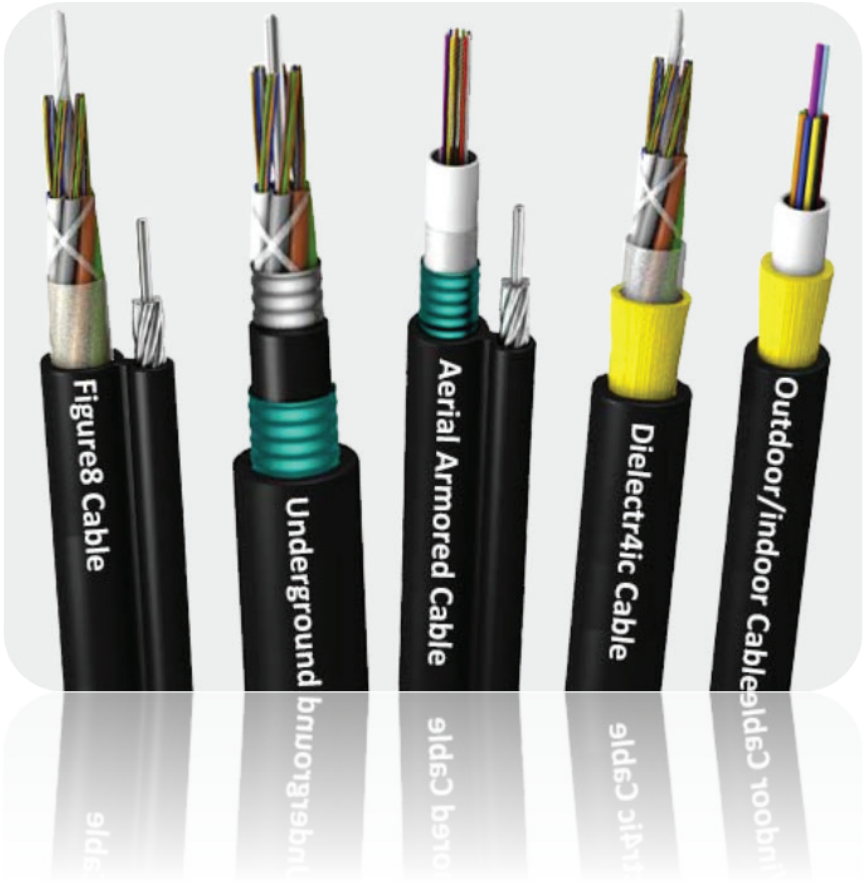
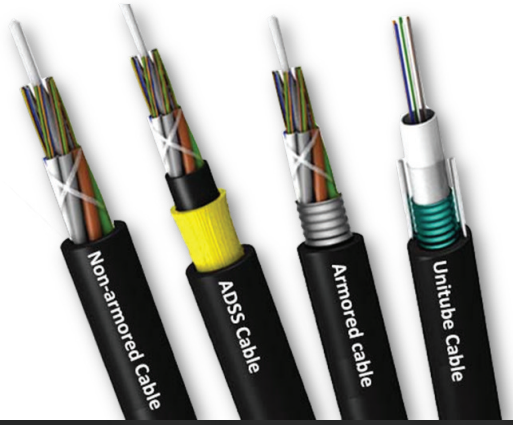
Setting the Standards

OXIN



Fiber Optic Cable

Catalogue



About Oxin Group

Oxin is a leading provider of fiber optic connectivity products used in data communications and Telecommunication networks.

The Company designs, develops, manufactures and sells fiber optic cabling, connectivity, management and systems solutions. It offers a broad range of products directly and through distributors, installers and OEM partners.

Oxin's growth has been founded on quality products, rapid response and excellent customer service. The Company is ISO9001:2000 approved and provides products conformant to international standards. Oxin is dedicated to value and continuous improvement of all its products and services.

With headquarters in Paris, Oxin has manufacturing activities in the France, China and US operations. The Company has both volume and quick response manufacturing capabilities and is able to support the global logistics requirements of its customers. Oxin provides customised and customer branded products for OEM customers.

Oxin products are available directly from Oxin or from our worldwide distribution partners.

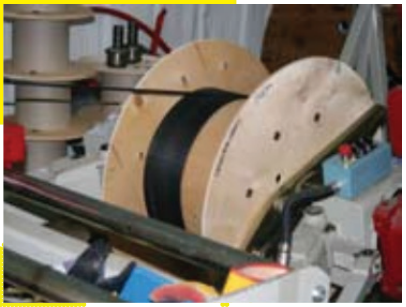
Setting the Standards

The Oxin fiber optic cable range includes simplex, suplex and flat ribbon patchcords, tight buffered, single loose tube and multi-loose tube distribution cables for internal and external applications as well as many variations of armoured, aerial, rodent resistant and water blocked cables.

The Oxin range has the solution for almost any application and can offer a cut to length service for specific fiber optic cables.

