

geoHEAT

***Series of Lenses combining functions of
Focusing the Laser Heating beam and
Spectroradiometric temperature measurements***



With these unique achromatic lenses it is possible to focus the radiation of IR-laser beam used for heating of a sample and, simultaneously, create the image of that sample for further analyzing with using a spectrometer or other instruments.

Diffraction limited correction level for both optical paths: laser heating and temperature measurements.

Optimized operation spectral bands:

- 1020 - 1100 nm for the heating channel
- 600 - 900 or 400 - 700 nm for the channel of the spectroradiometric temperature measurements.

Focusing + Temperature Measuring!

No more problems with Chromatic Shift!

Technical Specifications

Model	<i>geoHEAT</i>	40_NIR	60_NIR	100_NIR	60_VIS	100_VIS
Type	Achromatic lenses					
Input Clear Aperture	16 mm	19 mm				
Focal Length, mm @ 1064 nm	40.8	60.2	102.0	61.6	99.1	
Working Distance, mm (from last mech. surface to Focus)	80	60	92	57	88	
F Number	2.6	3.2	5.4	3.2	5.2	
Overall Dimensions Diameter / Length, mm	55 / 110	30 / 26.5	30 / 17.5	30 / 25.5	30 / 17.5	
Optimum spectral range, nm	600 - 900, 1020 - 1100			400 - 700, 1020 - 1100		
Other features	<ul style="list-style-type: none"> - Achromatic for design wavelengths, reduced chromatic shift - Optimized for purposes of focusing the near-IR radiation - Diffraction limited for the working spectral bands - Compact design - No cemented doublets - Extended back focal length (distance from last optical surface to focal plane) - Optimized to compose relay imaging optical system with a lens from BK7 of 500...1500 mm focal length, except <i>geoHEAT 40_NIR</i> - Optimized for operation in <i>geoHEAD</i> – combined system for heating and spectroradiometric temperature measurements 					
Applications	Laser Heating in studies of physical properties of materials (for example, minerals) under high pressure and high temperature in combination with spectroradiometric temperature measurements.					
Mounting	External Thread M 27x1 (M 24x1 for modifications of <i>geoHEAT 40_NIR</i> , <i>geoHEAT 100_NIR</i>)					
Weight	< 400 g		< 100 g			

Example of imaging layout, magnification -12.5



Comparison of Chromatic Focal Shift

