



HCS® 1000 µm Low OH Optical Fiber

P/N: CF01493-15

Overview

HCS® (Hard-Clad Silica) is a polymer coated optical fiber system invented by us in the early years of the optical fiber industry. A proprietary polymer is applied to the pristine surface of pure, fused silica as we draw the glass down to its final, step-index, multimode optical fiber form. We then add additional buffer layers to improve chemical and abrasion resistance. This final step increases the finished diameter to a dimension that is easier for field-technicians to handle.

HCS is optimized for use at the 650 and 850 nm wavelengths which are common in transceivers deployed in many industrial applications. The pure silica core is highly transparent. This makes HCS fiber suitable for use over a very broad range of optical wavelengths and in a variety of applications beyond data communications such as fiber optic sensors, spectroscopy and laser delivery.

HCS optical fiber characteristics:

- High mechanical strength
- Bend insensitivity
- Crimp-on connector capability similar to electrical wires (for HCS core sizes up to 400 µm)
- Resistance to harsh chemicals commonly found in industry
- Wide operating temperature range
- Superior crush, twist and flex performance
- Long term reliability
- Ease of handling

HCS fibers have a high core-to-clad ratio. By using a very thin cladding layer, light transmitting devices are connected to a large core area that efficiently couples more of the optical energy into and along the fiber. This enables systems designers to take advantage of lower cost transceivers and simplified connectors to minimize overall systems expense.

Typical Applications

- High-Power Laser Delivery
- Short-to-Medium Distance Communications (Up to 3 km)
- Avionics Communications
- Medical Sensing
- Factory Automation
- Laser Therapy and Surgery
- Near-IR Spectroscopy
- Optical Pyrometry
- Nuclear Plasma Diagnostics

Product Specifications	
Product Description	1000 0.37 NA Low OH
Physical Characteristics	
Core Diameter	1000 ± 15 µm
HCS® Cladding Diameter	1035 ± 15 µm
ETFE Buffer Diameter	1400 ± 50 µm
Core/Clad Offset	≤ 10.0 µm
Crimp & Cleave Compatible	Yes
Cladding Material	HCS fluoroacrylate
Buffer Material	ETFE
Optical Characteristics	
Type	Multimode Step-Index
Numerical Aperture	0.37
Attenuation @ 850 nm	≤ 8 dB/km
Water Content	Low OH
Mechanical and Environmental	
Operating Temperature	-65 to +125 °C
Short-Term Bend Radius	≥ 73 mm
Long-Term Bend Radius	≥ 118 mm
Proof Test Level	≥ 100 kpsi (0.689 GPa)
Order by Part Number	CF01493-15
Description Code	HCP-M1000T
OPTIONS	Buffer Color, Buffer Diameter, Buffer Material, Proof Test
Contact Information	For additional information please contact your sales representative. You can also visit our website at www.lightera.com or call 1-888-FIBERHELP (1-888-342-3743) USA or 1-770-798-5555 outside the USA. For a full list of our certifications, visit our website.
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