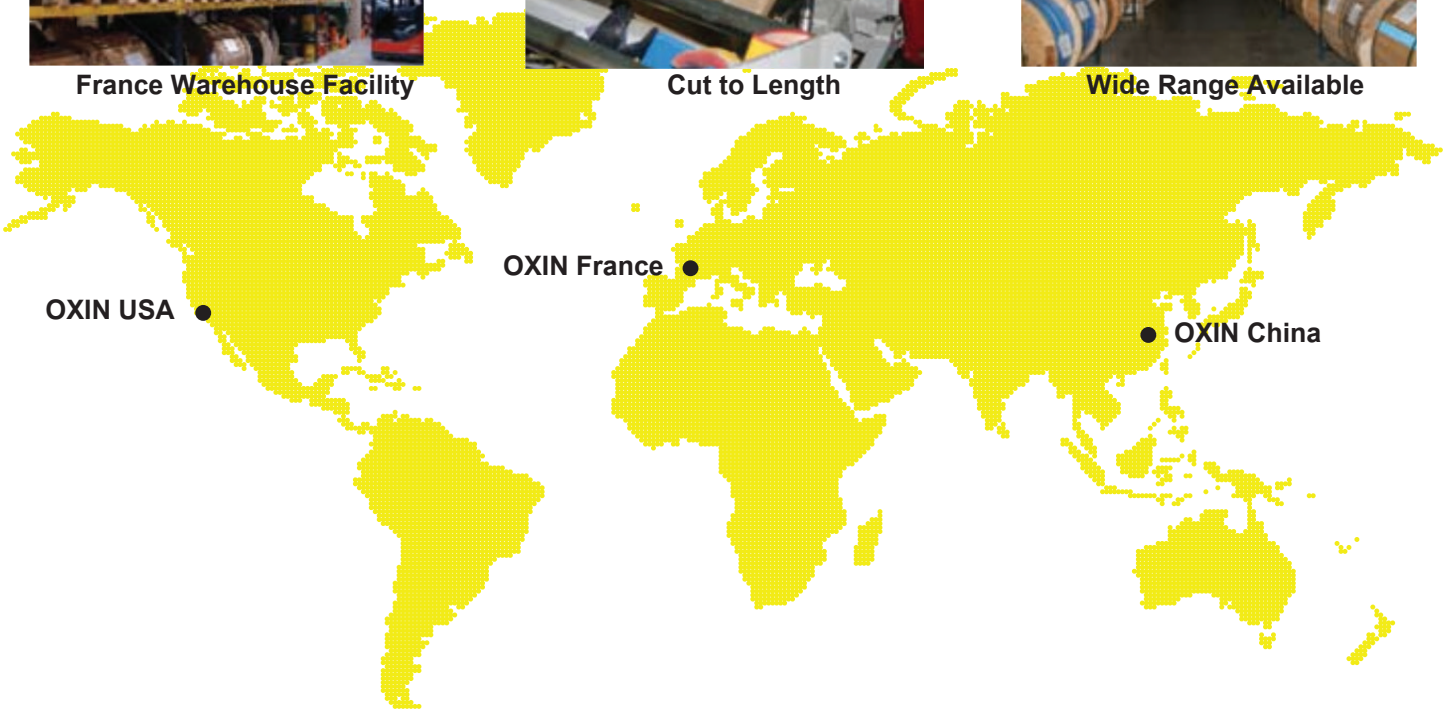
Please call the sales team for more information.

France Warehouse Facility



Cut to Length

Wide Range Available



Technical References

Cable Jacket Classification

Poly Vinyl Chloride (PVC) Cable
Cables with Poly Vinyl Chloride (PVC) jacket are the most commonly used and are often referred to as general purpose cables. These types of cables are intended for installations with no particular fire safety code requirements. In a fire, PVC-coated wires can form HCL fumes; the chlorine serves to scavenge free radicals and is the source of the material's fire retardance. While HCL fumes can also pose a health hazard in their own right, HCL breaks down on surfaces. Particularly in areas where the air is cool enough to breathe, and is not available for inhalation.

High Devcity Polyethylene (HDPE) Cable
HDPE is the high dencity version of PE plastic. It is harder, stronger and a little heavier than LDPE, but less ductile. The use of UV-stabiliser (carbon black) improves its weather resistance but turns it black. HDPE is also more opaque and it can withstand rather higher temperatures (120°C for short periods, 110°C continusly). HDPE has many advantages: chemical and corrosion-resistant, light-weight, low moisture absorption, non-staining, thermoforming performance, non-toxic and high tensile strength.

Fire Retardant Polyvinylchloride (FR-PVC) Cable
FR-PVC insulation has better fire retardant properties than normal PVC. It has significant advantages in terms of lower acid emissions and smoke generation. The amount of chlorine in the flame-retardant PVC (FRPVC) jacket cable is significantly higher (5%) than the conventional PVC jacket cable. FRPVC has good electrical insulation properties below 100°C.

Low Smoke ZeroHalogen (LSZH) Cable
Cables with LSZH jacket are intended for applications where both low smoke and low corrosive gases are needed. Used in shipboard applicatios and computer networking rooms where toxic or acidic smoke and fumes can injure peaple and/or equipment. Examples of Halogens include Flurine, Chlorine, Bromine, and Iodine. These materials when burned produce acidic smoke that can harm people and computer equipment. These cables will self extinguish but cannot pass UL-910 or UL-1666 for a plenum or riser rating. However, LSZH cables have not been specified by NEC for use in installations in the US, these cables are used primarily in Europe.

General Purpose (CM, CMG, CMX) Cable
Communications cable used for general purpose. Intended for general use within buildings in accordance with the NEC Articlae 800.53(E)(1). These cables do not spread flame to the top of a tray in the Vertical-Tray Flame Test. As a general rule, CM and CMG cables are suitable for installation in cable trays and other non-plenum, non-riser areas. These cables will burn and partially self extinguish. Often these cables are used for workstation cables and patch cords. These cables comply with UL-1581 testing.

Riser (CMR) Cable
Cable that is suitable for use in a riser application. In commercial buildings, a riser is space used by telecommunications infrastructure, connecting from one floor to another. Defined for usage in vertical tray applications such as cable runs between floors through cable risers or in elevator shafts in accordance with Section 800:53(B) of NEC. These cables must traveling up the cable in a vertical burn test. These cables comply with UL-1666.

Plenum (CMR) Cable
Cables with plenum rated jackets are intended for installations where cables are routed through an air handling conduit, often called a plenum. Plenum cables must self extingluish and not reignite. They also produce less smoke than traditional PVC cables. The smoke and fumes are toxic.
This requirement is usually imposed by fire safety codes and is related to the stringent burn test that this type of cable must meet. These cables comply with NFPA-262 and UL-910.

Polyethilen (PE) Cable
PE is a semi-crystal thermoplastic material and one of the most commonly used plastics. It is generally ductile, flexible and has low strength. There are two basic families: LDPE (Low Dencity Polyethylene), and HDPE (High Devcity Polyethylene).

Technical References

Cable Armour

Metallic Armour
Metallic armour provides a tough protective covering for wires and cables. The type, thickness, and kind of metal used to make the armour depend on three factors:
1. The use of the conductors
2. the environment where the conductors are to be used
3. the amount of rough treatment that is expected

Steel Tape Armour
Steel tape covering is wrapped around the cable and then covered with a serving of jute. There are two types of steel tape armour: onterlocking armour and flat-band armour.

Interlocked Armour
Interlocking Armour is applied by wrapping the tape around the cable so that each turns is overlapped by the next and is locked in place. Galvanized steel or aluminium are the typical materials used for interlocking armour. However, other metals are sometimes used for specialized applications. The metals are sometimes used for specialized applications. The interlocking construction protects the cable from damage during and after installation. The armour may be applied directly over the insulation for over an inner jacket. Materials and costruction generally comply with the requirements of UL, CSA and/or ICEA.

Flat-Band Armour
Flat-Band armour consists of two layers of steel tape. The first layer is wrapped around the cable but is not overlapped. The second layer is then wrapped around the cable covering the area that was not covered by the first layer.

