



HCXtreme® 550-22 Optical Fiber

P/N: F18941

Product Overview

The Lightera family of High-Power Delivery optical fibers includes the HCXtreme product line. HCXtreme fibers are low-OH, all-silica fibers coated with HCS® fluoroacrylate to improve fiber strength and to reduce static fatigue. ETFE is used as the outer buffer on these step-index, multimode fibers. They have a nominal NA of 0.22 and are available in a variety of core sizes and core/clad ratios.

HCXtreme Optical Fiber coating technology solves the problem of fiber failure due to excessive bending of optical fiber under power. In testing down to 2.5 mm radius bend, HCXtreme fibers continued to transmit power without breakage. Actual performance in any given application should be validated by customer testing.

For further details and testing methodology, request our white paper, entitled “Study of Optical Fiber Damage Under Tight Bend with High Optical Power at 2140 nm.”

Typical Applications

- Cascaded Laser Power Delivery
- High-Power Laser Delivery
- Industrial Cabling
- Laser Surgery
- Laser Welding and Cutting
- Near-IR (up to 2100 nm)
- Laser Power Delivery

Product Specifications	
Product Description	550-22 HCX
Physical Characteristics	
Core Diameter	550 ± 12 µm
Cladding Diameter	600 ± 10 µm
Hard Coating Diameter	630 ± 10 µm
Buffer Diameter	750 ± 30 µm
Clad/Coating Offset	≤ 9 µm
Crimp & Cleave Compatible	No
Buffer Material	ETFE
Standard Buffer Color	Blue
Coating Material	HCS® Fluoroacrylate
Optical Characteristics	
Type	Multimode Step-Index
Numerical Aperture	0.22
Attenuation @ 850 nm	≤ 10 dB/km
Water Content	Low OH
Mechanical and Environmental	
Operating Temperature	-65 to +125 °C
Short-Term Bend Radius	≥ 58 mm
Long-Term Bend Radius	≥ 94 mm
Proof Test Level	≥ 100 kpsi (0.689 GPa)
Order by Part Number	F18941
Product Description Code	550-22 HCXtreme
OPTIONS	Cabling, Carbon Coating, Clad Diameter, Connectorization, Core Diameter, Low Bioburden Packaging and Manufacturing, Metalization, Numerical Aperture, Buffer Colors, 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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