

Chalcogenide InfraRed CIR-fiber cable

art photonics offers **FlexiRay®** Fiber Cables for a Mid-Infrared spectral range 1.1 - 6.5 μm . Based on Chalcogenide Infra-Red (CIR-) fibers, **FlexiRay®** fiber cables are used in a wide range of applications including power delivery of QCL, spectroscopy, Flexible IR-imaging systems, etc. CIR- fiber cables are available with a variety of standard fiber diameters, SMA-905, FC/PC, FC/APC connectors, and several types of protective tubing.

Manufacturing technologies of art photonics assure precise fiber position inside the connector ferrule and a perfect surface quality of the fiber end.

Before shipping, each fiber cable passes through detailed Quality Control procedure.

Applications:

- ✓ Mid IR spectroscopy
- ✓ Flexible IR pyrometry
- ✓ Flexible IR-Imaging systems
- ✓ Power delivery for Quantum Cascade Lasers



Features:

- ✓ High transmittance in 1.1 - 6.5 μm range
- ✓ Low optical losses 0.2 - 0.3 dB/m at 2.5 - 4 μm and 4.5 - 5 μm
- ✓ Core/Clad structure with core diameters span from 8 to 500 μm
- ✓ Temperature range from -50°C to 90°C

Standard product specifications

Optical Fiber Type	Chalcogenide Step Index Multimode
Wavelengths range	1.1 - 6.5 μm
Fiber Core/Cladding Sizes (μm)	see standard fiber parameters on the second page
Effective Numerical Aperture (NA)	see standard fiber parameters on the second page
Minimum bending radius depending on protective sheathing	PEEK tubing – 130mm metal PVC coated tubing – 80mm stainless steel tubing – 80mm stainless steel silicone coated tubing – 130mm
Connectors	SMA-905; FC/PC or FC/APC
Temperature range	-50°C to + 90°C

Parameters of standard Chalcogenide fibers

Code	Type	Core, μm	Cladding, μm	Protective Jacket, μm	NA	Min. bending Radius, mm
CIR8/300	Step Index Singlemode	8 ± 1	300 ± 15	400 ± 20	0.25 ± 0.02	60
CIR50/250	Step Index few modes	50 ± 3	250 ± 10	410 ± 20	0.13 ± 0.02	50
CIR250/300	Step Index Multimode	250 ± 10	300 ± 15	400 ± 30	0.30 ± 0.03	60
CIR340/400	Step Index Multimode	340 ± 10	400 ± 15	510 ± 30	0.30 ± 0.03	80
CIR500/550	Step Index Multimode	500 ± 10	550 ± 15	700 ± 30	0.30 ± 0.03	100