Continuosly Corrugated and Welded (CCW)
CCW armour is made by forming an aluminium strip into a circle along its length and then welding it at the seam. This smooth tube is then rolled or crimped to form ridges to prevent kinking while bending. This type of sheath provides an impervious seal against moisture and other chemicals as well as physical protection.

Wire Armour
Wire armour is a layer of wound metal wire wrapped around the cable. Wire armour is usually made of galvanized steel and can be used with the sheath as a buried cable where moisture is a concern or without the sheath

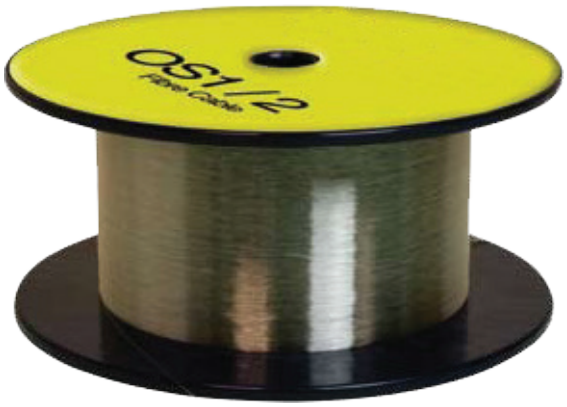
Wire Braid Armour
Wire-braid armour also known as basket0weave armour, is used when light and flexible protection is needed. Wire braid is constructed much like fibrous braid. The metal is woven directly over the cable as the outer covering. The metal used in this braid is galvanized steel, bronze, copper or aluminium. Wire-braid armour is mainly used for shipboards, because it provides the mechanical protection of an armoured cable, yet is much lighter in weight than other types of armoured coverings. Materials and construction generally comply with the requirements of IEEE Standard 45 and various military specifications.

Lead Sheath
For underground installations in conduits, ducts and raceways, a lead sheath may be used to protect insulated cables from moisture. In locations where corrosive conditions may be encountered, a jacket over the lead is recommended. Commercially pure lead is used on some lead-covered cables, which conforms to the requirements of ASTM B29 and ICEA S-19-81. Lead alloy sheaths, containing added tin or antimony are used where a harder sheath is desired or where vibration may be encountered.

Wire Serve
Wire serve armour is most commonly found on submarine cable because it provides excellent phycical protection from boat anchors, sharp rocks, sharks, etc. this type of armour normally consists of 1/8 to 1/4 inch diameter solid steel wires which are laid helically around the cicumference of the cable. Tar or asphalt (bitumen) is placed over and around the steel wires to reduce the effects of corrosion.

OS1 ITU-T G.652B 9/125
Singlemode Optical Fiber

OS 1|2 9/125



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Features and Benefits	1. WP Single mode optical fiber with doped silica core and silica cladding. Dual layer UV cured acrylic resin primary coatings 2. Dry water blocking technology within the tubes and under the cables' jacket 3. Full dielectric construction, no grounding required 4. Fiber and sub-units are color coded for easy identification 5. Length markings in meters for easy determination of cable length 6. Small diameter and bend radius facilitate installation in tight spaces 7. Fibers grouped into sets of 12 for maximum density 8. Available in fiber counts up to 144 fibers 9. Available in colored jackets for indoor only installations 10. Available in tight buffered, loose tube and ribbon cable 11. Operational in the entire 1260nm to 1625nm wavelength range 12. Operational in the 1360nm to 1460nm wavelength extended band 13. Low chromatic dispersion in the 1310nm operating window 14. Low attenuation at the 1383nm water peak region
Applications	• Supports 1Gb/s up to an indicative 5km in data networks • Supports high speed multi-channel video, data and voice services in metropolitan and access networks ATM, SONET and WDM

Certification and Compliance	
ISO/IEC 11801 OS-1	Information technology - Generic cabling for customer premises
IEC 60793-2-50 type B1.1	Sectional specification for category B1 single mode fibers
Telcordia GR-20-CORE	Generic Requirements for Optical Fiber and Optical Fiber Cable
ITU-T G.652B	Characteristics of a single-mode optical fiber and cable
ANSI/TIA/EIA-492CAAA	Detail Specification for Class IVa Dispersion-Unshifted Single-Mode Optical Fibers

OS 1|2 9/125

OS1 ITU-T G.652B 9/125
Singlemode Optical Fiber

	Parameter		Value
Geometrical Characteristics	Mode field diameter	@ 1310 nm	9.2 ± 0.4 µm
		@ 1550 nm	10.4 ± 0.8 µm
	Cladding diameter		125 ± 1.0 µm
	Cladding non circularity		≤ 0.7 %
	Coating non circularity		≤ 6.0 %
	Core/cladding concentricity error		≤ 0.5 µm
	Coating/cladding concentricity error		≤ 12 µm
	External diameter (uncoloured)		242 ± 8 µm
	Fiber curl radius		≥ 4 m

	Parameter		Value
Transmission Characteristics	Maximum attenuation fiber	@ 1310 nm	≤ 0.35 dB/km
		@ 1550 nm	≤ 0.21 dB/km
		@ 1625 nm	≤ 0.24 dB/km
	Maximum attenuation cabled	@ 1310 nm#	≤ 0.38 dB/km
		@ 1550 nm#	≤ 0.25 dB/km
		@ 1625 nm¤	≤ 0.28 dB/km
	Typical attenuation cabled	@ 1310 nm#	≤ 0.34 dB/km
		@ 1550 nm#	≤ 0.19 dB/km
		@ 1625 nm¤	≤ 0.25 dB/km
	Chromatic dispersion	@ 1310 nm	≤ 3.00 ps/(nm·km)
		@ 1550 nm	≤ 18.00 ps/(nm·km)
		@ 1625 nm	≤ 22.00 ps/(nm·km)
	Cabled cut off wavelength λ_{ccf}		≤ 1260 nm
	Zero dispersion wavelength λ_{0}		≥ 1300 nm
			≤ 1322 nm
	Zero dispersion slope S_{0}		≤ 0.090 ps/(nm^2·km)
	Numerical aperture (NA)		0.14 ± 0.015
	Polarization mode dispersion (PMD)		≤ 0.2 ps/√km
	Group refractive index	@ 1310 nm	1.4660-1.4677
		@ 1550 nm	1.4670-1.4682
		@ 1625 nm	1.4670-1.4682
	Fiber irregularities point and whole length	@ 1310 nm	≤ 0.05 dB
		@ 1550 nm	

