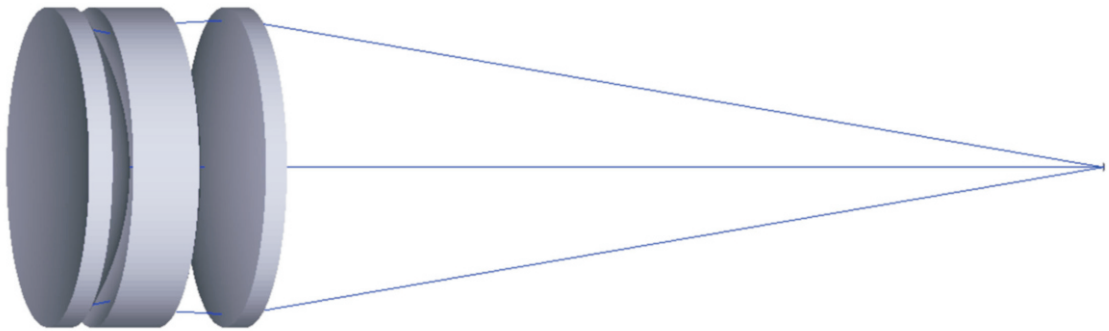


# ***geoHEAT***

***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 100_NIR</i>	<i>geoHEAT 60_NIR</i>	<i>geoHEAT 100_VIS</i>	<i>geoHEAT 60_VIS</i>
Type	Achromatic lenses			
Input Clear Aperture	19 mm			
Focal Length, mm @ 1064 nm	102.0	60.2	99.1	61.6
Working Distance, mm (from last mechanical surface to Focus)	92.0	60.0	88.0	57.0
F Number	5.4	3.2	5.2	3.2
Overall Dimensions	- Diameter 30 mm - Length 17.5 mm	- Diameter 30 mm - Length 26.5 mm	- Diameter 30 mm - Length 17.5 mm	- Diameter 30 mm - Length 25.5 mm
Optimum spectral range, nm	600 - 900, 1020 - 1100		400 - 700, 1020 - 1100	
Other features	<ul style="list-style-type: none"> <li>- Achromatic for design wavelengths, reduced chromatic shift</li> <li>- Optimized for purposes of focusing the near-IR radiation</li> <li>- Diffraction limited for the working spectral bands</li> <li>- Compact design</li> <li>- No cemented doublets</li> <li>- Extended back focal length (distance from last optical surface to focal plane)</li> <li>- Optimized to compose relay imaging optical system with a lens from BK7 of 500...1500 mm focal length</li> <li>- Optimized for operation in geoHEAD – combined system for heating and spectroradiometric temperature measurements</li> </ul>			
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.			
Weight	< 100 g			
Mounting	External Thread M 27x1 (M 24x1 for modification of <i>geoHEAT 100_NIR</i> )			

## Example of imaging layout, magnification -12.5



## Comparison of Chromatic Focal Shift

