



ORNET



Z Wave - S™

Low Water Peak Single Mode Bend Insensitive Fiber

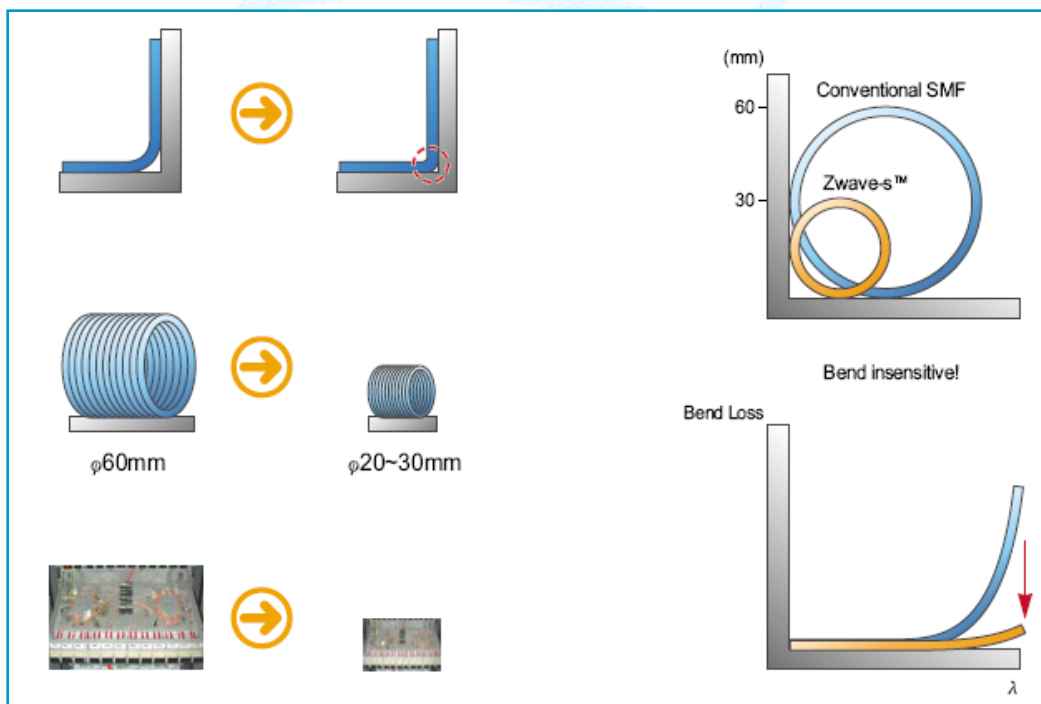
Features & Benefits

- Complies with ITU-T G657
- Bend-insensitive ($\sim\phi 20\text{mm}$)
- Low intrinsic loss
- Transmission capability from 1280nm to 1625nm by removing the OH Ion around 1383nm
- Excellent geometrical properties for active alignment splicing technique available with excellent splice loss control
- Matched cladding design for excellent microbending resistance
- Supported by a complete family of closures and connectors
- Mechanically strippable coating
- Environmentally compatible
- Meets all industry standards

Performance

- High Bending Performance
- Maximum bending radius Conv. SMF vs. Zwave-s™

Compact Installation



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Specification

| Characteristics | | Specified Values | Tolerances | Unit |
|---------------------------|----------------------------|------------------|------------|---------------------------|
| Optical Properties | | | | |
| Attenuation | 1310nm | ≤0.35 | | dB/km |
| | 1383nm | ≤0.31 | | dB/km |
| | 1550nm | ≤0.21 | | dB/km |
| | 1625nm | ≤0.23 | | dB/km |
| Attenuation Uniformity | 1550nm | 0.05 | Max | dB |
| Mode Field Diameter | 1310nm | 8.6 | ±0.5 | μm |
| | 1550nm | 9.6 | ±0.8 | μm |
| Cutoff Wavelength | Cable | 1260 | Max | nm |
| Chromatic Dispersion | 1550nm | 18 | Max | ps/(nm • km) |
| | Zero Dispersion Wavelength | 1300~1324 | | nm |
| | Slope@λ0 | 0.092 | Max | ps/(nm ² • km) |
| Macro bending Attenuation | 10turns, φ30mm 1550nm | 0.03 | Max | dB |
| | 1turns, φ20mm 1625m | 0.2 | Max | dB |

Geometrical Properties

| | | | | |
|--------------------------------------|--|-----|------|----|
| Cladding Diameter | | 125 | ±0.7 | μm |
| Cladding Non-Circularity | | 0.8 | Max | % |
| Core/Cladding Concentricity Error | | 0.6 | Max | μm |
| Coating Diameter | | 245 | ±5 | μm |
| Coating Non-Circularity | | 6 | Max | % |
| Coating/Cladding Concentricity Error | | 10 | Max | μm |

Mechanical Properties

| | | | | |
|---|---------------------|---------|---------|------|
| Proof Test | 1s | 100*** | Min | kpsi |
| Fiber Curl | Radius of curvature | 4 | Min | m |
| Coating Strip Force | 30mm - 500mm/min | 1.3~8.9 | | n |
| Dynamic Tensile Strength (0.5meter gauge length) | Unaged | ≥550 | Min | kpsi |
| | | 750 | Typical | kpsi |
| | Aged | ≥440 | Min | kpsi |
| | | 750 | Typical | kpsi |

*** Higher Proof test levels available upon request.

Environmental Properties

| | | | | |
|------------------------------|-----------------------------|---------|-----|-------|
| Temperature Cycling | -60°C to +85°C, 1310&1550nm | 0.05*** | Max | dB/km |
| Temperature Humidity Cycling | -10°C to +85°C, 1310&1550nm | 0.05 | Max | dB/km |
| Water Immersion | 23°C, 1310&1550nm | 0.05 | Max | dB/km |
| Heat Aging | 85°C, 1310&1550nm | 0.05 | Max | dB/km |

Performance Properties

| | | | | |
|------------------------------|-------|-------|---------|--|
| Effective Group Index (Neff) | 1310m | 1.467 | Typical | |
| | 1550m | 1.468 | Typical | |