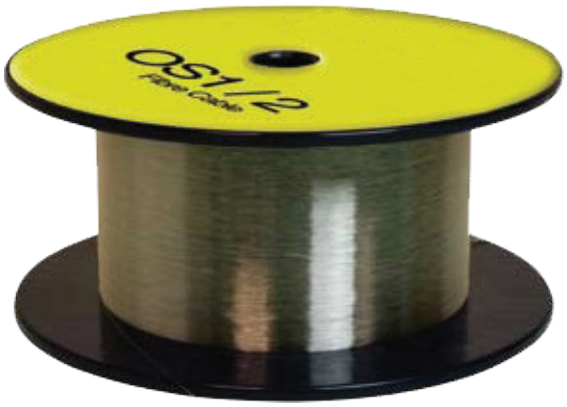
Standard OTDR testing wavelengths
¤ Testing at 1625nm on request

	Parameter	Value
Environmental Characteristics	Fiber temperature dependence -60°C to	≤ 0.1 dB/km
	Fiber temperature and humidity cycling -10°C to +85°C, 98% R.H.	≤ 0.1 dB/km
	Fiber water soak dependence 23°C for 30	≤ 0.2 dB/km

	Parameter	Value
Mechanical Characteristics	Proof test fiber strain for 1 second equivalent	1 %
	Bending dependence 100 turns 75 mm diameter 850 nm & 1300 nm	≤ 0.5 dB
	Typical mean coating strip force	1.0 to 3.0 N

OS2 ITU-T G.652D 9/125
Singlemode Optical Fiber

OS 1|2 9/125



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Applications	• Supports 1Gb/s up to an indicative 5km in data networks • Supports high speed multi-channel video, data and voice services in metropolitan and access networks ATM, SONET and WDM

Certification and Compliance	ISO/IEC 11801 OS-2	Information technology - Generic cabling for customer premises
	IEC 60793-2-50 type B1.3	Sectional specification for category B1 single mode fibers
	Telcordia GR-20-CORE	Generic Requirements for Optical Fiber and Optical Fiber Cable
	ITU-T G.652D	Characteristics of Low Water Peak (LWP) Single Mode Optical Fiber
	ANSI/TIA/EIA-492CAAB	Detail Specification for Class IVa Dispersion-Unshifted Single-Mode Optical Fibers with Low Water Peak

OS 1|2 9/125

OS2 ITU-T G.652D 9/125
Singlemode Optical Fiber

	Parameter		Value
Geometrical Characteristics	Mode field diameter	@2 1310 nm	9.2 ± 0.6 µm
		@ 1550 nm	10.1 ± 0.8 µm
	Cladding diameter		125 ± 0.9 µm
	Cladding non circularity		≤ 0.7 %
	Coating non circularity		≤ 6.0 %
	Core/cladding concentricity error		≤ 0.5 µm
	Coating/cladding concentricity error		≤ 12 µm
	External diameter (uncoloured)		242 ± 8 µm
	Fiber curl radius		≥ 4 m

	Parameter		Value
Transmission Characteristics	Maximum attenuation fiber	@ 1310 nm	≤ 0.35 dB/km
		@ 1550 nm	≤ 0.21 dB/km
		@ 1625 nm	≤ 0.24 dB/km
	Maximum attenuation cabled	@ 1310 nm#	≤ 0.38 dB/km
		@ 1550 nm#	≤ 0.25 dB/km
		@ 1625 nm¤	≤ 0.28 dB/km
	Typical attenuation cabled	@ 1310 nm#	≤ 0.34 dB/km
		@ 1550 nm#	≤ 0.19 dB/km
		@ 1625 nm¤	≤ 0.25 dB/km
	Chromatic dispersion	@ 1310 nm	≤ 3.00 ps/(nm·km)
		@ 1550 nm	≤ 18.00 ps/(nm·km)
		@ 1625 nm	≤ 22.00 ps/(nm·km)
	Cabled cut off wavelength λ_{ccf}		≤ 1260 nm
	Zero dispersion wavelength λ_0		≥ 1300 nm
			≤ 1322 nm
	Zero dispersion slope S_0		≤ 0.090 ps/(nm^2·km)
	Numerical aperture (NA)		0.14 ± 0.015
	Polarization mode dispersion (PMD)		≤ 0.2 ps/√km
	Group refractive index	@ 1310 nm	1.4660-1.4677
		@ 1550 nm	1.4670-1.4682
		@ 1625 nm	1.4670-1.4682
	Fiber irregularities point and whole length	@ 1310 nm	≤ 0.05 dB
		@ 1550 nm	

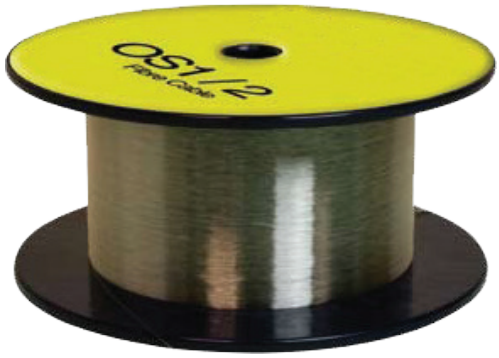
Standard OTDR testing wavelengths
¤ Testing at 1625nm on request

	Parameter	Value
Environmental Characteristics	Fiber temperature dependence -60°C to	≤ 0.1 dB/km
	Fiber temperature and humidity cycling -10°C to +85°C, 98% R.H.	≤ 0.1 dB/km
	Fiber water soak dependence 23°C for 30	≤ 0.2 dB/km

	Parameter	Value
Mechanical Characteristics	Proof test fiber strain for 1 second equivalent	1 %
	Bending dependence 100 turns 75 mm diameter 850 nm & 1300 nm	≤ 0.5 dB
	Typical mean coating strip force	1.0 to 3.0 N

OS2 ITU-T G.655 NZDSF
Singlemode Optical Fiber

OS 2 G.655



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Applications	• Supports 1Gb/s up to an indicative 5km in data networks • Supports high speed multi-channel video, data and voice services in metropolitan and access networks ATM, SONET and WDM

Certification and Compliance	ISO/IEC 11801 OS-2	Information technology - Generic cabling for customer
	IEC 60793-2-50 type B4	Sectional specification for category B4 single mode fibers
	Telcordia GR-20-CORE	Generic Requirements for Optical Fiber and Optical Fiber
	ITU-T G.655	Characteristics of a non-zero dispersion-shifted single-mode optical fiber and cable
	TIA-492E000 / TIA-492EA00	Blank Detail Specification for Class IVd Nonzero-Dispersion Single-Mode Optical Fiber for the 1550 nm Window

