

# QuickNet™ OM4 and OM5 Signature Core™ Trunk Cable

## general information

QuickNet™ OM4 and OM5 Signature Core™ Trunk Cable Assemblies allow for rapid deployment of high-density permanent links in a single assembly for data center applications requiring quick infrastructure deployment, such as main, horizontal, and zone distribution areas. These trunk cable assemblies optimize cable routing requirements to ensure efficient use of pathway space and significantly reduce installation time and cost. Signature Core™ Trunk Cable Assemblies are built with modular MPO connectivity and provide compatibility, flexibility, and system performance in all permanent link applications.



## technical information

OM4 and OM5 Signature Core™ Fibers are modal and chromatic dispersion compensating multi-mode fibers designed for optimum performance with high-speed Vertical Cavity Surfacing Emitting Lasers (VCSEL) transceivers. The refractive index profile is engineered to correct for the interaction between modal and chromatic dispersion increasing the total channel bandwidth.

Like OM3 and OM4 fiber types, the actual supported reach for Signature Core™ Fiber family depends on the electrical and optical characteristics of the VCSEL transceiver<sup>1</sup>.

OM4 Signature Core™ provides you on average 20% longer reach than OM4 defined standard for all applications using Ethernet, Fibre Channel and Cisco BiDi technologies. For example, the OM4 Signature Core™ Fiber will support a 600m reach with 10GBASE-SR transceivers compared to a 400m maximum reach over OM4 as specified in IEEE 802.32.

OM5 Signature Core™ provides you on average 15% longer reach than OM5 defined standard for all applications that use Short Wavelength Division Multiplexing (SWDM). SWDM is a technology that boosts transmission capacity by sending multiple signals in four wavelengths across the 850nm to 940nm on a single fiber.

OM4 and OM5 Signature Core™ Fibers are 100% standards compliant meeting all OM3 and OM4 specifications, with an additional requirement for Differential Mode Delay (DMD) that compensates for modal and chromatic dispersion effects. OM5 Signature Core™ includes additional bandwidth characterization at 953 nm to support extended distances when using SWDM.

## application

Data centers requiring quick infrastructure deployment with extended reach. Small diameter trunk cable assemblies use 30 to 40% less space which is ideal for high density cable applications.

## construction

<b>Cable type:</b>	Indoor unarmored
<b>Cable jacket ratings:</b>	Optical Fiber Non-conductive Plenum (OFNP) Low Smoke Zero Halogen (LSZH)
<b>Fiber type:</b>	Signature Core™ OM4+ and OM5+
<b>Fiber count:</b>	12, 24
<b>Connector end 'A':</b>	Type: MPO female, PanMPO female Color: Black, Aqua, Lime green Polarity: Method A
<b>Connector end 'B':</b>	Type: MPO female, PanMPO female Color: Black, Aqua, Lime green Polarity: Method A
<b>Number of breakouts:</b>	12-fiber: 1 24-fiber: 2
<b>Jacket color:</b>	Aqua, Lime green

## optical properties

<b>Cable attenuation:</b>	1.8dB/km @ 953 nm for OM5 Signature Core
<b>Maximum connector insertion loss:</b>	0.25dB
<b>Minimum connector return loss:</b>	30dB

<sup>1</sup> The actual channel reach of a laser optimized, multimode fiber (OM3, OM4, or Signature Core™) depends on the optical and electrical parameters of the VCSEL transceiver. For worst-case optical and electrical parameters, Signature Core™ Fiber will provide at least 20% greater reach over standard un-compensated OM4 fiber.

<sup>2</sup> OM4 fiber was ratified in the IEEE802.3/D3.0 proceedings from Dec. 15, 2011, Table 52-6 with an Operating Range of 2m to 400m.

<sup>3</sup> Reach values are a minimum.

<sup>4</sup> Differential Mode Delay (DMD) is a metric defined in telecommunications industry association standard EIA/TIA 455-220-A, January 2003, which describes a method for measuring the modal dispersion of laser optimized multimode fiber.

<sup>5</sup> OM5 fiber has been approved as the new wideband multimode standard on June 2016, by ANSI/TIA-492AAAE.

