OH-Lite 250 Fibre

ITU-T G.652.D Single Mode Optical Fibre

Product Description

OH-Lite 250 Single Mode Optical Fibre is a low-water-peak fibre, with attenuation at 1380-1390 nm less than attenuation at 1310 nm.

Product Application

OH-Lite 250 Fibre is ideal for regional, metropolitan, and local access networks using CWDM.

Product Benefits

OH-Lite 250 Fibre single mode fibre is designed for use over the entire 1260 nm to 1625 nm wavelength range. This gives it much more useable spectrum than conventional single mode fibre.

Optical Parameters		
Attenuation Max. (dB/km)		
1310 nm		≤ 0.34
1383 nm# #After hydrogen aging according to IEC-60793-2-50 regarding the B-652.D fibre category		≤ 0.34
1550 nm		≤ 0.20
1625 nm		≤ 0.23
Macro bend loss (dB)		
1 turn 16 mm radius	1550nm	≤ 0.5
100 turns 30 mm radius		≤ 0.05
100 turns 30 mm radius	1625nm	≤ 0.1
Mode Field Diameter (µm) at 1310 nm		9.1 ± 0.4
Mode Field Diameter (µm) at 1550 nm		10.3 ± 0.5
Cable cutoff wavelength (nm)		≤ 1260
Zero dispersion wavelength (nm)		1300 to 1324
Dispersion at 1550nm (ps/nm.km)		≤ 17.5
Zero Dispersion Slope (ps/nm².km)		≤ 0.090
PMD LDV (ps/√ km)		≤ 0.2
Individual Fibre PMD* (ps/√ km) * Individual PMD values may change when cabled		≤ 0.2
Point of discontinuities 1310nm & 1550nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (µm)		125 ± 0.7
Core Clad Concentricity error (µm)		≤ 0.5
Cladding Non-circularity (%)		≤ 0.8
Coating Diameter (uncoloured) (µm)		242 ± 5
Coating Cladding Concentricity error (µm)		≤ 12
Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 1310, 1550, 1625 nm (dB/km)
Temperature humidity cycling	-10°C to +85°C, 95% RH	
Water Immersion	30 days, 23 ± 2°C	
High temperature and humidity aging	30 days 85 ± 2°C, 85% RH	
Accelerated Aging (Temperature)	30 days, 85 ± 2°C	
Mechanical Characteristics		
Proof Testing		≥ 125 (kpsi) (0.86GN/m²) (This is equivalent to 1.2% strain)
Fibre Curl (m)		≥ 4
Performance Characteristics		
Coating strip force		≥ 1.3 N (0.3 lbf) and ≤ 5.0 N (1.1 lbf)
Dynamic fatigue parameter (N_d)		≥ 20
Effective group index of refraction (Typical Values)		1.4670 at 1310 nm 1.4675 at 1550 nm 1.4680 at 1625 nm
Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm (dB/km)		≤ 0.03
Attenuation in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km)		≤ 0.03

DOF-Lite 655 Fibre

ITU-T G.655.C and D Single Mode Optical Fibre

Product Description

- DOF-Lite 655 Single Mode Optical Fibre is a is a Non-Zero Dispersion Shifted Fibre (NZ-DSF) with large effective area.

Product Application

- DOF-Lite 655 fibre is ideal for high data-rate, multi-wavelength long haul transmission. It has a large effective area for improved power handling plus dispersion optimized for dense wavelength division multiplexing (DWDM). It is suitable for transmission in the conventional C-band (1530-1565 nm) and L-band (1565- 1625 nm). - DOF-Lite 655 Fibre exceeds the requirements of today's high- channel-count 2.5 Gb/s and 10 Gb/s systems and supports migration to next generation 40 Gb/s data rates.

Product Benefits

- DOF-Lite 655 fibre has a large effective area for improved power handling plus dispersion optimized for dense wavelength division multiplexing (DWDM). This combination reduces the onset of non-linear transmission effects such as four-wave mixing and self-phase modulation, whilst also reducing the cost and complexity of dispersion compensation.

