

MPO/MPO 250µm uDist OFNP 3.0mm (12F sub-units), 24-144F

DESCRIPTION

The 250µm uDist OFNP 3.0mm fiber trunks with 12-fiber sub-units offer a high-density MPO-to-MPO backbone solution designed for scalable data center and enterprise network architectures. Engineered with ultra-low-diameter insulated fibers (uDist), these trunks provide exceptional flexibility for routing through congested pathways while delivering high performance across 24-fiber and larger configurations. Factory-terminated MPO connectors—available in 12F or 24F formats—ensure consistent end-face geometry, low insertion loss, and reliable parallel-optics transmission for high-bandwidth environments.

APPLICATION

Ideal for structured backbone cabling, equipment-to-equipment links, and high-density patching fields, these trunks enable rapid installation and streamlined cable management in multi-rack deployments. The 12-fiber sub-unit construction simplifies routing and identification within trays, vertical managers, and cross-connect zones. These assemblies are fully configurable to meet project-specific needs, including Family, Connector A, Connector B, Polarity, Cable Type, Fiber Count, Fiber Type, Break-Out A, Break-Out B, Options, Length, and Unit of Measurement.

Construction	
Cable Type	(10) 250µm uDist OFNP 3.0mm (12F Sub-units), >24F
Cable Jacket Rating	Optical Fiber Non-Conductive Plenum (OFNP)
Fiber Type	OS2
	OM1
	OM3
	OM4
	OM5
Connector Types	MPO-12 OM1, Pinned or Non-Pinned, Beige
	MPO-12 OS2, Pinned or Non-Pinned, Blue
	MPO-12 OS2 APC, Pinned or Non-Pinned, Green
	MPO-12 OM3, Pinned or Non-Pinned, Aqua
	MPO-12 OM4, Pinned or Non-Pinned, Aqua
	MPO-12 OM5, Pinned or Non-Pinned, Lime

Construction	
Fiber Count	24 Fiber
	48 Fiber
	72 Fiber
	96 Fiber
	144 Fiber
Jacket color	Yellow (OS2)
	Orange (OM1)
	Aqua (OM3/OM4)
	Lime (OM5)

Physical Properties	
Cable Construction	
3mm Microarray Breakout Base 12	
Fiber	12 primary coated fibers nominally 250µm, Color code: ANSI/TIA/EIA-598-B
Sub-Unit	Ø 3.0 mm
Aub-Unit Jacket Material	PVC
Sub-Unit ID	Identified as Unit 1, Unit 2, Unit 3, etc.
Cable Strength Member	Glass Reinforced Plastic (GRP) (OPTIONAL)
Cable	3mm subunits containing 12 250µm colored fiber with aramid yarn Cabled around a central strength member and surrounded by Strength member (polyester yarn or aramid yarns) and an outer jacket
Cable Jacket Material	PVC Optical Fiber Non-Conductive Plenum (OFNP)
Sheath Colors (Munsell)	OS2: Yellow, 5Y 8.5/12
	OM1: Orange, 8.75R 6/12
	OM3/OM4: Aqua, 10BG 7/6
	OM5: Lime-Green, 5.5GY 8.5/10

Physical Properties	
Cable Outside Diameter	0.35" (8.8mm) [24 fiber]
	0.35" (8.8mm) [48 fiber]
	0.43" (10.9mm) [72 fiber]
	0.51" (13mm) [96 fiber]
	0.69" (17.6mm) [144 fiber]
Minimum Bend Radius	Long Term: 3.5" (88mm) Install: 5.2" (132mm) [24 fiber]
	Long Term: 3.5" (88mm) Install: 5.2" (132mm) [48 fiber]
	Long Term: 4.3" (109mm) Install: 6.5" (164mm) [72 fiber]
	Long Term: 6.0" (152mm) Install: 11.4" (290mm) [96 fiber]
	Long Term: 6.9" (175mm) Install: 13.8" (350mm) [144 fiber]
Cable Tensile Strength	Long Term: 45lbs (198N) Install: 150lbs (710N) [24, 48, 72 fiber]
	Long Term: 90lbs (396N) Install: 300lbs (1420N) [96, 144 fiber]
Connector Durability	IAW TIA-568.3-E and the max IL of 0.3dB at 200 cycles
Breakout Outside Diameter	0.12" (3mm) SUB-UNIT [24, 48, 72, 96, 144 fiber]
Breakout Length*	SUB-UNIT LENGTH: 24" ± 3" (609.6mm ± 76.2mm) [24, 48, 72, 96, 144 fiber]

*Consult line drawings on page 6 for additional Breakout Length information

Optical Properties	
Maximum Cable Attenuation	Single-mode: 0.4dB @ 1310nm & 0.3dB @ 1550nm
	OM1: 3.0dB @ 850nm & 1.5dB @ 1300nm
	OM3: 3.0dB @ 850nm & 1.0dB @ 1300nm
	OM4: 3.0dB @ 850nm & 1.0dB @ 1300nm
	OM5: 3.0dB @ 850nm & 1.0dB @ 1300nm

Optical Properties Cont.

