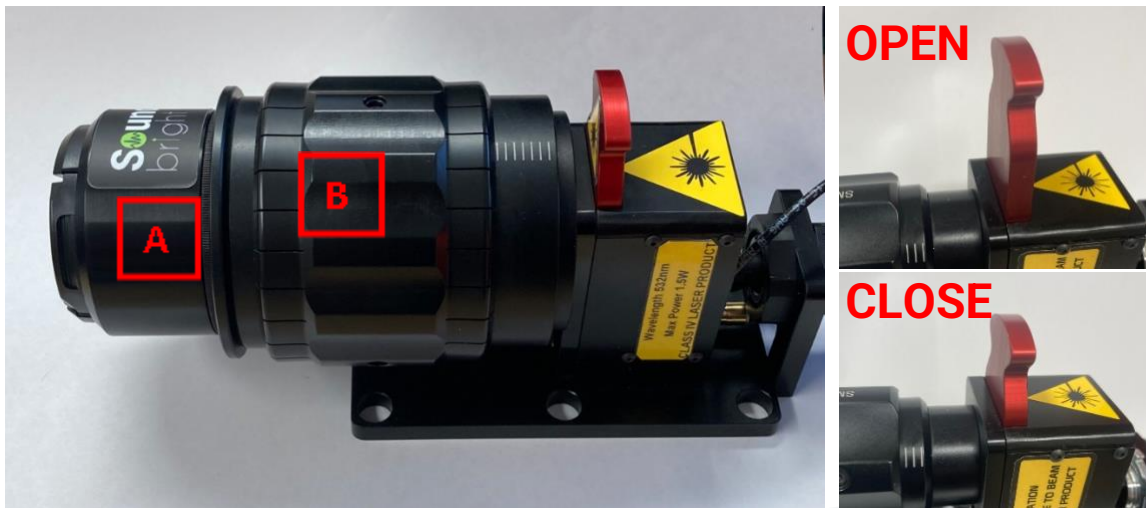


# QUARTET Optical Heads

## STANDARD SPOT SIZE (2" collection)

The **standard optical fiber head** uses a standard 2" collecting lens. By using different focusing element **[A]**, the optical head can be set-up for a variety of stand-off distances. This front lens can be easily changed or replaced. Adjusting element **[B]** can also be used to focus the optical head.



### OPTICAL HEAD

- [A]** – Focusing lens (F=100, 200 or 500mm)  
**[B]** – Rotation element for focus adjustment

The **Stand-off distance** corresponds to the distance between the sample and the front of the Optical Head (the front edge of the lens sleeve). The **stand-off position** is a function of the focal length selected **[A]** and the focus adjustment **[B]**. The Quartet is optimized for a highly speckled signal beam. Example of stand-off distances and the corresponding **spot size** of the beam on the sample surface is summarized in the table below: For exact stand-off distance values, check the provided Datasheet.

Focusing lens	Stand-off distance*	Nominal spot size
<b>F = 100 mm</b>	80 mm – 105 mm	≥ 50 µm
<b>F = 200 mm</b>	175 mm – 311 mm	≥ 100 µm
<b>F = 500 mm</b>	460 mm – > 4m	≥ 250 µm

\* Stand-off distance is measured from the front of the lens mount

**Note:** The focus position corresponds to the greatest speckle size scattered back from the workpiece.

## SMALL SPOT SIZE (1" collection)

The **high-resolution optical fiber head** uses a 1" collecting lens. As with the standard head, fitting different focusing elements **[A]** will vary the stand-off distance. This front lens can be easily changed or replaced. Adjusting element **[B]** can also be used to focus the optical head.



### OPTICAL HEAD

**[A]** – Focusing lens (F=30, 50, 100 or 200mm)

**[B]** – Rotation element for focus adjustment

Focusing lens	Stand-off distance*	Nominal spot size
<b><i>F = 30 mm</i></b>	23 mm – 25 mm	9 µm
<b><i>F = 50 mm</i></b>	44 mm – 47 mm	15 µm
<b><i>F = 100 mm</i></b>	97 mm – 109.5 mm	33 µm
<b><i>F = 200 mm</i></b>	190 mm – 248 mm	52 µm