Parameters

Optical Parameters		
Attenuation Max. (dB/km)		
1550 nm		≤ 0.22
1625 nm		≤ 0.24
Macro bend loss (dB)		
100 turns 30 mm radius	1550nm	≤ 0.05
1 turn 16 mm radius	1625nm	≤ 0.5
100 turns 30 mm radius		≤ 0.1
Mode Field Diameter (µm) at 1550 nm		9.6 ± 0.4
Cable cutoff wavelength (nm)		≤ 1450
Dispersion at 1460 nm (ps/nm.km)		-4.02 to 0.15
Dispersion at 1530 nm (ps/nm.km)		2.00 to 4.00
Dispersion at 1550nm (ps/nm.km)		3.00 to 5.00
Dispersion at 1565 nm (ps/nm.km)		4.00 to 6.00
Dispersion at 1625 nm (ps/nm.km)		5.77 to 11.26
Individual fibre PMD and PMD LDV (ps/√ km) * Individual PMD values may change when cabled		≤ 0.15
Point of discontinuities 1550nm & 1625nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (µm)		125 ± 0.7
Core Clad Concentricity error (µm)		≤ 0.5
Cladding Non-circularity (%)		≤ 1.0
Coating Diameter (uncoloured) (µm)		242 ± 5
Coating Cladding Concentricity error (µm)		≤ 12
Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 1550, 1625 nm (dB/km)
Temperature humidity cycling	-10°C to +85°C, 95% RH	
Water Immersion	30 days, 23 ± 2°C	
High temperature and humidity aging	30 days 85 ± 2°C, 85% RH	
Accelerated Aging (Temperature)	30 days, 85 ± 2°C	
Mechanical Characteristics		
Proof Test Levels		≥100 kpsi (0.7GN/m2). This is equivalent to 1% strain
Fibre Curl (m)		≥ 4
Performance Characteristics		
Coating strip force		≥ 1.3 N (0.3 lbf) and ≤ 5.0 N (1.1 lbf)
Dynamic fatigue parameter (N_d)		≥ 20
Effective group index of refraction (Typical Values)		1.470 at 1550 nm
Attenuation in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km)		≤ 0.05
Effective area µm² (Typical Value)		70

DOF-Lite 656 Fibre

ITU-T G.655.E/G.656 Single Mode Optical Fibre

Product Description

-DOF-Lite 656 Single Mode Optical Fibre is a Non-Zero Dispersion Shifted Fibre (NZ-DSF).

Product Application

-DOF-Lite 656 Fibre was designed for high data-rate, multi-wavelength long haul transmission. It is suitable fortransmission in the conventional C-band (1530-1565 nm) and L-band (1565- 1625 nm).

Product Benefits

-DOF-Lite 656 Fibre provides lower dispersion and dispersion slope which can be advantageous for metro networks.It is also compliant with current 100G/200G and beyond coherent technologies for long-haul networks.

Parameters

Optical Parameters		
Attenuation Max. (dB/km)		
1550 nm		≤ 0.21
1625 nm		≤ 0.24
Macro bend loss (dB)		
100 turns 30 mm radius	1550nm	≤ 0.05
1 turn 16 mm radius	1625nm	≤ 0.05
100 turns 30 mm radius		≤ 0.1
Mode Field Diameter (µm) at 1550 nm		9.2 ± 0.5
Cable cutoff wavelength (nm)		≤ 1450
Dispersion at 1460 nm (ps/nm.km)		1.00 to 4.60
Dispersion at 1530 nm (ps/nm.km)		3.02 to 8.24
Dispersion at 1550nm (ps/nm.km)		3.60 to 9.28
Dispersion at 1565 nm (ps/nm.km)		3.80 to 10.13
Dispersion at 1625 nm (ps/nm.km)		4.58 to 13.43
PMD LDV (ps/√ km)		≤ 0.06
Individual Fibre PMD* (ps/√ km) * Individual PMD values may change when cabled		≤ 0.1
Point of discontinuities 1550nm & 1625nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (µm)		125 ± 0.7
Core Clad Concentricity error (µm)		≤ 0.5
Cladding Non-circularity (%)		≤ 0.8
Coating Diameter (uncoloured) (µm)		242 ± 5
Coating Cladding Concentricity error (µm)		≤ 12
Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 1550, 1625 nm (dB/km)
Temperature humidity cycling	-10°C to +85°C, 95% RH	
Water Immersion	30 days, 23 ± 2°C	
High temperature and humidity aging	30 days 85 ± 2°C, 85% RH	
Accelerated Aging (Temperature)	30 days, 85 ± 2°C	
Mechanical Characteristics		
Proof Test Levels		≥ 100 kpsi (0.7GN/m2). This is equivalent to 1% strain
Fibre Curl (m)		≥ 4
Performance Characteristics		
Coating strip force		≥ 1.3 N (0.3 lbf) and ≤ 5.0 N (1.1 lbf)
Dynamic fatigue parameter (N_d)		≥ 20
Effective group index of refraction (Typical Values)		1.470 at 1550 nm
Attenuation in the wavelength region from 1525 - 1575 nm about theattenuation at 1550 nm (dB/km)		≤ 0.02