OS 2 G.655

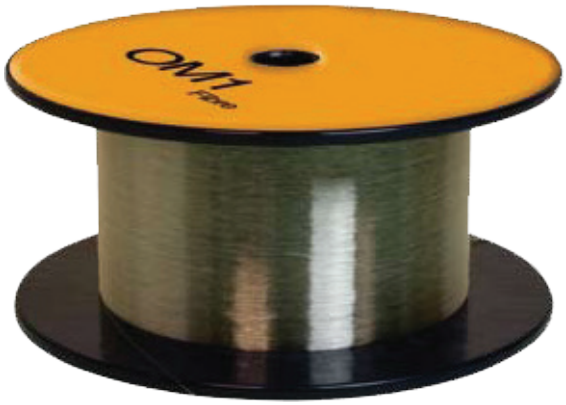
OS2 ITU-T G.655 NZDSF
Singlemode Optical Fiber

	Parameter		Value
Geometrical Characteristics	Mode field diameter	@ 1310 nm	8.6 ± 0.6 μm
		@ 1550 nm	9.5 ± 0.8 μm
	Cladding diameter		125 ± 0.7 μm
	Cladding non circularity		≤ 1 %
	Coating diameter		245 ± 7 μm
	Coating non circularity		≤ 6.0 %
	Core/cladding concentricity error		≤ 0.6 μm
	Coating/cladding concentricity error		≤ 12.0 μm
	Fiber curl radius		≥ 4 m
	Parameter		**Value**
Transmission Characteristics	Attenuation	@ 1550 nm	≤ 0.22 dB/km
		@ 1625 nm	≤ 0.24 dB/km
	Attenuation vs. wavelength Max. α difference		≤ 0.02 dB/km
	Zero dispersion wavelength λ_0		≤ 1520 nm
	Dispersion slope @ 1550 nm		≤ 0.084 ps/(nm^2·km)
	Typical dispersion slope @ 1550 nm		0.75 ps/(nm^2·km)
	PMD Maximum Individual Fiber Link Design Value (M=20, Q=%0.01) Typical Value		≤ 0.2 ps/√km ≤ 0.08 ps/√km 0.04 ps/√km
	Cabled cut off wavelength λ_{ccf}		≤ 1450 nm
	Mode field diameter (MFD) @ 1550 nm		9.1 ~ 10.1 μm
	Effective group index of refraction (Neff)		1.469
	Point discontinuities @ 1550 nm		≤ 0.05 dB
	Parameter		**Value**
Environmental Characteristics	Fiber temperature dependence -60°C to +85°C		≤ 0.1 dB/km
	Fiber temperature and humidity cycling -10°C to +85°C, 90% R.H.		≤ 0.1 dB/km
	Fiber water soak dependence 23°C for 30 days		≤ 0.2 dB/km
	Damp heat dependence +85°C, %85 R.H. for 30 days		≤ 0.05 dB/km
	Dry heat dependence +85°C		≤ 0.05 dB/km
	Parameter		**Value**
Mechanical Characteristics	Proof test		1 %
	Bending dependence 100turns 60mm diameter @1625nm		≤ 0.05 dB
	Bending dependence 100turns 50mm diameter @1310nm & 1550nm		≤ 0.05 dB
	Bending dependence 1turn 32mm diameter @1550nm		≤ 0.5 dB

OM1

62.5/125 Multimode Optical Fiber

OM 1 62.5/125



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Features and Benefits	1. Graded index multimode optical fiber with doped silica core and silica cladding. Dual layer UV cured acrylic resin primary coatings 2. Dry water blocking technology within the tubes and under the cables' jacket 3. Full dielectric construction, no grounding required 4. Fiber and sub-units are color coded for easy identification 5. Length markings in meters for easy determination of cable length 6. Small diameter and bend radius facilitate installation in tight spaces 7. Fibers grouped into sets of 12 for maximum density 8. Available in fiber counts up to 144 fibers 9. Available in colored jackets for indoor only installations 10. Available in tight buffered, loose tube and ribbon cable
Applications	• Gigabit Ethernet in high speed LAN networks over an indicative 275m link length at 850nm wavelength • Legacy networks including Ethernet, Fast Ethernet and FDDI • Premises cabling in data networks including backbone, riser and horizontal • Supports video, data and voice services

Certification and Compliance	ISO/IEC 11801 OM-1	Information technology - Generic cabling for customer premises
	IEC 60793-2-10 type A1b	Product specifications - Sectional specification for category A1 multimode fibers
	Telcordia GR-20-CORE	Generic Requirements for Optical Fiber and Optical Fiber
	ANSI/TIA/EIA-492AAAA	Detail Specification for 62.5 mm Core Diameter/125 mm Cladding Diameter Class Ia Graded-Index Multimode Optical Fibers

OM 1 62.5/125

OM1

62.5/125 Multimode Optical Fiber

	Parameter		Value
Geometrical Characteristics	Core diameter		62.5 ± 2.5 μm
	Core non circularity		≤ 6 %
	Cladding diameter		125 ± 2 μm
	Cladding non circularity		≤ 1.0 %
	Core/cladding concentricity error		≤ 1.5 μm
	Coating/cladding concentricity error		≤ 12 μm
	External diameter (uncoloured)		245 ± 10 μm

	Parameter		Value
Transmission Characteristics	Maximum attenuation fiber	@ 850 nm	≤ 3.0 dB/km
		@ 1300 nm	≤ 0.7 dB/km
	Maximum attenuation cabled	@ 850 nm	≤ 3.5 dB/km
		@ 1300 nm	≤ 1.5 dB/km
	Typical attenuation cabled	@ 850 nm	≤ 2.9 dB/km
		@ 1300 nm	≤ 1.2 dB/km
	Zero dispersion wavelength λ_0		≥ 1320 nm
			≤ 1365 nm
	Zero dispersion slope S_0		≤ 0.11 ps/(nm^2·km)
	Numerical aperture (NA)		0.275 ± 0.015 μm
	Modal bandwidth overfilled LED	@ 850 nm	≥ 200 MHz·km
		@ 1300 nm	≥ 500 MHz·km
	Group refractive index	@ 850 nm	1.496
		@ 1300 nm	1.491
	Fiber irregularities point and whole length @1300		≤ 0.2 dB

