For current pricing, please see our website.

Endlessly Single Mode Photonic Crystal Fiber

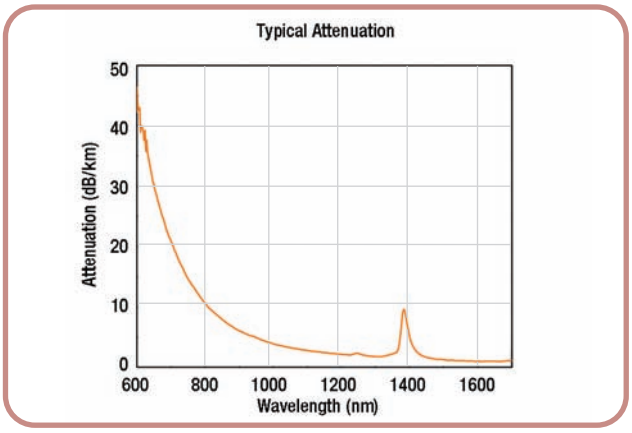
A conventional single mode fiber is actually multimode for wavelengths shorter than the second-mode cutoff wavelength, limiting the useful operating wavelength range in many applications. In contrast, NKT Photonics' endlessly single mode Photonic Crystal Fibers (PCFs) are truly single mode at all wavelengths for which fused silica is transparent, regardless of the core size. In practice, the useful operating wavelength range is limited only by bend loss. Although the cladding possesses six-fold symmetry, the mode profile is very similar to the quasi-Gaussian fundamental mode of a conventional axially symmetric step-index fiber resulting in a form overlap that is >90%. Unlike conventional fibers, these fibers are fabricated from a single material – undoped high-purity fused silica glass.

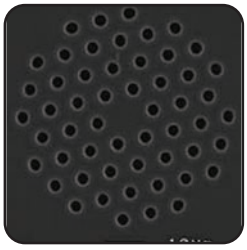
Features

- Single Mode at All Wavelengths
- Operating Wavelength Range: 600 - 2000 nm
- Near-Gaussian Mode Profile
- Single Material
- Attenuation <0.8 dB/km for ESM-12B @ 1550 nm
- Low Bend Loss
- Standard Core Sizes: 12 µm (Other Sizes Available upon Request)
- Can be Provided with Connectors or Hermetically Sealed Ends

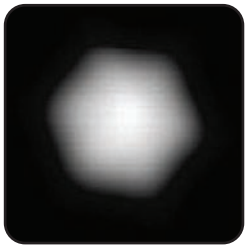
Applications

- Delivery of High-Power Broadband Radiation in a Single Spatial Mode
- Short Wavelength Applications (Visible and UV)
- Sensors and Interferometers





SEM of ESM-12B



Measured Near-Field Profile (log scale) of ESM-12B

Specifications

ITEM #	ESM-12B
MFD	10 ± 1 µm @ 1550 nm
Attenuation	<4 dB/km @ 1060 nm <15 dB/km @ 1384 nm <1 dB/km @ 1550 nm
NA	0.1 ± 0.05 @ 1550 nm
Core Diameter	12 ± 1 µm
Cladding Diameter	125 ± 3 µm
Coating Diameter	240 ± 15 µm
Cladding Material	Pure Silica
Coating Material	Acrylate

ITEM #	LENGTH	$	£	€	RMB
ESM-12B	1 to 9 m	$ 112.00	£ 80.64	€ 97,44	¥ 892.64
	10 to 49 m	$ 89.60	£ 64.52	€ 77,96	¥ 714.12

NKT Photonics the power of light