

TOP® Multicore Fiber

Specification Datasheet · TopRays Optical Fiber

TOP® multicore fibers open new capabilities for laser power delivery: by using different cores, or several cores at once, power density and beam shape can be precisely controlled. TOPRAYS offers customizable multicore fibers to meet your specific needs.



Applications

The preferred solution for applications including processing of metal sheets of different thicknesses, sensing and laser delivery.

Advantages

- Supports kilowatt-level power
- Non-circular core shapes possible
- Precise control of power density
- Higher precision
- Step-index profile
- Special jackets available for high-temperature, high-vacuum and highly corrosive chemical environments

Construction

Quartz glass core · fluorine-doped quartz cladding · primary coating · secondary jacket

Jacket Options · Primary Coating

Material	Operating Temperature
Hard cladding (fluorinated acrylate)	-40 to +80 °C
Silicone	-40 to +150 °C
Polyimide	-190 to +350 °C
Acrylate	-40 to +85 °C
Aluminium	-196 to +400 °C

Jacket Options · Secondary Jacket

Material	Operating Temperature
ETFE (Tefzel®)	-40 to +150 °C

Material	Operating Temperature
Nylon	-40 to +100 °C
Acrylate	-40 to +85 °C
DuPont Hytel® 7246	-40 to +140 °C
Acrylate DeSolite® DF-0009	-40 to +150 °C
PFA Fluon®	-200 to +260 °C

Concentric Multicore

4 pairs of quartz/fluorine-doped* quartz layers (4 concentric cores), overcoated with silicone and nylon

NA = 0.22 / 0.18 / 0.18 / 0.25 // 0.37

100/120/300/330/500/530/705/720/900/1100SN

* WF or UV

Our multicore fibers can be fully customized; please contact us for more information.