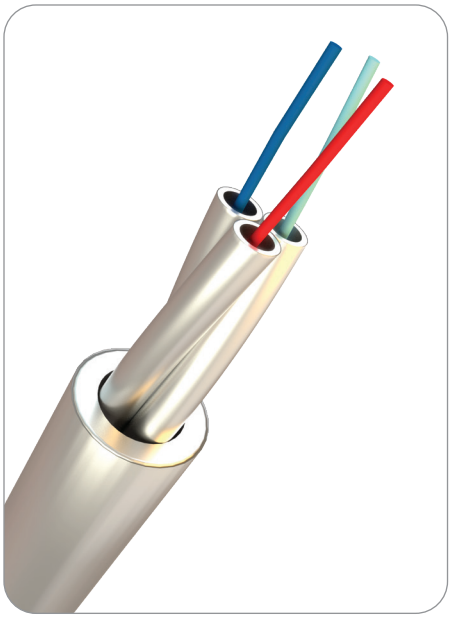


500°C Multi-fiber Metal Fiber Optic Cable

AFL's 500°C-Rated Harsh Environment Fiber Optic Cable is designed to minimize strain on optical fibers due to thermal expansion at high temperatures. Three inner tubes, each designed to hold one metal-coated fiber, are stranded together. The inner tubes are encapsulated by an outer tube, constructed with an anti-corrosive steel to allow its deployment in extremely harsh environments. Outer tube construction is designed to provide a high level of mechanical strength while still having a low minimum bend radius. Metal-coated fiber options are available from AFL Specialty Fibers.

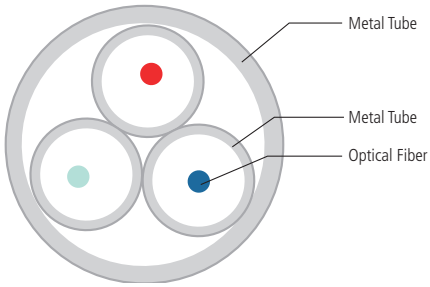
Features

- Deployable in temperatures up to 500°C
- Low minimum bend radius
- Outer jacket constructed with anti-corrosive steel
- Contains up to three metal-coated fibers

Applications

- Super-critical geothermal systems
- Downstream oil processing
- Process temperature monitoring
- Industrial applications up to 500°C

Cable Components



Specifications

PARAMETER	VALUE
Number of Fibers	Up to 3, 1 per inner metal tube
Fiber	Single-Mode and/or Multimode metal-coated fiber
Inner Tube Material	316L Stainless Steel
Inner Tube Outer Diameter	2.35mm / 0.093 inches
Inner Tube Wall Thickness	0.2mm / 0.008 inches
Outer Tube Material	Alloy 825
Outer Tube Outer Diameter	5.75mm / 0.227 inches
Outer Tube Wall Thickness	0.3mm / 0.012 inches
Minimum Bend Radius	143mm / 5.63 inches
Nominal Weight	76 kg/km / 51 lb/1000 ft.
Max Tensile Load	2722 N / 612 lbs
Operational Temperature Range	Up to 500°C