HD A2 200 Fibre

ITU-T G.657.A2 Single Mode Optical Fibre

Product Description

HD A2 200 fibre is an ultra-low bend loss ITU-T G.657.A2 compliant fibre with a 200-micron diameter. This fibre enables very high density (HD) cables with small diameters which allow service providers to maximize the number of fibres that can be installed in existing ducts or to minimize the size or even the need for new ducting and related infrastructure. In addition, the induced loss of this fibre at the tightest bends is a factor of two lower than the ITU-T G.657.A2 standard, providing installation and operational efficiencies in high density networks. This ultra-low bend loss extends to the longer wavelengths required for future system upgrades. Dense fibre technologies with ultra-low bend loss allow operators to optimize their physical asset utilization and future proof their high-density networks.

Product Application

The need to install more fibre in less space has led to wider application of bend insensitive fibres and reduced diameter fibres. HD A2 200 fibre is suitable for use in networks where very-high-density cables and accessories are required.

Product Benefits

- Maximizes the number of fibres that can be installed in existing infrastructure – By enabling more than double the number of fibres in the same cable diameter.
- Minimizes the space required in ducts and related infrastructure – By reducing cable cross section area by up to 30% for the same number of fibres.
- Provides installation and operational efficiencies and enables the use of compact closures and accessories - Due to ultra-low bend loss.
- Future system ready - In that low bend loss extends to the longer wavelengths required for future system upgrades.
- Compatible with legacy networks – Due to low loss splicing to G.652.D and G.657.A1 fibres.

Product Specifications

Optical Parameters		
Attenuation Max. (dB/km)		
1310 nm		≤ 0.35
1383 nm		
1550 nm		≤ 0.21
1625 nm		≤ 0.23
Macro bend loss (dB)		
1 turn 7.5 mm radius	1550nm	≤ 0.2
1 turn 10 mm radius		≤ 0.1
10 turns 15 mm radius		≤ 0.03
1 turn 7.5 mm radius	1625nm	≤ 0.5
1 turn 10 mm radius		≤ 0.2
10 turns 15 mm radius		≤ 0.1
Mode Field Diameter (µm) at 1310 nm		8.6 ± 0.4
Mode Field Diameter (µm) at 1550 nm		9.6 ± 0.5
Cable cut-off wavelength (nm)		≤ 1260
Zero dispersion wavelength (nm)		1300 to 1324
Dispersion at 1550nm (ps/nm.km)		≤ 18
Zero Dispersion Slope (ps/nm^2.km)		≤ 0.092
PMD LDV (ps/√ km)		≤ 0.06
Individual Fibre PMD* (ps/√ km) * Individual PMD values may change when cabled		≤ 0.1
Point of discontinuities 1310nm & 1550nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (µm)		125 ± 0.7
Core Clad Concentricity error (µm)		≤ 0.5
Cladding Non-circularity (%)		≤ 0.7
Coating Diameter (uncoloured) (µm)		190 ± 10
Coating Cladding Concentricity error (µm)		≤ 10
Mechanical & Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 1310, 1550, 1625 nm (dB/km)
Temperature humidity cycling	-10°C to +85°C, 95% RH	
Water Immersion	30 days, 23 ± 2°C	
High temperature and humidity aging	30 days 85 ± 2°C, 85% RH	
Accelerated Aging (Temperature)	30 days, 85 ± 2°C	

Proof Testing	≥ 125 (kpsi) (0.86GN/m²) (This is equivalent to 1.2% strain)
Fibre Curl (m)	≥ 4
Performance Characteristics	
Coating strip force	≥ 1.0 N (0.2 lbf) and≤ 5.0 N (1.1 lbf)
Dynamic fatigue parameter (N_d)	≥ 20
Effective group index of refraction (Typical Values)	1.4678 at 1310 nm 1.4685 at 1550 nm 1.4689 at 1625 nm
Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm (dB/km)	≤ 0.03
Attenuation increase in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km)	≤ 0.02

HD A2 250 Fibre

ITU-T G.657.A2 Single Mode Optical Fibre

Product Description

HD A2 250 fibre is an ultra-low bend loss ITU-T G.657.A2 compliant fibre with a 250-micron diameter. The inducedloss of this fibre at the tightest bends is a factor of two lower than the ITU-T G.657.A2 standard providing installation and operational efficiencies in high density (HD) networks. This ultra-low bend loss extends to the longer wavelengths required for future system upgrades. Fibres with ultra-low bend loss allow operators to optimize their physical asset utilization and future proof their high-density networks.

