

# Loose Tube Fiber Optic Indoor/Outdoor Cable

12 Element All Dielectric Dry Core Design

**MiDia® SAFE**



Issue November 2018  
according to **OFS Generic Specification**

## Application

Mainly used in outside plant to building transitions and inter-building installations

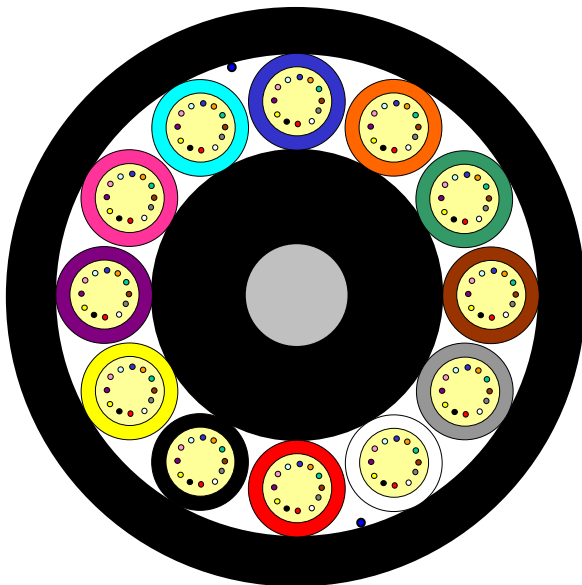
## Design

- Optical Fibers
- Gel-filled Buffer Tubes
- Non-metallic Central Member
- Water Blocked Dry Core
- Ripcords
- Flame Retardant Jacket

## Features

- All Dielectric Cable
- Dry Core Design – Cable core water blocked by means of dry “water swellable” technology - for quicker, cleaner cable prep for jointing
- Individual colored tubes
- Low smoke/zero halogen (LSOH) rated
- Meets the requirements of IEC 60332-1-2
- Meets CPR Euro Class E<sub>ca</sub> according EN 13501-6

Version illustrated is the 144 Fiber Cable



Fiber Count	Tubes	Core Design	Outer Diameter [mm]	Cable Weight [kg/km]	Standard Length [m]	Cable- Code**
132	11	1+12(1Filler*)	12.3	165	2000 / 4000 / 6000 / 8000	HS[ ]1-132[ ]-[ ]EK-[ ]E
144	12	1+12	12.3	165	2000 / 4000 / 6000 / 8000	HS[ ]1-144[ ]-[ ]EK-[ ]E

This table shows nominal diameter and weight values which may differ in shipments.

\*Fillers are natural colored. \*\*Please refer to the OFS Cable- Code. The blanks specify the fiber type.

## Identification

### Tube and Fiber Color Code:

1	Blue	2	Orange	3	Green	4	Brown	5	Grey	6	White
7	Red	8	Black	9	Yellow	10	Violet	11	Rose	12	Aqua

Alternative tube and fiber color code available on request.

## Sheath Marking

**OFS OPTICAL CABLE MIDIA SAFE [ID] [MM/YYYY] [Handset Sign] xxxF [Meter Marking]**

Alternative sheath printing available on request.

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## Mechanical Properties and Environmental Behaviour

Tests according to IEC 60794

	Parameter	Requirement	Value
<b>Tensile Performance:</b>  IEC 60794-1-21-E1A and E1B	Long term load	- No attenuation increase* - No fiber strain	Load: 500 N
	Short term load, during installation	- No changes in attenuation before versus after load - Max. fiber strain 0.5%	Load: 2.0 x W <i>W is the weight of the cable</i>
<b>Crush Performance:</b>  IEC 60794-1-21-E3A	Long term load	- No attenuation increase*	Load (Plate / Plate): 500 N
	Short term load	- No changes in attenuation before versus after load - No damage**	Load (Plate / Plate): 1500 N
<b>Bending Performance:</b>  IEC 60794-1-21-E11	Handling fixed installed	- No attenuation increase*	Bend radius: 120 mm
	During installation (under load)	- No changes in attenuation before versus after load	Bend radius: 240 mm
<b>Temperatures:</b>  IEC 60794-1-22-F1	Operation	- No attenuation increase*	-40 to +70°C
	Installation		-15 to +60°C
	Storage/Shipping		-40 to +70°C

\* No changes in attenuation means that any changes in measurement value, either positive or negative within the uncertainty of measurement shall be ignored. The total uncertainty of measurement shall be less than or equal to 0.05 dB.

\*\* Mechanical damage – when examined visually without magnification, there shall be no evidence of damage to the sheath. The imprint of plates will not be considered as damage.

