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Indoor LSZH

Flat duplex | Direct termination | Easy routing

Tight Buffer Flat Duplex Cable 2F

I-V-(ZN)H-H-2x1

Flat duplex indoor connection cable with two tight-buffered sub-units

CORE PRODUCT DATA

Cable family	Indoor tight buffer flat duplex cable
Code designation	I-V(ZN)HH 2x1 Flat DX / I-V-(ZN)H-H-2x1
Fiber count	2 fibers
Sub-unit structure	Two parallel simplex tight-buffered sub-units
Strength member	Aramid yarn, non-metallic
Jacket material	LSZH / HFFR indoor sheath, black
Typical route	LAN, patching, terminal connection, FTTH indoor drop

2 2-fiber flat route

Two simplex sub-units are arranged side by side for compact indoor paths.

+ Direct termination

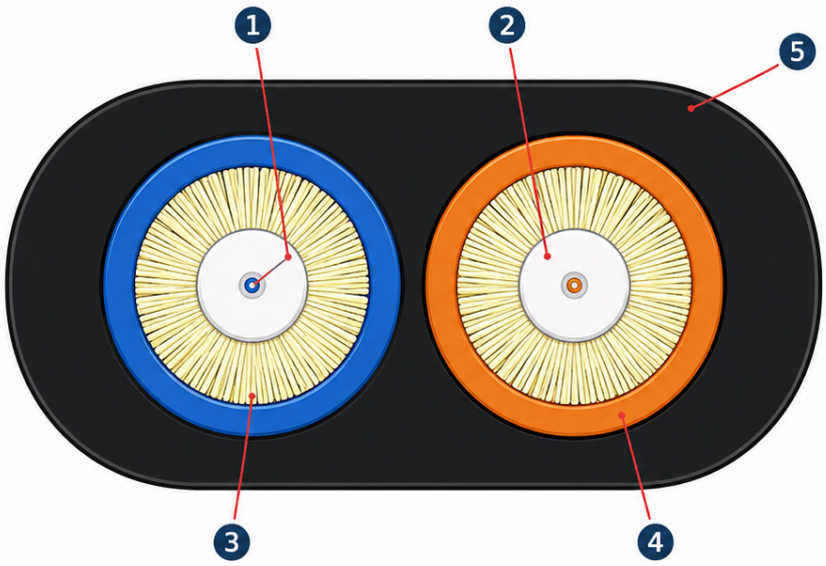
900 mic. tight buffer and aramid yarn support clean connector assembly.

F LSZH indoor sheath

Halogen-free, flame-retardant jacket for low fire load indoor cabling.

Numbered Cable Cross Section

I-V(ZN)HH 2x1 Flat DX - tight buffer flat duplex indoor cable



Component legend

1. **Optical Fiber**
   Single-mode (SM) or Multi-mode (MM) options
2. **900 mic. Tight Buffer**
   Easy stripping for direct termination
3. **Strength Member**
   Aramid yarn
4. **HFFR Sub-Unit Simplex**
   Two parallel single-fiber sub-units (Blue & Orange)
5. **HFFR Outer Sheath**
   Flat duplex construction

Layer order: outside to inside 5 > 4 > 3 > 2 > 1

Technical Construction and Performance

Construction values for I-V(ZN)HH 2x1 Flat DX indoor tight buffer cable

Item	2.0 mm sub-unit	2.8 mm sub-unit
Fiber count	2 fibers	2 fibers
Strength member	Aramid yarns	Aramid yarns
Sub-unit jacket	LSZH / HFFR	LSZH / HFFR
Outer jacket	LSZH / HFFR common flat sheath	LSZH / HFFR common flat sheath
Sub-unit diameter	2.0 mm	2.8 mm
Approx. cable dimension	3.1 x 6.2 mm	3.8 x 6.6 mm
Approx. cable weight	24 kg/km	32 kg/km
Tensile load perm./inst.	300 / 500 N	400 / 700 N
Crush resistance	600 N/10 cm - IEC 60794-1-2 E3	600 N/10 cm - IEC 60794-1-2 E3
Temperature range	-20 °C to +60 °C - IEC 60794-1-2 F1	-20 °C to +60 °C - IEC 60794-1-2 F1
Minimum bending radius	20 x outer diameter - IEC 60794-1-2 E11	20 x outer diameter - IEC 60794-1-2 E11

