

# Single-mode fibers

**Cu450 | Cu600 | Cu800 | Cu1300 | Cu1300/200 | AL1300**

Copper and aluminum-coated single-mode fibers for near-IR wavelength range are usually in stock and available for same day shipping in lengths starting at 20 m. Custom single-mode configurations, including pure silica core or custom wavelengths, may require 1 km minimum order and 6 weeks to manufacture and ship. For more information contact us at (416) 848 0258 or [info@ivgfiber.com](mailto:info@ivgfiber.com)

## Specifications

	<b>Cu450</b>	<b>Cu600</b>	<b>Cu800</b>	<b>Cu800/200</b>	<b>Cu1300</b>	<b>Cu1300/200</b>	<b>AL1300</b>	<b>Custom options</b>
Availability	from stock	from stock	from stock	from stock	from stock	from stock	from stock	custom run
Primary coating	copper alloy	copper alloy	copper alloy	copper alloy	copper alloy	copper alloy	aluminum	aluminum; copper
Additional inner layer	carbon	carbon	carbon	carbon	carbon	carbon	carbon	carbon
Additional outer layer	—	—	—	—	—	—	—	polyimide; acrylate
Wavelength range	450–600 nm	600–800 nm	800–1000 nm	800–1000 nm	1300–1600 nm	1300–1600 nm	1300–1600 nm	400 – 2000 nm
Cut-off wavelength	< 420 nm	< 560 nm	< 770 nm	< 770 nm	< 1250 nm	< 1250 nm	< 1250 nm	—
Attenuation at 800/1300 nm	14 dB/km	12 dB/km	10.5 dB/km	4.0 dB/km	9.5 dB/km	1.5 dB/km	9.5 dB/km	—
Numerical aperture	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13 – 0.26
Preform	Ge-doped	Ge-doped	Ge-doped	Ge-doped	Ge-doped	Ge-doped	Ge-doped	pure silica core; high-NA
Mode field diameter	4 ± 0.5 μm	5 ± 0.5 μm	6 ± 0.5 μm	6 ± 0.5 μm	9 ± 0.5 μm	9 ± 0.5 μm	9 ± 0.5 μm	—
Cladding diameter	125 ± 1 μm	125 ± 1 μm	125 ± 1 μm	200 ± 2 μm	125 ± 1 μm	200 ± 2 μm	125 ± 1 μm	125 μm; 200 μm
Coating diameter	165 ± 10 μm	165 ± 10 μm	165 ± 10 μm	260 ± 10 μm	165 ± 10 μm	260 ± 10 μm	165 ± 10 μm	from 20 to 50 μm thick
Core-clad concentricity	< 0.5 μm	< 0.5 μm	< 0.5 μm	< 0.5 μm	< 0.5 μm	< 0.5 μm	< 0.5 μm	—
Cladding offset	< 5 μm	< 5 μm	< 5 μm	< 5 μm	< 5 μm	< 5 μm	< 5 μm	—
Short-term bending radius	> 10 mm	> 10 mm	> 10 mm	> 15 mm	> 10 mm	> 15 mm	> 10 mm	—
Long-term bending radius	> 25 mm	> 25 mm	> 25 mm	> 40 mm	> 25 mm	> 40 mm	> 25 mm	—
Proof test	100 kpsi	100 kpsi	100 kpsi	100 kpsi	100 kpsi	100 kpsi	100 kpsi	—
Continuous length	up to 3000 m	up to 3000 m	up to 3000 m	up to 2000 m	up to 3000 m	up to 2000 m	up to 3000 m	—
Short-term temperature (< 60 s)	< 600°C	< 600°C	< 600°C	< 600°C	< 600°C	< 600°C	< 400°C	—
Long-term temperature (> 60 s)	< 450°C	< 450°C	< 450°C	< 450°C	< 450°C	< 450°C	< 400°C	—

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