

ALTOS® Loose Tube, Gel-Free Cable 228 F, 50 µm multimode (OM4)

CORNING

Part Number:
228TU4-T4190D20

Corning ALTOS® all-dielectric gel-free cables are designed for outdoor and limited indoor use for backbones in lashed aerial and duct installations. The loose tube gel-free design is fully waterblocked using craft-friendly, water-swappable materials, which means cable access is simple and no clean up is required. The flexible craft-friendly buffer tubes are easy to route in closures, and the SZ-stranded, loose tube design isolates fibers from installation and environmental rigors while allowing easy mid-span access. The all-dielectric cable construction requires no bonding or grounding, and these cables have a medium-density polyethylene jacket that is rugged, durable and easy to strip.

Features and Benefits

Gel-free waterblocking technology

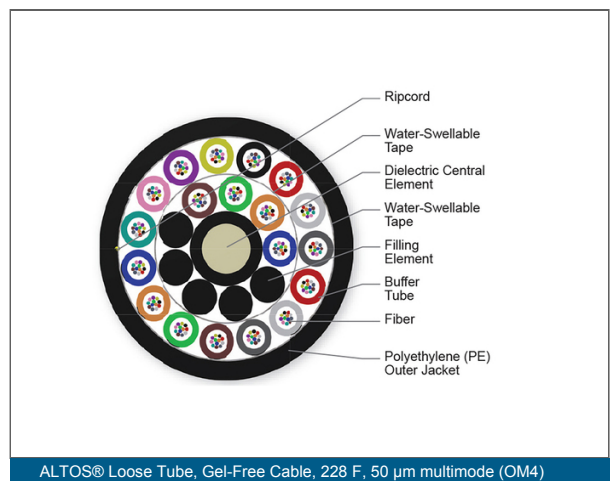
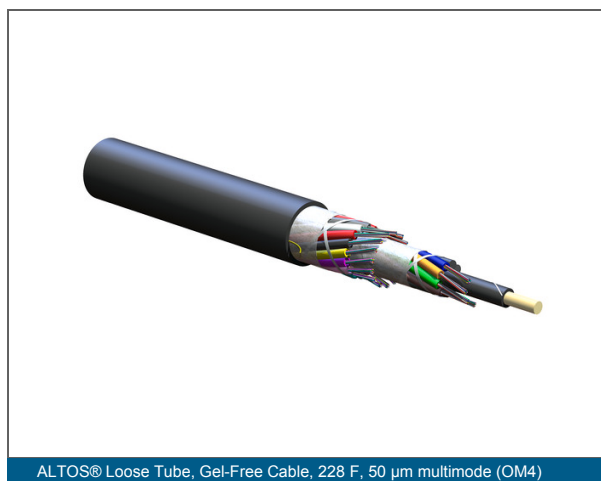
Craft-friendly cable preparation

Polyethylene jacket

Rugged, durable and easy to strip (while providing superior protection against UV radiation, fungus, abrasion and other environmental factors)

All-dielectric construction

Requires no grounding or bonding



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Specifications

General Specifications

Installation Methods	Aerial, Duct
Cable Type	Loose Tube
Environment	Outdoor
Product Type	Dielectric
Fiber Category	50 µm MM (OM4)
Cable geometry	Round

Standards

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
Common Installations	Outdoor lashed aerial and duct, indoor when installed according to National Electrical Code® (NEC®) Article 770
Design and Test Criteria	ANSI/ICEA S-87-640

Environmental Conditions

Notes	Corning recommends storing cable in a proper temperature environment prior to installation to allow the cable temperature to meet installation temperature range specifications for best installation results.
Temperature Range, Installation	-30 °C to 70 °C (-22 °F to 158 °F)
Temperature Range, Operation	-40 °C to 70 °C (-40 °F to 158 °F)
Temperature Range, Storage	-40 °C to 70 °C (-40 °F to 158 °F)

Cable Design

Central Element	Dielectric
Fiber Count	228
Number of Ripcords	1
Buffer Tube Color Coding, Layer 1	Blue, Orange, Green, Brown
Outer Jacket Color	Black

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Cable Design

Outer Jacket Material	Polyethylene (PE)
Buffer Tube Diameter	2.5 mm (0.1 in)
Number of Active Tubes	19
Number of Filling Elements	5
Number of Tube Positions	24
Tape	Water-swellaable
Tape, Layer 2	Water-swellaable
Fiber Coloring	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua
Fibers per Tube	12
Color Code Standards	Telcordia

Mechanical Specifications

Max. Tensile Strength, Long-Term	890 N (200.08 lbf)
Max. Tensile Strength, Short-Term	2700 N (606.98 lbf)
Nominal Outer Diameter	18.2 mm (0.72 in)
Min. Bend Diameter Installation	546 mm (21.5 in)
Min. Bend Diameter Operation	364 mm (14.33 in)

Optical Characteristics

Fiber Code	T
Performance Option Code	90
Fiber Category	OM4
Fiber Type	Multimode
Fiber Name	50 µm MM (OM4)
Maximum Attenuation	3.0 dB/km / 1.0 dB/km
Wavelengths	850 nm / 1300 nm
Fiber Compliance	IEC 60793-2-10
Fiber Core Diameter	50 µm

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Optical Characteristics	
Serial 1 Gigabit Ethernet	1000 m / 600 m
Serial 10 Gigabit Ethernet	550 m / -
Minimum Effective Modal Bandwidth (EMB)	4700 MHz*km / -
Min. Overfilled Launch (OFL) Bandwidth	3500 MHz*km / 500 MHz*km

Dimensions	
Cable Weight	196 kg/km (131.71 lb/1000 ft)



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