

General Fiber Care and Instructions

In general, hollow core fibers from Guiding Photonics are much more robust than other infrared fibers; however, care should still be taken to prevent damage to the fiber. In particular, the larger bore fibers with (ID > 700 μm) are less flexible than the smaller bore fibers, and additional care should be taken to insure that the fiber is not bent beyond the minimum recommended radius.

For high power/energy applications, initially align the fiber at relatively low power. The fibers can indeed be used at relatively high power/energy when the beam is focused straight into core; however, damage can occur if the beam is focused onto the annular glass surface instead of into the core.

Avoid dust or debris as it may clog the fiber. If you suspect the fiber is clogged, you may try using suction (e.g., a vacuum cleaner) and/or blowing across the tip with dry nitrogen or an inert gas. We do NOT recommend using “canned air” or “gas duster”, as these contain propellants with potentially unwanted IR absorption features.

Unlike, solid core fibers, **hollow fibers cannot be polished**, since the resulting debris can clog the fiber.

Due to the large bore (200 μm to 1000 μm) coupling laser light into hollow core fibers is relatively simple. However, optimal coupling typically requires adequate alignment of a relatively long focal length lens. For more information on optimal coupling please visit our website:

<http://www.guidingphotonics.com/optical-assemblies.html>.

In addition, please contact us if interested in our custom designed optical solutions and/or if you have any questions about our fiber optic products.

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