		Core (Tier 1)	Ultra (Tier 3)
Connector Insertion Loss	Single-mode APC	Typical: 0.3dB Maximum: 0.75dB	Typical: 0.3dB Maximum: 0.35dB
	Multimode UPC	Typical: 0.3dB Maximum: 0.75dB	Typical: 0.3dB Maximum: 0.35dB
		Core (Tier 1)	Ultra (Tier 3)
Maximum Connector Return Loss	Single-mode APC	55dB	55dB
	Multimode UPC	20dB	20dB

Environmental Properties

Operating Temp	0°C to 70°C (32°F -158°F)
Storage and Shipping Temp	-40°C to 70°C (-40°F -158°F)
Installation Temp	0°C to 60°C (32°F -140°F)

Standards

List of Standards	UL 1651
	CSA C22.2 No. 232
	NFPA 262
	Telcordia® GR-409-CORE, Issue 1 and Issue 2
	ANSI/ICEA S-83-596
	ANSI/TIA-568.3-E

Configuration Fields

Example P.N. C 47 47 B 10 0 A E N N Y 030 F

					0							
1	2	3	4	5	6	7	8	9	10	11	12	

Description: CORE, MPO, MPO, Type B, uDist OFNP 3.0mm, 24F, OM4, Stagger, Stagger, No Pulling-Eye, 03F

1	Family
C	Core
U	Ultra

2	Connector A
46	MPO-12 MM Pinned
47	MPO-12 MM Non-Pinned
62	MPO-12 SM Pinned
63	MPO-12 SM Non-Pinned
83	MPO-12 PRO MM Pinned Elite
84	MPO-12 PRO MM Non-Pinned Elite
85	MPO-12 PRO SM Pinned Elite
86	MPO-12 PRO SM Non-Pinned Elite
1A	MPO-12 MM Pinned APC Down Angle
1E	MPO-12 MM Non-Pinned APC Down Angle

3	Connector B
46	MPO-12 MM Pinned
47	MPO-12 MM Non-Pinned
62	MPO-12 SM Pinned
63	MPO-12 SM Non-Pinned
83	MPO-12 PRO MM Pinned Elite
84	MPO-12 PRO MM Non-Pinned Elite
85	MPO-12 PRO SM Pinned Elite
86	MPO-12 PRO SM Non-Pinned Elite
1A	MPO-12 MM Pinned APC Down Angle
1E	MPO-12 MM Non-Pinned APC Down Angle

4	Polarity
A	MPO/MPO Type A:1-1, 12F, (MPO Standard)
B	MPO/MPO Type B:1-1, 12F, Physically Flipped
C	MPO/MPO Type C:1-1, 12F, Reverse Fiber

