ZORA Outdoor OM4 Single-mode Fiber Cable (6-144 cores)

ZOR Outdoor OM4 Multimode Fibre Optic Cable 6-144 Cores

ZORA's Robust outdoor single-mode fiber cable (6-144 cores) for long-distance, high-speed transmission. Perfect for telecom, broadband, and harsh environments

ZORA outdoor non-metal loose tube fiber optic cables are designed with a high number of fiber cores to provide the versatility and flexibility required to support demanding installations.

With fiber cores up to 288, our non-metallic loose tube fibers comply with EIA/TIA, REA/RUS PE-90 and GR-20 standards.

Product Features

- 06~144 cores
- Loose casing design
- The outer material is PE
- Good mechanical and temperature properties
- High strength loose tube sleeve, hydrolysis resistant

- The tube is filled with special oil paste to provide critical protection for the optical fiber
- Pressure resistance and flexibility
- PSP enhances moisture resistance
- Small diameter, light weight and easy to install

Applications

- Impracticable
- Outdoor application
- As the backbone network of LAN, MAN, WAN
- 10Gbps 40/100Gbps Ethernet network
- Storage Local Area Network (SAN), data center

Conform to standards

- Bellcore GR-20-CORE
- ISO/IEC11801
- ANSI/TIA 568-2.D
- CENELEC EN 50173
- IEC60794-1

Ordering Informatio

Product name	Packing specification	Packing specification
ZRC51SM-6	ZORA 6-core indoor OS2 fiber optic cable	2 km/roll
ZRC51SM-8	ZORA 8-core indoor OS2 fiber optic cable	2 km/roll
ZRC51SM-12	ZORA 12-core indoor OS2 fiber optic cable	2 km/roll
ZRC51SM-24	ZORA 24-core indoor OS2 fiber optic cable	2 km/roll
ZRC51SM-48	ZORA 48-core indoor OS2 fiber optic cable	2 km/roll
ZRC51SM-96	ZORA 48-core indoor OS2 fiber optic cable	2 km/roll

Technical specification

Structure	
Outdoor coat	
Coat material	HDPE
The average coat thickness	Averages 1.8 mm
The internal strength consists	FRP
Cable reinforcement material (metal armor)	NO
Fiber size	50/125μm

Buffer protective layer diameter	
Main buffer layer diameter	250μm ± 5μm
Loose casing material	PBT
Compressive strength (IEC794-1)	
Installation/transport (100 mm)	1000 N / 300 N
Minimum bending radius (IEC794-1)	
Install/transport	20 x diameter / 10 x diameter
Operating Temperature	
Installation / Transportation	-40℃ ~ +70℃

Technical Data - Transmission

Fiber type	Attenuation				Bandwidth	Bandwidth
Conditions	---		---		850 nm	1300 nm
	1310 nm	1550 nm	850 nm	1300 nm		
Units	dB/km	dB/km	dB/km	dB/km	MHz/km	MHz/km

G652D	≤0.36	≤0.22	---	---	---	---
G655	≤0.40	≤0.23	---	---	---	---
OM1	---	---	≤3.5	≤1.2	≥200	≥500
OM2	---	---	≤3.3	≤1.2	≥500	≥500
OM3	---	---	≤3.3	≤1.2	≥1500	≥500
OM4	---	---	≤3.3	≤1.2	≥3500	≥500

Technical Data - Machinery

Specification	6-42 fibre optics (6 fibre optics per tube)	48-84 fibre optics (12 fibre optics per tube)	96 fibres (12 fibres per tube)
Number of loose sleeves	1-7 Loose Tubing	4-7 Loose Tubing	8 Loose Tubing
Cable diameter	Approx. 10.1 mm	Approx. 11.0 mm	Approx. 11.9 mm
Cable weight	Approximately 87 (kg/km)	Approx. 103 (kg/km)	Approx. 121 (kg/km)
Strength Component	2.25mm	2.8mm	3.7mm

Diameter			
Maximum Tensile Tension Installation	1000N	1500N	3000N
Maximum Tensile Tension Operation	400N	600N	1000N

Outdoor OM4 Multimode Fibre Optic Cable 6-144 Cores FAQ

What are the main advantages of OM4 multimode fibre optic cable over other types?

OM4 multimode fibre optic cable offers significantly higher bandwidth - distance product compared to lower - grade multimode cables like OM1 and OM2. It can support higher data rates over longer distances, typically enabling 10Gbps transmission up to 550 meters and 40Gbps/100Gbps over shorter reaches. This makes it ideal for high - density data center applications where large amounts of data need to be transferred quickly.

What are the typical applications of OM4 multimode fibre optic cable?

OM4 is commonly used in data centers for interconnecting servers, storage devices, and network switches. It is also suitable for campus network backbones where high - speed, long - distance connections between buildings are required. In addition, it can be used in enterprise LANs to support high - bandwidth applications such as video surveillance, cloud computing access, and large - scale data sharing.

How does the installation of OM4 multimode fibre optic cable differ from single - mode fibre optic cable?

Installation of OM4 multimode fibre is generally more forgiving in terms of alignment during connection. Multimode fibres have a larger core diameter (50 micrometers for OM4), which allows for easier connection and alignment compared to single - mode fibres with a much smaller core diameter (9 micrometers). However, like single - mode, proper cleaning of the fibre ends and use of appropriate connectors are crucial for optimal performance. Also, when installing in a data center, cable management for OM4 is important to avoid signal interference and ensure easy maintenance.

What is the maximum transmission distance for OM4 multimode fibre optic cable at different data rates?

At 10Gbps, the maximum transmission distance is around 550 meters. For 40Gbps, it can reach up to approximately 150 meters, and for 100Gbps, the distance is typically around 100 meters. These distances may vary slightly depending on the quality of the cable, connectors, and the optical transceivers used.

Can OM4 multimode fibre optic cable be used in outdoor environments?

Yes, OM4 multimode fibre optic cable can be used in outdoor environments, but it needs to be properly protected. Special outdoor - rated OM4 cables are available, which are designed to withstand environmental factors such as moisture, temperature variations, and mechanical stress. These cables often have additional shielding and protective jackets. However, proper installation techniques, including burying or using aerial installation methods with appropriate support structures, are necessary to ensure long - term reliable performance.

How do I maintain and troubleshoot OM4 multimode fibre optic cable systems?

Regular maintenance includes periodic inspection of the cable for any signs of physical damage, such as cuts or bends. Cleaning the fibre connectors with appropriate cleaning tools (e.g., lint - free wipes and isopropyl alcohol) is essential to prevent dust and debris from causing signal loss. To troubleshoot, first check for visible signs of damage. If there is a signal problem, use an optical time - domain reflectometer (OTDR) to detect breaks or excessive attenuation in the cable. Also, verify that the optical transceivers are working correctly and are properly configured for the OM4 cable system.