



# GigaPOF<sup>®</sup>-50SR

## Short-reach perfluorinated optical fiber

GigaPOF-50SR is a low attenuation, IR-transparent POF with higher bandwidth than any other type of plastic optical fiber. Offering easy termination, compatibility with conventional glass fiber transceivers, and tight bending capability, no other gigabit optical medium is so easy to use.

### Graded-index perfluorinated POF: combining the best of the glass fiber and plastic fiber worlds

Until now, the simplicity of plastic optical fiber came with a heavy price: low performance and a restriction to visible wavelengths. The Chromis GigaPOF<sup>®</sup> line overcomes that trade-off with low attenuation, IR-transparent perfluorinated polymer materials, a graded refractive index, and exacting geometric tolerances. GigaPOF-50SR easily supports Gigabit Ethernet and multi-gigabit applications at distances up to 100 meters. Fast Ethernet is supported up to 200 meters.

### Small but simple

As with any optical fiber, high speed means small core sizes. But small core size doesn't have to mean hard to use. Like traditional plastic fibers, GigaPOF-50SR can be terminated with simple, inexpensive tools and polishes in seconds to a smooth, low-loss end-face.

Unlike brittle glass fibers, GigaPOF-50SR doesn't need special bend restrictions for long-term installed reliability. Depending on cable structure, GigaPOF-50SR handles long-term installed bend radii as small as 5 mm.

### No need for special transceivers

GigaPOF-50SR has a core size and numerical aperture that closely match standard 50- $\mu$ m multimode glass fiber. So, GigaPOF-50SR cables can be used as a direct drop-in replacement for 50- $\mu$ m glass fiber in 850-nm links and networks.



Product Specifications	
<b>Transmission Characteristics</b>	
Attenuation at 850 nm (dB/km)	$\leq 60$
Attenuation at 1300 nm (dB/km)	$\leq 60$
Bandwidth at 850 nm (MHz.km)	$\geq 300$
Numerical aperture	$0.185 \pm 0.015$
Macro-bend loss (dB for 10 turns on a 25-mm radius quarter circle)	$\leq 0.25$
Zero dispersion wavelength (nm)	1200–1650
Dispersion slope (ps/nm <sup>2</sup> .km)	$\leq 0.06$
<b>Physical Characteristics</b>	
Core diameter ( $\mu$ m)	$50 \pm 5$
Over-cladding diameter ( $\mu$ m)	$490 \pm 5$
Core to over-cladding concentricity ( $\mu$ m)	$\leq 4$
Maximum tensile load (N)	7.0
Long-term bend radius (mm)	5.0
<b>Environmental Performance</b>	
Temperature induced attenuation at 850 nm from $-20^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ (dB/km)	$\leq 5$
Temperature induced attenuation at 850 nm from $+75^{\circ}\text{C}$ 85 % RH 30 day cycle (dB/km)	$\leq 10$