## Shipping Information

Cable Length	Drum Dimensions (approx.)		Shipping Weight (calc.)	
	Diameter(battened)	Width	Without lagging	With lagging
2000 m	1250 mm	790 mm	410 kg	450 kg
4000 m	1450 mm	790 mm	770 kg	810 kg
6000 m	1600 mm	1055 mm	1120 kg	1180 kg
8000 m	1750 mm	1055 mm	1470 kg	1530 kg

The shipping information are given for one-way reels. Reusable reels are available on request.

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### Cable Ordering Information

Example: **HSS1-nnnA-3EK-BE<sup>1</sup>**

**Part Number: PREFIX – nnnV – X2X3X4 – X5X6**

#### PREFIX

Pos.1: **H**= LooseTube FRNC

Pos.2: **S**= MiDia Safe

Pos.3: **S**= Single Mode

**M**= Multi Mode

Pos.4: **1**= Single Jacket

**5**= Non Metallic Rodent Protection

#### nnn = Fiber Count

#### V= Version

Version **A**= 250µm

Version **C**= 250µm Multi Mode

#### X2= Fiber Selection

**3**= 1310/1550 nm (AllWave® ZWP Fiber)

1310/1550 nm (AllWave®+ ZWP Fiber)

1310/1550 nm (AllWave® One ZWP Fiber)

1310/1550 nm (AllWave® Low Loss ZWP Fiber)

**5**= 1310/1550 nm (AllWave® FLEX ZWP Fiber)

**7**= 1310/1550 nm (AllWave® FLEX + ZWP Fiber)

**L**= 850/1300 nm 50µm MMF (LaserWave® FLEX G+) (OM2+)

850/1300 nm 50µm MMF (LaserWave® FLEX 300) (OM3)

850/1300 nm 50µm MMF (LaserWave® FLEX 550) (OM4)

**R**= 850/1300 nm 62,5µm MMFLaser Optimized (OM1+)

#### X3= Fire Performance

**E**= EuroClass E<sub>ca</sub>

#### X4= Sheath Color

**K**= Black

#### X5= Fiber Transmission Performance

**B**= 0.35/0.31/0.27/0.25/0.27 dB/km @

1310/1385/1490/1550/1625 nm

(AllWave® ZWP Fiber)

**E**= 0.36/0.31/0.27/0.25/0.27 dB/km @

1310/1385/1490/1550/1625 nm

(AllWave® FLEX ZWP Fiber)

(AllWave® FLEX + ZWP Fiber)

**C**= 0.35/0.31/0.27/0.25/0.27 dB/km @

1310/1385/1490/1550/1625 nm (AllWave® + ZWP Fiber)

**F**= 0.33/0.31/0.25/0.19/0.20 dB/km @

1310/1385/1490/1550/1625 nm (AllWave® One ZWP Fiber)<sup>2</sup>

**A**= 0.33/0.31/0.25/0.19/0.20 dB/km @

1310/1385/1490/1550/1625 nm (AllWave® Low Loss ZWP Fiber)<sup>2</sup>

**D**= 2.4/0.7 dB/km and 700/500 MHz-km @

850/1300 nm MMF (LaserWave® FLEX G+) (OM2+)

**F**= 2.4/0.7 dB/km and 1500/500 MHz-km @

850/1300 nm MMF (LaserWave® FLEX 300) (OM3)

**H**= 2.4/0.7 dB/km and 3500/500 MHz-km @

850/1300 nm MMF (LaserWave® FLEX 550) (OM4)

**A**= 2.9/0.7 dB/km and 220/500 MHz-km @

850/1300 nm MMF (Laser Optimized 62,5µm) (OM1+)

**X**= Specific

#### X6= Fiber Type<sup>3</sup>

**E**= AllWave® ZWP Single Mode

**2**= 50/125 µm Multi Mode

**9**= 62.5/125 µm Multi Mode

<sup>1</sup> Part Number shown is for Loose Tube MiDia Safe with black FRNC sheath and 250 µm Single Mode AllWave ZWP Fibers. It meets CPR Euro Class E<sub>ca</sub> according to EN 13501-6.  
<sup>2</sup> ALL LOW LOSS OFFERS ARE BASED ON LDV MEASURED VALUES. Maximum end-to-end link attenuation over a concatenated span of cable, not including splice loss, 50 km or 5 cable continuous sections minimum.

<sup>3</sup> Contact OFS sales representative for information on other cable variations, including additional fiber types, composite cables and attenuation.

### Fire Performance

#### EuroClass E<sub>ca</sub>

For DoP, please visit <https://www.ofs-sales.com/cpr> DoP Code:

Single Mode	Multi Mode
HSS1-012-E-A	HSM1-012-E-C

The information is believed to be accurate at time of issue.

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