Product Application

The need to improve network installation and operational efficiencies has led to wider application of bend-insensitive fibres. HD A2 250 fibre is suitable for use in any high-density network.

Product Benefits

- Provides installation and operational efficiencies and enables the use of compact closures and accessories - Due to ultra-low bend loss.
- Future system ready - In that low bend loss extends to the longer wavelengths required for future system upgrades.
- Compatible with legacy networks - Due to low loss splicing to G.652.D and G.657.A1 fibres

Product Specifications

Optical Parameters		
Attenuation Max. (dB/km)		
1310 nm		≤ 0.35
1383 nm		
1550 nm		≤ 0.21
1625 nm		≤ 0.23
Macro bend loss (dB)		
1 turn 7.5 mm radius	1550nm	≤ 0.2
1 turn 10 mm radius		≤ 0.1
10 turns 15 mm radius		≤ 0.03
1 turn 7.5 mm radius	1625nm	≤ 0.5
1 turn 10 mm radius		≤ 0.2
10 turns 15 mm radius		≤ 0.1
Mode Field Diameter (µm) at 1310 nm		8.6 ± 0.4
Mode Field Diameter (µm) at 1550 nm		9.6 ± 0.5
Cable cut-off wavelength (nm)		≤ 1260
Zero dispersion wavelength (nm)		1300 to 1324
Dispersion at 1550nm (ps/nm.km)		≤ 18
Zero Dispersion Slope (ps/nm².Km)		≤ 0.092
PMD LDV (ps/√.km)		≤ 0.06
Individual Fibre PMD* (ps/√.km) * Individual PMD values may change when cabled		≤ 0.1
Point of discontinuities 1310nm & 1550nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (µm)		125 ± 0.7
Core Clad Concentricity error (µm)		≤ 0.5
Cladding Non-circularity (%)		≤ 0.8
Coating Diameter (uncoloured) (µm)		242 ± 5

Coating Cladding Concentricity error (µm)		≤ 10
Mechanical & Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 1310, 1550, 1625 nm (dB/km)
Temperature humidity cycling	-10°C to +85°C, 95% RH	
Water Immersion	30 days, 23 ± 2°C	
High temperature and humidity aging	30 days, 85 ± 2°C, 85% RH	
Accelerated Aging (Temperature)	30 days, 85 ± 2°C	
Proof Testing		≥ 125 (kpsi) (0.86GN/m²) (This is equivalent to 1.2% strain)
Fibre Curl (m)		≥ 4
Performance Characteristics		
Coating strip force		≥ 1.3 N (0.3 lbf) and ≤ 5.0 N (1.1 lbf)
Dynamic fatigue parameter (N^d)		≥ 20
Effective group index of refraction (Typical Values)		1.4678 at 1310 nm 1.4685 at 1550 nm 1.4689 at 1625 nm
Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm (dB/km)		≤ 0.03
Attenuation increase in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km)		≤ 0.02

HD B3 250 Fibre

ITU-T G.657.B3 Single Mode Optical Fibre

Product Description

HD B3 250 fibre is an ITU-T G.657.B3 compliant fibre with low bend loss down to a 5 mm bend radius which is the tightest bend radius for the high-density fibre family. This low bend loss extends to the longer wavelengths required for future system upgrades. Fibres with low bend loss at tight bend radius help operators realize installation and operational efficiencies in their in-building networks.

Product Application

HD B3 250 fibre is designed for use in cables for routing around tight corners and through tight spaces typical for in-building installations.

Product Benefits

- Provides installation and operational efficiencies for in-building networks - due to low bend loss at tight bend radius.
- Future system ready - In that low bend loss extends to the longer wavelengths required for future system upgrades.
- Compatible with legacy networks - due to low loss splicing to G.652.D and G.657.A1 and fibres.