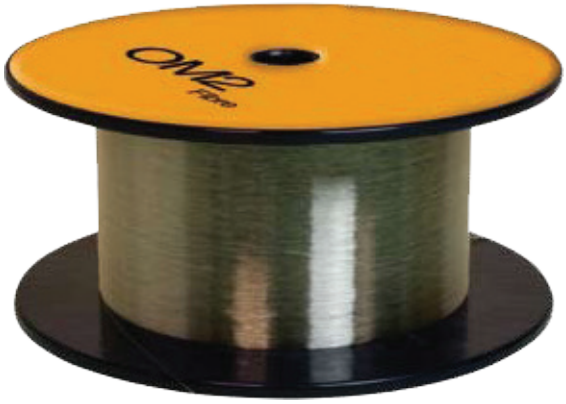
	Parameter	Value
Environmental Characteristics	Fiber temperature dependence -60°C to +85°C	≤ 0.1 dB/km
	Fiber temperature and humidity cycling -10°C to +85°C , 90% R.H.	≤ 0.1 dB/km
	Fiber water soak dependence 23°C for 30 days	≤ 0.1 dB/km

	Parameter	Value
Mechanical Characteristics	Proof test fiber strain for 1 second equivalent	1 %
	Bending dependence 100 turns 75 mm diameter 850 nm & 1300 nm	≤ 0.5 dB
	Typical mean coating strip force	1.5 to 2.7 N

OM2

50/125 Multimode Optical Fiber

OM 2 50/125



Description	Today's advanced networks are diverse and almost always complex. The right way ahead is to future-proof these networks and to take precautions to protect them against anything that will create problems, damage or disruption. That means matching the right hardware with the right cabling to guarantee performance – and that means choosing fiber optic cable. Optical fiber cables offer many benefits: high bandwidth and transmission speed, the potential for network growth, extended reach, fault tolerance, greater data security and support for Gigabit and multi-Gigabit protocols and networked applications.	
Features and Benefits	1. Graded index multimode optical fiber with doped silica core and silica cladding. Dual layer UV cured acrylic resin primary coatings 2. Dry water blocking technology within the tubes and under the cables' jacket 3. Full dielectric construction, no grounding required 4. Fiber and sub-units are color coded for easy identification 5. Length markings in meters for easy determination of cable length 6. Small diameter and bend radius facilitate installation in tight spaces 7. Fibers grouped into sets of 12 for maximum density 8. Available in fiber counts up to 144 fibers 9. Available in colored jackets for indoor only installations 10. Available in tight buffered, loose tube and ribbon cable	
Applications	• For use in 1 Gb/s high speed LAN networks over a 550m indicative link length at 850nm wavelength using a laser launch • High speed and legacy networks including Gigabit Ethernet, Fast Ethernet and Ethernet • Premises cabling in data networks including backbone, riser and horizontal • Supports video, data and voice services	
Certification and Compliance	ISO/IEC 11801 OM-2	Information technology - Generic cabling for customer premises
	IEC 60793-2-10 type A1a.1	Product specifications - Sectional specification for category A1 multimode fibers
	Telcordia GR-20-CORE	Generic Requirements for Optical Fiber and Optical Fiber Cable
	ITU-T G.651	Characteristics of multimode graded index Optical Fiber
	ANSI/TIA/EIA-492AAAB	Detail Specification for 50 mm Core Diameter/125 mm Cladding Diameter Class Ia Graded-Index Multimode Optical Fibers

OM 2 50/125

OM2

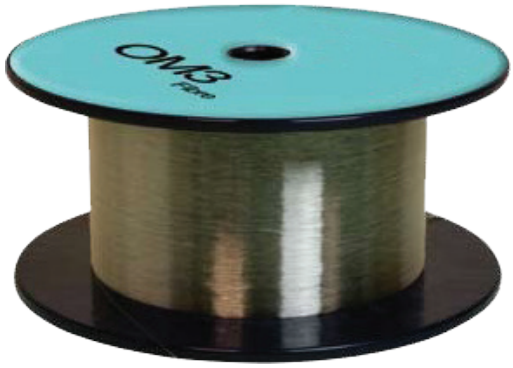
50/125 Multimode Optical Fiber

	Parameter		Value
Geometrical Characteristics	Core diameter		50 ± 2.5 µm
	Core non circularity		≤ 6 %
	Cladding diameter		125 ± 2 µm
	Cladding non circularity		≤ 1.0 %
	Core/cladding concentricity error		≤ 1.5 µm
	Coating/cladding concentricity error		≤ 12 µm
	External diameter (uncoloured)		245 ± 10 µm
	Parameter		**Value**
Transmission Characteristics	Maximum attenuation fiber	@ 850 nm	≤ 2.5 dB/km
		@ 1300 nm	≤ 0.7 dB/km
	Maximum attenuation cabled	@ 850 nm	≤ 3.5 dB/km
		@ 1300 nm	≤ 1.5 dB/km
	Typical attenuation cabled	@ 850 nm	≤ 2.7 dB/km
		@ 1300 nm	≤ 0.9 dB/km
	Zero dispersion wavelength λ_0		≥ 1320 nm
			≤ 1365 nm
	Zero dispersion slope S_0		≤ 0.11 ps/(nm^2·km)
	Numerical aperture (NA)		0.275 ± 0.015 µm
	Modal bandwidth overfilled LED	@ 850 nm	≥ 500 MHz·km
		@ 1300 nm	≥ 500 MHz·km
	Group refractive index	@ 850 nm	1.482
		@ 1300 nm	1.477
	Fiber irregularities point and whole length @1300		≤ 0.2 dB
	Parameter		**Value**
Environmental Characteristics	Fiber temperature dependence -60°C to +85°C		≤ 0.1 dB/km
	Fiber temperature and humidity cycling -10°C to 85+°C , %90 R.H.		≤ 0.2 dB/km
	Fiber water soak dependence 23°C for 30		≤ 0.2 dB/km
	Parameter		**Value**
Mechanical Characteristics	Proof test fiber strain for 1 second equivalent		1 %
	Bending dependence 100 turns 75 mm diameter 850 nm & 1300 nm		≤ 0.5 dB
	Typical mean coating strip force		1.7 to 2.7 N

