications

- Achieves RoHS compliance with a high index glass
- Designed for high volume production
- Molded lenses for greater performance and repeatability
- Lenses are molded into holders for easy assembly



Molded aspheric lenses made from high index lead-based glasses have long been used in laser to fiber coupling systems inside of transceiver packages. RoHS compliance has been difficult to achieve based on the high performance requirements of these systems and the advantageous properties of lead-based glasses. LightPath Technologies has developed a set of lenses using a high index, RoHS compliant glass that replaces LightPath's current lead glass based products and meets the RoHS standards.

Contact LightPath to take advantage of the power of Aspheric Optics for a simpler optical system.

RoHS Compliant Telcommunications Lenses

Lens Code	Numerical Aperture	Focal Length (mm)	Outer Diameter (mm)	Clear Aperture (mm)	Working Distance (mm)	Holder
355410	0.20	2.51	1.805	1.01	1.84	None
355536	0.60	0.60	2.0 x 2.2 (T - Shape)	0.72	0.22	T Holder
355880	0.60	0.70	3.00	0.84	0.29	Cylindrical
355940	0.17	4.0	3.00	1.37	3.36	Cylindrical
355945	0.10	2.51	3.00	0.51	1.755	Cylindrical

LightPath's D-ZLAF52LA Glass is used for all Lenses.

Standard Coatings

MLBB-A Coating: 400 nm - 600 nm
MLBB-B Coating: 600 nm - 1050 nm
MLBB-C Coating: 1050 nm - 1600 nm
MLBB-Q Coating: 1300 nm - 1700 nm

