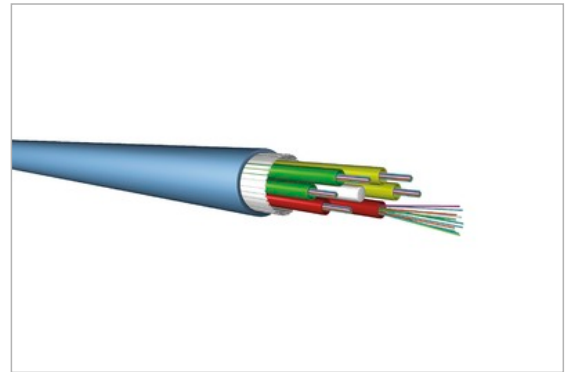


## Description

This cable can be used for LAN and WAN backbones, telecom access lines, fiber to business and fiber to the building drop connections as well as fiber to the home drop and access connections. With its FireBur® LSHF sheathing this cable is ideal for mixed indoor and outdoor installation. This cable features a high tensile strength and a degree of rodent protection, effective in many cases. It is equally suited for installation in ducts and on trays. The cable is suited for installation in tubes by blowing and flooding. The cable may be used for direct burial with proper sand back filling.



## Technical Data

### Standards

ISO 11801 2 <sup>nd</sup> edition	EN 187 000
IEC 60794-2	IEC 60794-2-20
EN 50 173-1	IEC 60794-2-21

### Construction

Cabletype	Universal U-DQ(ZN)BH for indoor and outdoor use
Central strength member	ø2.5 mm FRP rod
Loose tube	ø2.3 mm jelly filled loose tubes, with 2 – 12 fibers each, up to 22 tubes in two layers, for lay-up
Water blocking	The core is water blocked using swellable tape and tread
Wrapping	Polyester nonwoven
Strain Relief	Glasroving elements
Ripcord	Polyester ripcord for easy slitting of the sheath
Sheath	1.5 mm blue FireBur®, UV stabilized, EN 50290-2-27

### Fire rating

IEC 60332-1-2	Single vertical wire test
IEC 60754-1	No halogens
IEC 60754-2	No acid matters
IEC 61034-2	No dense smoke

Reaction to fire (Euroclasses) E<sub>ca</sub>

**Heat of combustion**

Fiber count; 6 fiber/tube	Fiber count; 8 fiber/tube	Fiber count; 12 fiber/tube	MJ/km	KWh/m
6-36	8-48	12-72	2200	0.61
42-48	56-64	84-96	2900	0.81
54-60	72-80	108-120	3700	1.03
66-72	88-96	132-144	4600	1.28
78-84	104-112		5600	1.56
90-108	120-144		4300	1.19
114-132			5200	1.44

**Physical properties**

Tensile strength (dynamic)	E1	6000 N
Tensile strength (permanent)	E1	4000 N
Compressive strength (crush)	E3	3000N
Impact	E4	25 Nm
Torsion	E7	5 cycles ± 1 turn
Kink	E10	The cables do not form a kink when a loop is drawn together to a diameter 12 times the cable nominal diameter
Temperature range	F1	The cables can bear temperature cycling between -40°C to +70°C.
		The cables will operate without any attenuation variation (≤0.05 dB) in the temperature interval -30°C to +60°C.
		The cables will operate with a maximum attenuation variation of 0.1 dB/km in the temperature interval -40°C to +70°C.
Water penetration	F5B	No water on free end

**Mechanical properties**

Fiber count; 6 fiber/tube	Fiber count; 8 fiber/tube	Fiber count; 12 fiber/tube	Nominal diameter	Nominal cable weight	Minimum bending radius
6-36	8-48	12-72	13.0mm	145 kg/km	160mm
42-48	56-64	84-96	14.5mm	180 kg/km	175mm

# FO Universal Cable 144G50/125µm OM2 6.0kN with non-metallic rodent protection

54-60	72-80	108-120	16.0mm	230 kg/km	190mm
66-72	88-96	132-144	17.5mm	270 kg/km	210mm
78-84	104-112		19.0mm	315 kg/km	220mm
90-108	120-144		18.0mm	260 kg/km	215mm
114-132			19.5mm	305 kg/km	230mm

## FO Fiber

Type	Draka OM2 50/125µm multimode fiber (C23)
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Standards and Norms	IEC 60793-2-10 Category A1a	EN 50173-1:2007 category OM2
	EN 60793-2-10: type A1a	ISO/IEC 11801:2002 category OM2
	ITU Recommendations G.651	IEEE 802.3 - 2002. with amendment 802.3ae – 2002
	TIA/EIA-492 AAAB	ANSI/TIA/EIA-568.B.3 – 2000

## Attenuation (of cable with fibers) according to IEC 60793-1-40

850 nm	≤ 2.7 dB/km
1300 nm	≤ 0.8 dB/km
Inhomogeneity of OTDR trace for any two 1000 metre fiber lengths	Max. 0.2 dB/km

## Bandwidth according to IEC 60793-1-41

850 nm	500 MHz*km
1300 nm	500 MHz*km

## Group index of refraction according to IEC 60793-1-22

Group index of refraction at 850 nm	1.482
Group index of refraction at 1300 nm	1.477

# FO Universal Cable 144G50/125µm OM2 6.0kN with non-metallic rodent protection

Other properties according to IEC 60793-1-xx

Attribute	Measurement method	Limits
Core diameter	IEC/EN 60793-1-20	50 ± 2.5 µm
Cladding diameter	IEC/EN 60793-1-20	125.0 ± 1.0 µm
Cladding non-circularity	IEC/EN 60793-1-20	≤ 1.0%
Core non-circularity	IEC/EN 60793-1-20	≤ 5%
Core -cladding concentricity error	IEC/EN 60793-1-20	≤ 1.5 µm
Primary coating diameter - uncoloured	IEC/EN 60793-1-21	242 ± 7 µm
Primary coating diameter - coloured	IEC/EN 60793-1-21	250 ± 15 µm
Primary coating non-circularity	IEC/EN 60793-1-21	≤ 5%
Primary coating-cladding concentricity error	IEC/EN 60793-1-21	≤ 10 µm
Proof stress level	IEC/EN 60793-1-30	≥ 0.7 (≈ 1 %)
Typical average strip force	IEC/EN 60793-1-32	1.7 N
Strip force (peak)	IEC/EN 60793-1-32	1.3 N ≤ F <sub>peak.strip</sub> ≤ 8.9 N
Numerical aperture	IEC/EN 60793-1-43	0.200 ± 0.015

Art.-No.	Description
L-U-DQ(ZN)BH144G50	FO Universal Cable 144G50/125µm OM2 6.0kN with non-metallic rodent protection