OM3

50/125 Multimode Optical Fiber

OM 3 50/125



Description	Today's advanced networks are diverse and almost always complex. The right way ahead is to future-proof these networks and to take precautions to protect them against anything that will create problems, damage or disruption. That means matching the right hardware with the right cabling to guarantee performance – and that means choosing fiber optic cable. Optical fiber cables offer many benefits: high bandwidth and transmission speed, the potential for network growth, extended reach, fault tolerance, greater data security and support for Gigabit and multi-Gigabit protocols and networked applications.
Features and Benefits	1. Graded index multimode optical fiber with doped silica core and silica cladding. Dual layer UV cured acrylic resin primary coatings 2. Dry water blocking technology within the tubes and under the cables' jacket 3. Full dielectric construction, no grounding required 4. Fiber and sub-units are color coded for easy identification 5. Length markings in meters for easy determination of cable length 6. Small diameter and bend radius facilitate installation in tight spaces 7. Fibers grouped into sets of 12 for maximum density 8. Available in fiber counts up to 144 fibers 9. Available in colored jackets for indoor only installations 10. Available in tight buffered, loose tube and ribbon cable
Applications	• For use in 10Gb/s / 1Gb/s high speed LAN networks over a 300m / 1000m indicative link length at 850nm wavelength using a laser launch • High speed and legacy networks including Gigabit Ethernet, Fast Ethernet and Ethernet • Data centers • Premises cabling in data networks including backbone, riser and horizontal • Supports video, data and voice services

Certification and Compliance	ISO/IEC 11801 OM-3	Information technology - Generic cabling for customer premises
	IEC 60793-2-10 type A1a.2	Product specifications - Sectional specification for category A1 multimode fibers
	Telcordia GR-20-CORE	Generic Requirements for Optical Fiber and Optical Fiber Cable
	ITU-T G.651	Characteristics of multimode graded index Optical Fiber
	ANSI/TIA/EIA-492AAAC	Detail Specification for 850-nm Laser-Optimized, 50-um Core Diameter/125-um Cladding Diameter Class Ia Graded-Index

OM 3 50/125

OM3

50/125 Multimode Optical Fiber

	Parameter		Value
Geometrical Characteristics	Core diameter		50 ± 2.5 µm
	Core non circularity		≤ 6 %
	Cladding diameter		125 ± 2 µm
	Cladding non circularity		≤ 1.0 %
	Core/cladding concentricity error		≤ 1.5 µm
	Coating/cladding concentricity error		≤ 12 µm
	External diameter (uncoloured)		245 ± 10 µm
	Parameter		**Value**
Transmission Characteristics	Maximum attenuation fiber	@ 850 nm	≤ 2.5 dB/km
		@ 1300 nm	≤ 0.7 dB/km
	Maximum attenuation cabled	@ 850 nm	≤ 3.5 dB/km
		@ 1300 nm	≤ 1.5 dB/km
	Typical attenuation cabled	@ 850 nm	≤ 2.7 dB/km
		@ 1300 nm	≤ 0.9 dB/km
	Zero dispersion wavelength λ_0		≥ 1320 nm
			≤ 1365 nm
	Zero dispersion slope S_0		≤ 0.11 ps/(nm^2·km)
	Numerical aperture (NA)		0.275 ± 0.015 µm
	Modal bandwidth overfilled LED	@ 850 nm	≥ 1500 MHz·km
		@ 1300 nm	≥ 500 MHz·km
	Group refractive index	@ 850 nm	1.482
		@ 1300 nm	1.477
	Fiber irregularities point and whole length @1300		≤ 0.2 dB
	Parameter		**Value**
Environmental Characteristics	Fiber temperature dependence -60°C to +85°C		≤ 0.1 dB/km
	Fiber temperature and humidity cycling -10°C to +85°C , 90% R.H.		≤ 0.2 dB/km
	Fiber water soak dependence 23°C for 30		≤ 0.2 dB/km
	Parameter		**Value**
Mechanical Characteristics	Proof test fiber strain for 1 second equivalent		1 %
	Bending dependence 100 turns 75 mm diameter 850 nm & 1300 nm		≤ 0.5 dB
	Typical mean coating strip force		1.7 to 2.7 N

OM4

50/125 Multimode Optical Fiber

OM 4 50/125

Description	Today's advanced networks are diverse and almost always complex. The right way ahead is to future-proof these networks and to take precautions to protect them against anything that will create problems, damage or disruption. That means matching the right hardware with the right cabling to guarantee performance – and that means choosing fiber optic cable. Optical fiber cables offer many benefits: high bandwidth and transmission speed, the potential for network growth, extended reach, fault tolerance, greater data security and support for Gigabit and multi-Gigabit protocols and networked applications.
Features and Benefits	1. Graded index multimode optical fiber with doped silica core and silica cladding. Dual layer UV cured acrylic resin primary coatings 2. Dry water blocking technology within the tubes and under the cables' jacket 3. Full dielectric construction, no grounding required 4. Fiber and sub-units are color coded for easy identification 5. Length markings in meters for easy determination of cable length 6. Small diameter and bend radius facilitate installation in tight spaces 7. Fibers grouped into sets of 12 for maximum density 8. Available in fiber counts up to 144 fibers 9. Available in colored jackets for indoor only installations 10. Available in tight buffered, loose tube and ribbon cable
Applications	• For use in 10Gb/s / 1Gb/s high speed LAN networks over a 300m / 1000m indicative link length at 850nm wavelength using a laser launch • High speed and legacy networks including Gigabit Ethernet, Fast Ethernet and Ethernet • Data centers • Premises cabling in data networks including backbone, riser and horizontal • Supports video, data and voice services

Certification and Compliance	ISO/IEC 11801 OM-4	Information technology - Generic cabling for customer premises
	IEC 60793-2-10 type A1a.3	Product specifications - Sectional specification for category A1 multimode fibers
	Telcordia GR-20-CORE	Generic Requirements for Optical Fiber and Optical Fiber Cable
	ITU-T G.651	Characteristics of multimode graded index Optical Fiber
	ANSI/TIA/EIA-492AAAD	Detail Specification for 850-nm Laser-Optimized, 50-um Core Diameter/125-um Cladding Diameter Class Ia Graded-Index

