

Introduction of Sumitomo High NA SMF

- ✓ *High NA SMF Applications*
- ✓ *Features of Sumitomo High NA SMF*
- ✓ *Products Lineup*

 SUMITOMO ELECTRIC INDUSTRIES, LTD.



Sumitomo High NA SMF

1. Application

- WDM Couplers
- Pigtails for LD pump, AWG (PLC)
- MFD conversion

2. Various lineup

- HR-14-098M, HR-20-098M, HR-XX-130M
- UV 250 μ m, Nylon 900 μ m, Hytrel[®]* 900 μ m
- Non-flammable 900 μ m **Coming soon !!**

3. Features

- Excellent bending characteristics
- MFD matching to components
- High reliability
 - 2% proof test level
- Custom design available

* Hytrel is registered trade mark of DuPont.



High NA SMF Products Lineup (1)

Fiber Type	HR-14-098M	HR-20-098M
Wavelength [WL] (nm)	960-1200	980-1650
Numerical Aperture	0.14	0.20
MFD (μm)	Typ. 5.9 at 980nm Typ. 9.5 at 1550nm	Typ. 4.0 at 980nm Typ. 6.1 at 1550nm
Cladding diameter (μm)	125.0 \pm 0.5	125.0 \pm 0.5
Core/Cladding concentricity error (μm)	\leq 0.3	\leq 0.3
Cladding non-circularity (%)	\leq 0.5	\leq 0.5
Cut-off wavelength (nm)	910 \pm 50	910 \pm 50
Attenuation at 980nm (dB/km)	\leq 2.0	\leq 2.5
Attenuation at 1550nm (dB/km)	\leq 0.3	\leq 0.4
Bending loss at 1550nm (dB/m)	NA	\leq 0.1 at 20mm ϕ \leq 0.05 at 40mm ϕ



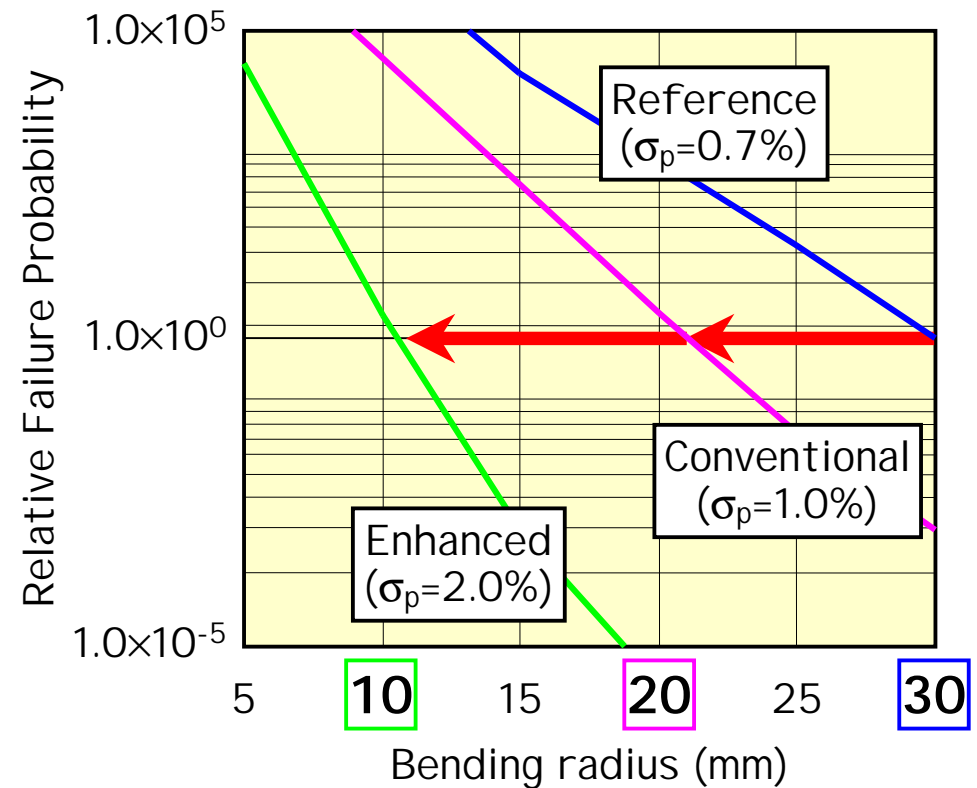
High NA SMF Products Lineup (2)

Fiber Type	HR-17-130M	HR-19-130M	HR-22-130M	HR-28-130M	HR-35-130M
Wavelength [WL] (nm)	1300-1600	1300-1600	1300-1650	1300-1650	1300-1650
Numerical Aperture	0.17	0.19	0.22	0.28	0.35
MFD (μm)	Typ. 6.6 at 1310nm Typ. 7.5 at 1550nm	Typ. 5.5 at 1310nm Typ. 6.3 at 1550nm	Typ. 5.0 at 1310nm Typ. 5.7 at 1550nm Typ. 6.1 at 1650nm	Typ. 3.9 at 1310nm Typ. 4.5 at 1550nm Typ. 4.8 at 1650nm	Typ. 3.1 at 1310nm Typ. 3.5 at 1550nm Typ. 3.7 at 1650nm
Cladding diameter (μm)	125.0 ± 0.5	125.0 ± 0.5	125.0 ± 0.5	125.0 ± 0.5	125.0 ± 0.5
Core/Cladding concentricity error (μm)	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3
Cladding non-circularity (%)	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Cut-off wavelength (nm)	1180-1280	1180-1280	1180-1280	1180-1280	1180-1280
Attenuation at 1550nm (dB/km)	≤ 0.3	≤ 0.4	≤ 0.5	≤ 0.8	≤ 1.0
Bending loss at 1550nm (dB/m)	≤ 0.1 at 20mmφ	≤ 0.1 at 20mmφ	≤ 0.05 at 20mmφ	≤ 0.05 at 20mmφ	≤ 0.05 at 20mmφ

High Reliability Fiber

Sumitomo fibers realize high reliability.

- 2% proof test level (σ_p)
 - 10mm bending radius available
 - ✓ Same failure probability as 30mm bending radius for reference fiber with 0.7% proof test level
 - ✓ Same failure probability as 20mm bending radius for conventional fiber with 1.0% proof test level



PMF Failure Probability after 25 years



Special Order Fiber

Sumitomo is pleased to accept your special order.
- Smaller fiber diameter, Photo-sensitive fiber, etc.

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Contact us!