Parameters

Optical Parameters		
Attenuation Max. (dB/km)		
1310 nm		≤ 0.35
1383 nm		
1550 nm		≤ 0.21
1625 nm		≤ 0.23
Macro bend loss (dB)		
1 turn 5.0 mm radius	1550nm	≤ 0.15
1 turn 7.5 mm radius		≤ 0.08
1 turn 10 mm radius		≤ 0.03
1 turn 5.0 mm radius	1625nm	≤ 0.45
1 turn 7.5 mm radius		≤ 0.25
1 turn 10 mm radius		≤ 0.1
Mode Field Diameter (µm) at 1310 nm		8.6 ± 0.4
Mode Field Diameter (µm) at 1550 nm		9.5 ± 0.5
Cable cutoff wavelength (nm)		≤ 1260
Zero dispersion wavelength (nm)		1300 to 1350
Dispersion at 1550nm (ps/nm.km)		≤ 18
Zero Dispersion Slope (ps/nm².km)		≤ 0.092
PMD LDV (ps/√ km)		≤ 0.06
Individual Fibre PMD* (ps/√ km) * Individual PMD values may change when cabled		≤ 0.1

Point of discontinuities 1310nm & 1550nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (µm)		125 ± 0.7
Core Clad Concentricity error (µm)		≤ 0.5
Cladding Non-circularity (%)		≤ 0.7
Coating Diameter (uncoloured) (µm)		242 ± 5
Coating Cladding Concentricity error (µm)		≤ 12
Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 1310, 1550, 1625 nm (dB/km)
Temperature humidity cycling	-10°C to +85°C, 95% RH	
Water Immersion	30 days, 23 ± 2°C	
High temperature and humidity aging	30 days 85 ± 2°C, 85% RH	
Accelerated Aging (Temperature)	30 days, 85 ± 2°C	
Mechanical Characteristics		
Proof Testing		≥ 125 (kpsi) (0.86GN/m²) (This is equivalent to 1.2% strain)
Fibre Curl (m)		≥ 4
Performance Characteristics		
Coating strip force		≥ 1.3 N (0.3 lbf) and ≤ 5.0 N (1.1 lbf)
Dynamic fatigue parameter (N_d)		≥ 20
Effective group index of refraction (Typical Values)		1.4678 at 1310 nm 1.4685 at 1550 nm 1.4689 at 1625 nm
Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm (dB/km)		≤ 0.03
Attenuation in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km)		≤ 0.02

Nova 250 Fibre

ITU-T G.657.A1 Single Mode Optical Fibre

Product Description

Nova 250 Optical Fibre was one of the first to offer ITU-T G.657.A1 bend performance with a 9.1 micron standard mode field diameter, ensuring complete compatibility with existing networks. The low induced loss of this fibre under tight bends provides installation and operational efficiencies in high density networks. This low bend loss extends to the longer wavelengths required for future system upgrades. Fibres with low bend loss allow operators to optimize their physical asset utilization and future proof their high-density networks.

Product Application

The need to improve network installation and operational efficiencies has led to wider application of bend-insensitive fibres. Nova 250 Optical Fibre is suitable for use in any network where full backward compatibility with deployed fibres is required.

Product Benefits

- Fully compatible with G.652.D and Stellar fibres - due to 9.1 micron standard mode field diameter.
- Increases reach and/or system margin - due to low attenuation.
- Provides installation and operational efficiencies in high density networks - due to low bend loss.
- Future system ready - in that low bend loss extends to longer wavelengths.

Product Specifications

Optical Parameters		
Attenuation Max. (dB/km)		
1310 nm		≤ 0.33
1383 nm# # After hydrogen aging according to IEC-60793-2-50 regarding the B-652.D fibre category		≤ 0.31
1550 nm		≤ 0.19
1625 nm		≤ 0.21
Macro bend loss (dB)		
1 turn 10 mm radius	1550nm	≤ 0.5
10 turns 15 mm radius		≤ 0.1
1 turn 16 mm radius		≤ 0.03
1 turn 10 mm radius		≤ 1.5