Easy stripping

Semi-tight 900 mic. buffer supports fast preparation for connector mounting and patchcord-type termination.

Dry design

Aramid yarn strength members provide tensile support without metallic components.

Compact flat route

The 2x1 flat geometry is practical for short controlled indoor routes and terminal connection points.

Application areas

- LAN and indoor distribution systems
- Indoor interconnect and patchcord applications
- Breakout and patch cable use between terminal distributors and end devices
- Fan-out and direct terminal equipment connection
- FTTH indoor drop cabling and compact connection paths

Optical Characteristics and Compliance

Fiber options, attenuation references and indoor route standards

Fiber type	Wavelength / reference	Attenuation / bandwidth
OM1 62.5/125	850 / 1300 nm	3.2 / 1.2 dB/km max
OM2 50/125	850 / 1300 nm	3.0 / 1.0 dB/km max
OM3 50/125	850 / 1300 nm	2.8 / 0.8 dB/km max
OM4 50/125	850 / 1300 nm	2.7 / 0.7 dB/km max
G.652D 9/125	1310 / 1550 nm	0.34 / 0.25 dB/km max
G.657A 9/125	1310 / 1550 nm	0.34 / 0.22 dB/km max

Standards and route notes

Compliance reference	Scope
EN 50173-1	Generic cabling systems reference
IEC 60754-2	Halogen acid gas / acidity and conductivity behavior
IEC 60794-1 & 2	Optical fiber cable test and construction references
IEC 60793-1 & 2	Optical fiber measurement and product references
IEC 60332-1 & 2	Flame propagation behavior for cable route assessment

Low fire load

LSZH / HFFR sheath material is selected for controlled indoor cable routes where low smoke and halogen-free behavior are required.

All dielectric

No metallic armor or metallic strength member is used. This supports electrically isolated indoor routing.

Connector friendly

The two sub-units can be separated and terminated directly with suitable fiber optic connectors.

Identification, Marking and Ordering Logic

Standard identification information for I-V(ZN)HH 2x1 flat duplex variants

Field	Specification
Cable marking	White ink-jet print at regular intervals: UPCOM, year, fiber count, fiber type, product code and meter marking
Standard inscription example	UPCOM 2 FO I-V-(ZN)H-H-2x1
Outer sheath color	Black as standard for indoor LSZH flat duplex routes
Sub-unit colors	Blue and orange shown as typical duplex identification colors; final color may be confirmed per project
Fiber options	OM1, OM2, OM3, OM4, G.652D or G.657A depending on project requirement
Sub-unit diameter options	2.0 mm or 2.8 mm sub-units

Ordering logic

Selection parameter	Available / confirmable option	RFQ note
Fiber type	G.652D / G.657A / OM1 / OM2 / OM3 / OM4	Confirm optical class and attenuation requirement
Sub-unit size	2.0 mm or 2.8 mm	Select according to connectorization and handling preference
Cable dimension	3.1 x 6.2 mm or 3.8 x 6.6 mm	Linked to selected sub-unit size
Packing / length	Drum, reel or coil according to project	Confirm required delivery length and tolerance
Marking text	Standard UPCOM marking or project-specific text	Confirm before production approval

Product page

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RFQ / production confirmation note

For quotation or production confirmation, specify fiber type, sub-unit diameter, cable color, required marking, packing length, connectorization method and final route condition. Technical values are typical and subject to final production confirmation and applicable project requirements.