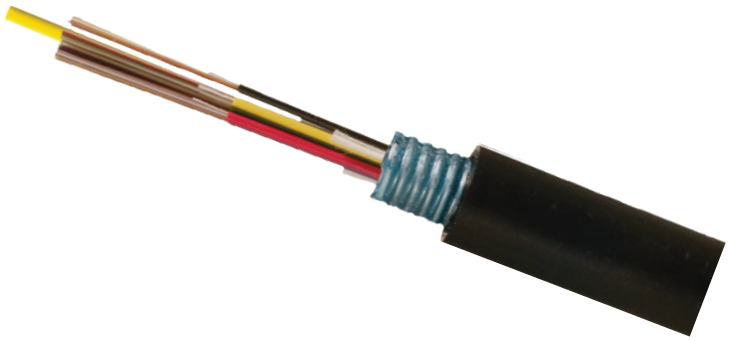
OM 4 50/125

OM4

50/125 Multimode Optical Fiber

	Parameter		Value
Geometrical Characteristics	Core diameter		50 ± 2.5 µm
	Core non circularity		≤ 6 %
	Cladding diameter		124.9 ± 1.1 µm
	Cladding non circularity		≤ 1.0 %
	Core/cladding concentricity error		≤ 1.5 µm
	Coating/cladding concentricity error		≤ 12 µm
	External diameter (uncoloured)		244.5 ± 7.5 µm
	Parameter		**Value**
Transmission Characteristics	Maximum attenuation fiber	@ 850 nm	≤ 2.3 dB/km
		@ 1300 nm	≤ 0.6 dB/km
	Maximum attenuation cabled	@ 850 nm	≤ 3.5 dB/km
		@ 1300 nm	≤ 1.5 dB/km
	Typical attenuation cabled	@ 850 nm	≤ 2.7 dB/km
		@ 1300 nm	≤ 0.9 dB/km
	Zero dispersion wavelength λ_0		≥ 1320 nm
			≤ 1365 nm
	Zero dispersion slope S_0		≤ 0.11 ps/(nm^2·km)
	Numerical aperture (NA)		0.275 ± 0.015 µm
	Modal bandwidth overfilled LED	@ 850 nm	≥ 3500 MHz·km
		@ 1300 nm	≥ 500 MHz·km
	Group refractive index	@ 850 nm	≥ 4700 MHz·km
		@ 1300 nm	1.480
	Fiber irregularities point and whole length @1300		≤ 0.2 dB
	Parameter		**Value**
Environmental Characteristics	Fiber temperature dependence -60°C to +85°C		≤ 0.1 dB/km
	Fiber temperature and humidity cycling -10°C to +85°C , 90% R.H.		≤ 0.1 dB/km
	Fiber water soak dependence 23°C for 30 days		≤ 0.2 dB/km
	Parameter		**Value**
Mechanical Characteristics	Proof test fiber strain for 1 second equivalent		1 %
	Bending dependence 100 turns 75 mm diameter 850 nm & 1300 nm		≤ 0.5 dB
	Typical mean coating strip force		1.0 to 3.0 N

Multi Loose Tube Single Jacket Fiber Optic Cable



Description	The multi loose tube cable construction consists of up to up to 12 elements and a maximum of 144 , 250 µm optical fibers in 12 fiber gel filled loose tubes with fillers where appropriate, SZ stranded around a jacketed Fiber Reinforced Plastic (FRP) central strength member with waterswellable threads and waterswellable tape. Helically applied water blocking e-glass nonmetallic strength members with ripcord. Corrugated Steel Tape (CST) armouring and black High Density Polyethylene (HDPE) or Low Smoke Zero Halogen (LSZH) jacket.
Features and Benefits	1. Choice of fiber types 2. Colour coded fibers 3. High water resistant 4. High crush resistant 5. PE / LSZH jacket
Applications	● Suitable for external & aerial applications

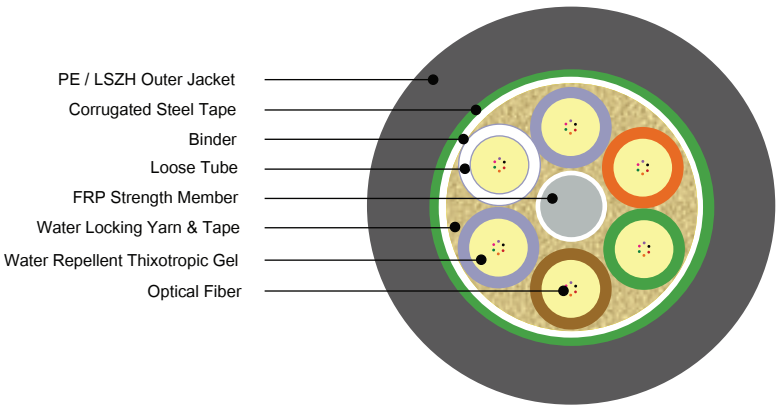
OS2 9/125

OM1 62.5/125

OM2 50/125

OM3 50/125

OM4 50/125



Rodent Resistant

Water Resistant

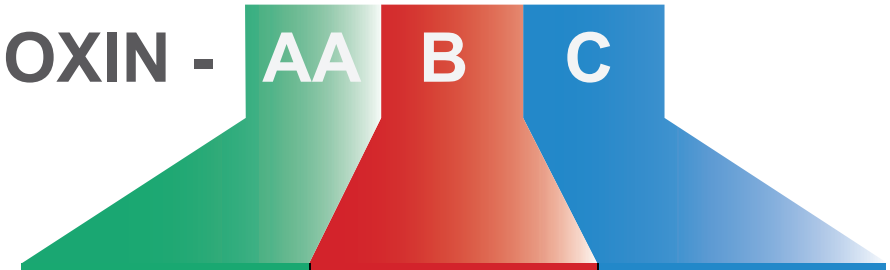
Fire Retardant

Internal Use

External Use

Multi Loose Tube Single Jacket Fiber Optic Cable

Oxin Fiber Optic Cable Part Number Builder



Cable type	Core count		Tube count	
21	1	2	1	2
SM	4core	6core	One	Two
31	3	4	4	6
OM2	8core	12core	Four	Six
33	5	6	8	0
OM3	16core	24core	Eight	Twelve
35	7	8		
OM4	32core	48core		
37	9	0		
OM1	72core	144core		

Most Commonly Used Cables

	Core	SM	OM2
Multi Loose Tube S. Jacket Cable Part Number	12 core 2x6	OXIN-2142	OXIN-3142
	24 core 2x12	OXIN-2162	OXIN-3162
	24 core 4x6	OXIN-2164	OXIN-3164
	48 core 4x12	OXIN-2184	OXIN-3184
	48 core 8x6	OXIN-2188	OXIN-3188

	Parameter	unit	24-48 core	72 core	144 core
Technical Characteristics	Outer Diameter	mm	12.0 ± 0.4	12.6 ± 0.4	17.1 ± 0.4
	Weight	kg/km	166	173	284
	Max. Load (installation)	N	1500	1500	1500
	Max. Load (installed)	N	600	600	600
	Min. Bend Radius	mm	240	252	340
	Min. Bend Radius (installed)	mm	120	126	170
	Operating Temp.	°C	-40 ~ +70	-40 ~ +70	-40 ~ +70
	Storage Temp.	°C	-20 ~ +60	-20 ~ +60	-20 ~ +60
	Installation Temp.	°C	-20 ~ +60	-20 ~ +60	-20 ~ +60
	Crush Resistance	N/(100mm)	3000	3000	3000

Setting the Standards

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