

PM-1550 Single-mode, polarization-maintaining fiber

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SINGLE-MODE, PM FIBER WITH SHORT BEAT LENGTH

Ideal for interferrometers

The PM-1550 has a strong form-birefringence and is optimized to create a short beat length between the polarizations.

It has a reduced bend-coupling between polarization states, an improved polarization extinction ratio, and is 30 times less temperature sensitive than conventional high-birefringence fiber.

Applications

- Sensors
- Gyroscopes
- Interferrometers



Low loss and constant mode field diameter

The fibers present a low-loss in the 600 to 1700 nm window .

Standard 125 μm outer diameter

The fiber has a standard 125 μm outer diameter and is compatible with all common fiber tools.

Features

- Low-loss fiber from 600 to 1700 nm
- Polarization-maintaining
- Single-mode at all wavelengths
- Radiation hard pure silica fiber
- Wavelength independent mode-field diameter

SPECIFICATIONS

Optical

| Single-mode | Yes |
|---------------------------------|-----------------|
| Attenuation [dB/km] | ≤3 |
| Mode-field diameter, 1/e² [µm] | 5.5 / 3.8 ± 0.8 |
| Mode-field ellipticity | ≈ 1.5 |
| Birefringence | ≥ 4e-4 |
| PER, typical [dB] | > 18 |
| Chromatic dispersion [ps/nm/km] | 55 ± 10 |

Mechanical

| Core diameter [µm] | 6.0/4.4 ± 0.5 |
|----------------------------------|---------------|
| Outer cladding diameter, OD [µm] | 125 ± 5 |
| Coating diameter [µm] | 245 ± 10 |
| Core and cladding material | Pure silica |
| Coating material, single-layer | Acrylate |
| Coating concentricity [µm] | < 10 |
| Proof test level [%] | 0.5 |

All NKT Photonics fiber products are produced under our quality management system certified in accordance with the ISO 9001:2015 standard.