5	Cable Type
10	250µm uDist OFNP 3.0mm (12F Sub-units), >24F

6	Fiber Count
A	024F
E	048F
H	072F
J	096F
N	144F

7	Fiber Type
J	OS2 G.657.A1 (9/125µm)
A	OM1 (62.5/125µm)
D	OM3 (50/125µm)
E	OM4 (50/125µm)
H	OM5 (50/125µm)

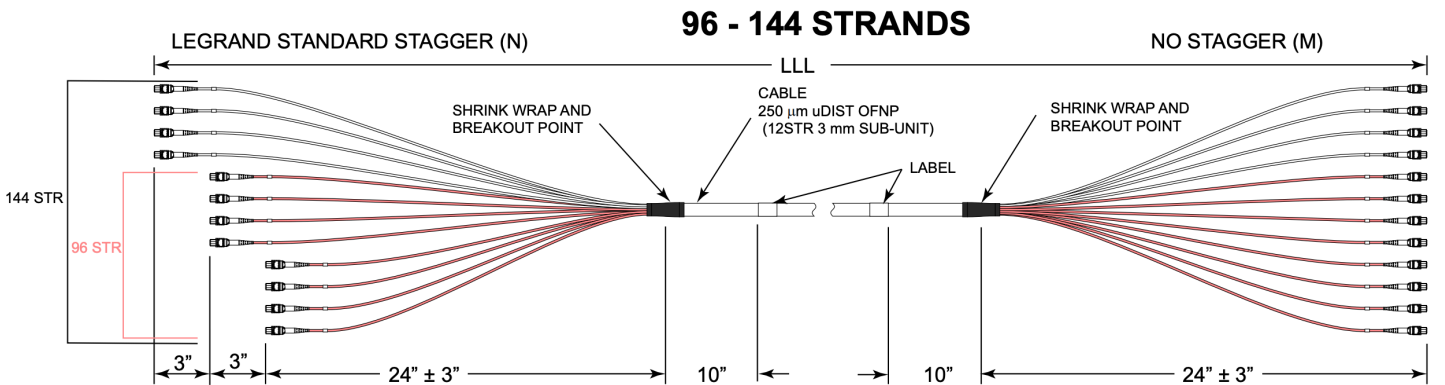
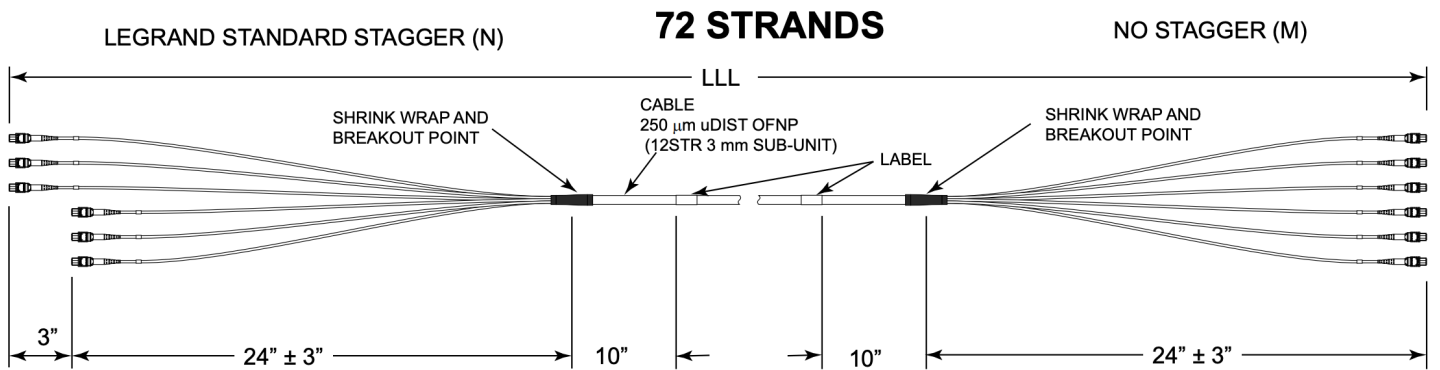
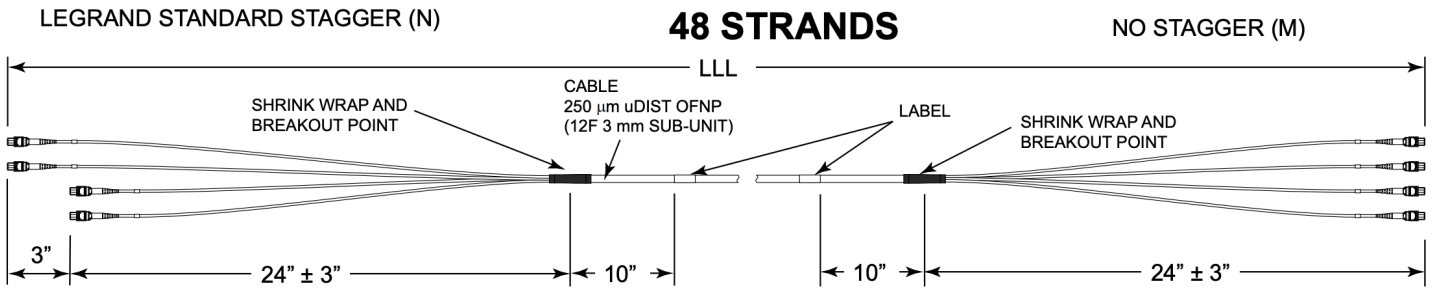
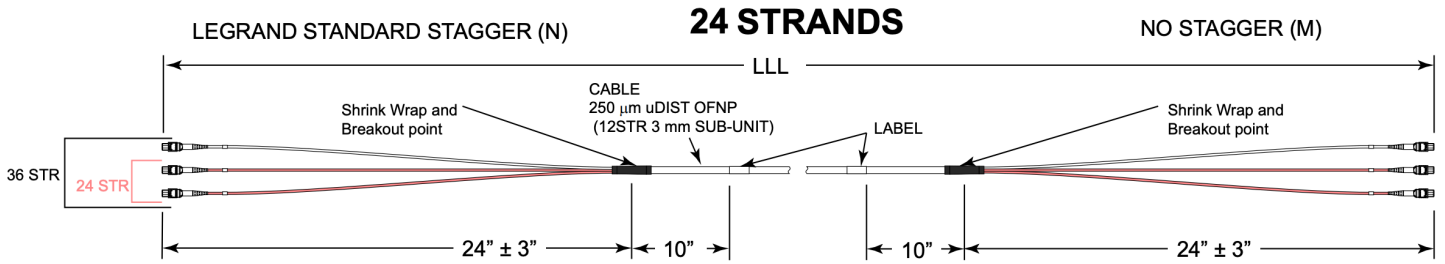
8	Breakout A
M	MPO No Stagger
N	MPO STD Legrand Stagger

9	Breakout B
M	MPO No Stagger
N	MPO STD Legrand Stagger

10	Options
Y	Manufacturing Specification, No Pulling-Eye, Standard Label
Z	Manufacturing Specification, Pulling-Eye Side A, Standard Label
N	Manufacturing Specification, Pulling-Eye Both Sides, Standard Label

11	Length
000	3-digit length

12	Unit of Measure
M	Meters
F	Feet



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