## physical properties

<b>Cable outside diameter (OD):</b>	12-fiber: 4.5mm 24-fiber: 5.4mm
<b>Cable weight:</b>	12F Plenum: 23.6kg/km (15.9lbs/kft) 12F LSZH: 22.2kg/km (14.9lbs/kft) 24F Plenum: 31.7kg/km (21.3lbs/kft) 24F LSZH: 29.7kg/km (19.9lbs/kft)
<b>Cable tensile rating:</b>	440N (100lb.)
<b>Cable compressive load:</b>	Breakout outside diameter: 10N/m
<b>Connector durability:</b>	500 mating cycles*
<b>Bend radius:</b>	Under load: 20 x cable OD Static: 10 x cable OD
<b>Transition outside diameter:</b>	12-fiber: 10mm 24-fiber: 10mm
<b>Pulling eye diameter:</b>	12-fiber: 19mm 24-fiber: 23mm
<b>Breakout length:</b>	1m

## environmental properties

<b>Storage and shipping temperature:</b>	-40°C to +70°C (-40°F to 158°F)
<b>Installation temperatures:</b>	-10°C to +60°C (14°F to 140°F)
<b>Operating temperature:</b>	-20°C to 70°C (-4°F to 158°F)

## standards

Meets or exceeds ISO/IEC 11801, TIA/EIA-568-C.3, TIA-604-5 (FOCIS-5), TIA/EIA-568-C.1, RoHS compliant, TIA-492-AAAD, IED 60793-2-10 type A1a.3

# QuickNet™ OM4 and OM5 Signature Core™ Trunk Cable

## part number

Description: FSUYP7E7EKAM010 = Fiber OM4+ Signature Core™ 24 fiber, small diameter, plenum, PanMPO™ female to PanMPO™ female, method A ultra IL, with pulling eye end A, 10 meters

Character	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Example	F	S	U	Y	P	7	E	7	E	K	A	M	0	1	0

### 1 – Fiber

F = Fiber

### 2 – Fiber Type

S = OM4+ Signature Core™

W = OM5+ Signature Core™

### 3 – Fiber Count

T = 12-fiber

U = 24-fiber

### 4 – Cable Type

Y = Small Diameter

### 5 – Flame Rating

L = Low Smoke Zero Halogen (LSZH)

P = Optical Fiber Non-conductive

Plenum (OFNP)

### 6 – Connector Type

7 = PanMPO™ Female

8 = PanMPO™ Male

### 7 – Connector Variant

5 = Molded Transition 1m breakout

E = 1m equal breakout

### 8 – Connector Type

7 = PanMPO™ Female

8 = PanMPO™ Male

### 9 – Connector Variant

E = 1m equal breakout

5 = Molded Transition 1m breakout

### 10 – Performance/Polarity

K = Polarity A/Ultra IL

### 11 – Pulling Eye

A = Pulling Eye end A

N = No Pulling Eye

### 12 – Unit of Measure

F = Feet

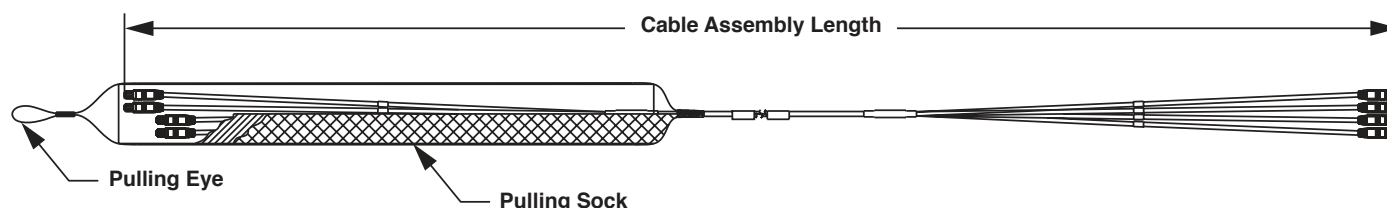
M = Meters

### 13, 14, and 15 – Length

005 – 100 m

015 – 300 Feet

## QuickNet™ OM4 and OM5 Signature Core™ trunk cable assembly detail



### Notes:

- Standard lengths for MPO to MPO OM4 Signature Core™ trunk cables are available from 10 – 100 feet in increments of 1 foot and 10m – 50m in increments of 1m. For additional lengths and availability, please contact Panduit customer service.
- Cable assembly lengths are measured as the distance between the furthest connector tips. Length tolerance is +4 feet (1.2m)/-0 for lengths up to 100 feet (30m) and +6 feet (1.8m)/-0 for lengths greater than 100 feet (30m).
- For hybrid solutions and special cable constructions/ratings/colors/availability, consult Panduit.
- Standard lengths for MPO to MPO OM5 Signature Core™ trunk cables are available from 15 – 300 feet in increments of 5 feet and 5m – 100m in increments of 1m. For additional lengths and availability, please contact Panduit customer service.

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