



HERO Fiber

PREPARED FOR
APPLICATION IN
MOST DEMANDING
CONDITIONS

Specialty metal coated fiber optics for extreme environments and most demanding applications.

FEATURES

Operating temperatures from – 200°C to 900°C

Safe for explosive environment – **spark-free**

Resistant to acids (sulphuric, nitric, hydrochloric, hydrofluoric) and **alkalines** (sodium or potassium hydroxide)

Resilient to radiation (nuclear and cosmic)

Allows **distributed sensing** along entire fiber length, easy to install in **most confined spaces**

Unique coating method allowing **low attenuation and high tensile strength**

Various metal coatings: **Cu, Au, Ag, Ni** (other materials available on request)

Cold **bondable with metals**

Highly **customizable coating thickness** (nm to mm)

Various **microstructure designs** available

Long lifespan



SPECS*

HERO Fiber 600 125/50

- Operating temperature:
-200°C to 700°C
(up to 900°C short term)
- Fiber diameter with coating:
170 μm \pm 10 μm
- Bending radius:
10 mm short term, 25 mm long term
- Fiber type:
single or multimode
- Proof test:
100 kpsi
- Chemical resistance:

H_2SO_4 >95% to 300°C	HF >40% to 100°C
HNO_3 65% to 100°C	NaOH >50% to 300°C
HCl 35% to 100°C	KOH >50% to 300°C

* Contact us for detailed information and/or specs adjustment.



APPLICATIONS

- Measurements in extreme conditions for industrial process monitoring (temperature, strain, vibrations, flow, pressure, deformation)
 - Oil & gas: down-hole sensing; sensing in processing installations
- Metallurgy: continuous monitoring of furnace's structure
 - Energy: boiler structural health and temperature monitoring; steam and liquids flow monitoring in extreme heat and radiation
- Telecom and IT: resilient and high-capacity emergency and back-up networks
- Aviation and space: monitoring of rocket and jet engines; space-capable sensors and wiring
- Chemical industry: sensors for hazardous, corrosive and caustic environments; high and cryogenic temperature monitoring
 - Ex areas: safe sensors and wiring
- Structure and material wear sensing
- High vacuum and high pressure devices
 - Radiation-resilient sensors