10 turns 15 mm radius	1625nm	≤ 0.3
Mode Field Diameter (μm) at 1310 nm		9.1 ± 0.4
Mode Field Diameter (μm) at 1550 nm		10.3 ± 0.5
Cable cut-off wavelength (nm)		≤ 1260
Zero dispersion wavelength (nm)		1300 to 1324
Dispersion at 1550nm (ps/nm.km)		≤ 17.5
Zero Dispersion Slope (ps/nm^2.km)		≤ 0.092
PMD LDV (ps/√ km)		≤ 0.06
Individual Fibre PMD* (ps/√ km) * Individual PMD values may change when cabled		≤ 0.1
Point of discontinuities 1310nm & 1550nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (μm)		125 ± 0.7
Core Clad Concentricity error (μm)		≤ 0.5
Cladding Non-circularity (%)		≤ 0.7
Coating Diameter (uncoloured) (μm)		242 ± 5
Coating Cladding Concentricity error (μm)		≤ 12
Mechanical & Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 1310, 1550, 1625 nm (dB/km)
Temperature humidity cycling	-10°C to +85°C, 95% RH	
Water Immersion	30 days, 23 ± 2°C	
High temperature and humidity aging	30 days, 85 ± 2°C, 85% RH	
Accelerated Aging (Temperature)	30 days, 85 ± 2°C	
Proof Testing		≥ 125 (kpsi) (0.86GN/m^2) (This is equivalent to 1.2% strain)
Fibre Curl (m)		≥ 4
Performance Characteristics		
Coating strip force		≥ 1.3 N (0.3 lbf) and ≤ 5.0 N (1.1 lbf)
Dynamic fatigue parameter (N_d)		≥ 20
Effective group index of refraction (Typical Values)		1.4670 at 1310 nm 1.4675 at 1550 nm 1.4680 at 1625 nm
Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm (dB/km)		≤ 0.03
Attenuation increase in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km)		≤ 0.02

Stellar 200 Fiber

ITU-T G.657.A2 Single Mode Optical Fiber

Product Description

Stellar 200 Fiber is the first to offer ITU-T G.657.A2 bend performance with a 9.1-micron standard mode field diameter, ensuring complete compatibility with existing networks. The induced loss of this fiber at the tightest bends is a factor of two lower than the ITU-T G.657.A2 standard, providing installation and operational efficiencies in high density networks. This low bend loss extends to the longer wavelengths required for future system upgrades. The 200um diameter of this fiber enables very high-density cables with small diameters which allow service providers to maximize the number of fibers that can be installed in existing ducts or to minimize the size or even the need for new ducting and related infrastructure. Low bend loss and reduced diameter fibers allow operators to optimize their physical asset utilization and future proof their high-density networks.

Product Application

The need to install more fiber in less space has led to wider application of bend insensitive fibers and reduced diameter fibers. Stellar 200 Optical Fiber is suitable for use in high density networks where full backward compatibility with existing fibers is required.

Product Benefits

- Completely compatible with existing networks built with G.652.D and G.657.A1 fibers - due to 9.1 micron standard mode field diameter.
- Provides installation and operational efficiencies and enables the use of compact closures and accessories - due to low bend loss.
- Future system ready - In that low bend loss extends to the longer wavelengths required for future system upgrades.
- Increases the number of fibers that can be installed in existing infrastructure - by enabling close to double the number of fibers in the same cable diameter.
- Minimizes the space required in ducts and related infrastructure - by enabling reduction in cable cross section area by about 30% for the same number of fibers.

Product Specifications

Optical Parameters		
Attenuation Max. (dB/km)		
1310 nm		≤ 0.33
1383 nm		≤ 0.31
1550 nm		≤ 0.19
1625 nm		≤ 0.21
Macro bend loss (dB)		
1 turn 7.5 mm radius	1550nm	≤ 0.2
1 turn 10 mm radius		≤ 0.1
10 turns 15 mm radius		≤ 0.03
1 turn 7.5 mm radius	1625nm	≤ 0.5
1 turn 10 mm radius		≤ 0.2
10 turns 15 mm radius		≤ 0.1
Mode Field Diameter (μm) at 1310 nm		9.1 ± 0.4
Mode Field Diameter (μm) at 1550 nm		10.3 ± 0.5
Cable cut-off wavelength (nm)		≤ 1260
Zero dispersion wavelength (nm)		1300 to 1324
Dispersion at 1550nm (ps/nm.km)		≤ 18
Zero Dispersion Slope (ps/nm^2.km)		≤ 0.092
PMD LDV (ps/√ km)		≤ 0.06
Individual Fiber PMD* (ps/√ km) * Individual PMD values may change when cabled		≤ 0.1
Point of discontinuities 1310nm & 1550nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (μm)		125 ± 0.7
Core Clad Concentricity error (μm)		≤ 0.5
Cladding Non-circularity (%)		≤ 0.7
Coating Diameter (uncoloured) (μm)		190 ± 10
Coating Cladding Concentricity error (μm)		≤ 10
Mechanical & Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 1310, 1550, 1625 nm (dB/km)
Temperature humidity cycling	-10°C to +85°C, 95% RH	
Water Immersion	30 days, 23 ± 2°C	
High temperature and humidity aging	30 days, 85 ± 2°C, 85% RH	
Accelerated Aging (Temperature)	30 days, 85 ± 2°C	
Proof Testing		≥ 125 (kpsi) (0.86GN/m^2) (This is equivalent to 1.2% strain)
Fiber Curl (m)		≥ 4
Performance Characteristics		
Coating strip force		≥ 1.0 N (0.2 lbf) and ≤ 5.0 N (1.1 lbf)
Dynamic fatigue parameter (N_d)		≥ 20
Effective group index of refraction (Typical Values)		1.4672 at 1310 nm 1.4679 at 1550 nm 1.4684 at 1625 nm
Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm (dB/km)		≤ 0.03
Attenuation increase in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km)		≤ 0.02

Stellar 200 Fiber

ITU-T G.657.A2 Single Mode Optical Fiber

Product Description

Stellar 200 Fiber is the first to offer ITU-T G.657.A2 bend performance with a 9.1-micron standard mode field diameter, ensuring complete compatibility with existing networks. The induced loss of this fiber at the tightest bends is a factor of two lower than the ITU-T G.657.A2 standard, providing installation and operational efficiencies in high density networks. This low bend loss extends to the longer wavelengths required for future system upgrades. The 200um diameter of this fiber enables very high-density cables with small diameters which allow service providers to maximize the number of fibers that can be installed in existing ducts or to minimize the size or even the need for new ducting and related infrastructure. Low bend loss and reduced diameter fibers allow operators to optimize their physical asset utilization and future proof their high-density networks.

Product Application

The need to install more fiber in less space has led to wider application of bend insensitive fibers and reduced diameter fibers. Stellar 200 Optical Fiber is suitable for use in high density networks where full backward compatibility with existing fibers is required.

Product Benefits

- Completely compatible with existing networks built with G.652.D and G.657.A1 fibers - due to 9.1 micron standard mode field diameter.
- Provides installation and operational efficiencies and enables the use of compact closures and accessories - due to low bend loss.
- Future system ready - In that low bend loss extends to the longer wavelengths required for future system upgrades.
- Increases the number of fibers that can be installed in existing infrastructure - by enabling close to double the number of fibers in the same cable diameter.
- Minimizes the space required in ducts and related infrastructure - by enabling reduction in cable cross section area by about 30% for the same number of fibers.

Product Specifications

Optical Parameters		
Attenuation Max. (dB/km)		
1310 nm		≤ 0.33
1383 nm		≤ 0.31
1550 nm		≤ 0.19
1625 nm		≤ 0.21
Macro bend loss (dB)		
1 turn 7.5 mm radius	1550nm	≤ 0.2
1 turn 10 mm radius		≤ 0.1
10 turns 15 mm radius		≤ 0.03
1 turn 7.5 mm radius	1625nm	≤ 0.5
1 turn 10 mm radius		≤ 0.2
10 turns 15 mm radius		≤ 0.1
Mode Field Diameter (μm) at 1310 nm		9.1 ± 0.4
Mode Field Diameter (μm) at 1550 nm		10.3 ± 0.5
Cable cut-off wavelength (nm)		≤ 1260
Zero dispersion wavelength (nm)		1300 to 1324
Dispersion at 1550nm (ps/nm.km)		≤ 18
Zero Dispersion Slope (ps/nm^2.km)		≤ 0.092
PMD LDV (ps/√ km)		≤ 0.06
Individual Fiber PMD* (ps/√ km) * Individual PMD values may change when cabled		≤ 0.1
Point of discontinuities 1310nm & 1550nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (μm)		125 ± 0.7
Core Clad Concentricity error (μm)		≤ 0.5
Cladding Non-circularity (%)		≤ 0.7
Coating Diameter (uncoloured) (μm)		190 ± 10
Coating Cladding Concentricity error (μm)		≤ 10
Mechanical & Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 1310, 1550, 1625 nm (dB/km)
Temperature humidity cycling	-10°C to +85°C, 95% RH	
Water Immersion	30 days, 23 ± 2°C	
High temperature and humidity aging	30 days, 85 ± 2°C, 85% RH	
Accelerated Aging (Temperature)	30 days, 85 ± 2°C	
Proof Testing		≥ 125 (kpsi) (0.86GN/m^2) (This is equivalent to 1.2% strain)
Fiber Curl (m)		≥ 4
Performance Characteristics		
Coating strip force		≥ 1.0 N (0.2 lbf) and ≤ 5.0 N (1.1 lbf)
Dynamic fatigue parameter (N_d)		≥ 20
Effective group index of refraction (Typical Values)		1.4672 at 1310 nm 1.4679 at 1550 nm 1.4684 at 1625 nm
Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm (dB/km)		≤ 0.03
Attenuation increase in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km)		≤ 0.02

Stellar 250 Fiber

ITU-T G.657.A2 Single Mode Optical Fiber

Product Description

Stellar 250 Fiber is the first to offer ITU-T G.657.A2 bend performance with a 9.1 micron standard mode field diameter, ensuring complete compatibility with existing networks. The induced loss of this fiber at the tightest bends is a factor of twolower than the ITU-T G.657.A2 standard providing installation and operational efficiencies in high density (HD) networks.

This low bend loss extends to the longer wavelengths required for future system upgrades. Fibers with low bend loss fibersallow operators to optimize their physical asset utilization and future proof their high-density networks.

Product Application

The need to improve network installation and operational efficiencies has led to wider application of bend-insensitive fibers. Stellar 250 Optical Fiber is suitable for use in any network where full backward compatibility with deployed fibers is required.

Product Benefits

- Fully compatible with existing networks built with G.652.D and G.657.A1 fibers - due to 9.1 micron standard modefield diameter.
- Provides installation and operational efficiencies in high density networks - due to very low bend loss.
- Future system ready - in that low bend loss extends to longer wavelengths.

Product Specifications

Optical Parameters		
Attenuation Max. (dB/km)		
1310 nm		≤ 0.33
1383 nm		≤ 0.31
1550 nm		≤ 0.19
1625 nm		≤ 0.21
Macro bend loss (dB)		
1 turn 7.5 mm radius	1550nm	≤ 0.2
1 turn 10 mm radius		≤ 0.1
10 turns 15 mm radius		≤ 0.03
1 turn 7.5 mm radius	1625nm	≤ 0.5
1 turn 10 mm radius		≤ 0.2
10 turns 15 mm radius		≤ 0.1
Mode Field Diameter (µm) at 1310 nm		9.1 ± 0.4
Mode Field Diameter (µm) at 1550 nm		10.3 ± 0.5
Cable cut-off wavelength (nm)		≤ 1260
Zero dispersion wavelength (nm)		1300 to 1324
Dispersion at 1550nm (ps/nm.km)		≤ 18
Zero Dispersion Slope (ps/nm^2.km)		≤ 0.092
PMD LDV (ps/√ km)		≤ 0.06
Individual Fiber PMD* (ps/√ km) * Individual PMD values may change when cabled		≤ 0.1
Point of discontinuities 1310nm & 1550nm (dB)		≤ 0.05
Geometrical Parameters		
Cladding Diameter (µm)		125 ± 0.7
Core Clad Concentricity error (µm)		≤ 0.5
Cladding Non-circularity (%)		≤ 0.7
Coating Diameter (uncoloured) (µm)		242 ± 5
Coating Cladding Concentricity error (µm)		≤ 12
Mechanical & Environmental Characteristics		
Temperature dependence	-60°C to +85°C	≤ 0.05 (Induced Attenuation at 1310, 1550, 1625 nm (dB/km)
Temperature humidity cycling	-10°C to +85°C, 95% RH	
Water Immersion	30 days, 23 ± 2°C	
High temperature and humidity aging	30 days 85 ± 2°C, 85% RH	
Accelerated Aging (Temperature)	30 days, 85 ± 2°C	
Proof Testing		≥ 125 (kpsi) (0.86GN/m^2) (This is equivalent to 1.2% strain)
Fiber Curl (m)		≥ 4
Performance Characteristics		
Coating strip force		≥ 1.3 N (0.3 lbf) and ≤ 5.0 N (1.1 lbf)
Dynamic fatigue parameter (N_d)		≥ 20

Effective group index of refraction (Typical Values)	1.4672 at 1310 nm 1.4679 at 1550 nm 1.4684 at 1625 nm
Attenuation in the wavelength region from 1285 - 1330 nm in reference to the attenuation at 1310 nm (dB/km)	≤ 0.03
Attenuation increase in the wavelength region from 1525 - 1575 nm in reference to the attenuation at 1550 nm (dB/km)	≤ 0.02