6F 12F 24F 48F 96F 144F Single Armor Single Jacket Cable

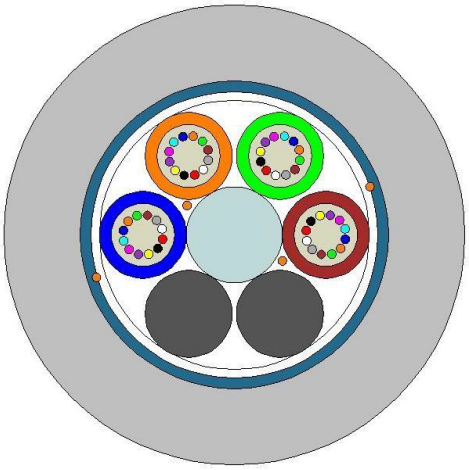
Draka

A Brand of Prysmian Group

TD 20-039

Cable Design

IEC/EN 60794-3-10



Central strength member (CSM): glass fibre reinforced plastic rod
(FRP) with coating when needed.

Tube: thermoplastic material, containing up to 12 optical fibres and
filled with a suitable water tightness compound.

Stranding: the required number of elements (tubes or fillers) are
SZ stranded around the central strength member.

Core wrapping: water swellable tape (dry core).

Armour: corrugated steel tape. 2 ripcords beneath.

Outer Sheath: HDPE.

Technical data

No. of Fibres		6, 12, 24	48	96	144
Design (Elements × Fibres per Tube)		6×6	6×12 12×12	8×12	
Loose Tube / Filler - nominal Ø	mm	2.1	2.2	2.2	2.2
CSM/sheath nominal diameter	mm	2.3	2.5 2.7/6.9	2.7/3.9	
Outer sheath nominal thickness	mm	1.6	1.6	1.6	1.6
Cable nominal Diameter	mm	11.5	11.9	13.3	16.3
Cable Weight	kg / km	127	134	160	228
Min. bending radius	mm	Without Tension Tension10 × Cable-Ø Ø		Under Maximum 20 × Cable-	
Temperature range	°C	Installation -10 -> +60;	Transport. & Storage -40 -> +70 ;		Operation -40 -> +70

Please refer to our General Installation, Safety & Handling recommendations before handling.

Main characteristics

Test	Standard	Value	Sanction*
Max. Installation Tension	IEC 60794-1-21-E1	2700N	fibre strain £ 0.33%, Da reversible
Crush	IEC 60794-1-21-E3	2200N / 100mm	Da £ 0.1 dB, cable integrity
Temperature Cyciling	IEC 60794-1-22-F1	-40 -> +70°C	Da £ 0.05 dB/km
Water Penetration	IEC 60794-1-22-F5C	sample=3m, water=1m	No water leakage after 24 hour

** values for single-mode fibres, all optical measurements performed at 1550 nm.*

6F 12F 24F 48F 96F 144F Single Armor Single Jacket Cable

Prysmian

A Brand of Prysmian Group

TD 20-039

Identification

Fibre Colours

No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	blue	orange	green	brown	grey	white	red	black	yellow	violet	pink	aqua

Loose Tube and filler Colours:

Tube No.	1	2	3	4	5	6	7	8	9	10	11	12
Tube Colour	blue	orange	green	brown	grey	white	red	black	yellow	violet	pink	aqua

All fillers are black.

Sheath Colour:

The outer sheath colour is black

Sheath Marking:

The outer sheath is marked in 1 meter intervals as follows:

PRYSMIAN FYCO TELECOM YYYY XXF G652D ARMOURED CABLE XXXXM

Identification

Packing:

Wooden drums with protection.

Delivery Lengths:

Standard delivery length is 5 km with a tolerance of ±3%.

6F 12F 24F 48F 96F 144F Single Armor Single Jacket Cable

Draka
A Brand of Prysmian Group

TD 20-039

Properties of cable with standard Enhanced SM fibre

ESMF, low water peak single mode fibre G652D, OS2

General and application

The optical fibres are made of a high grade doped silica core surrounded by a silica cladding.They are coated with a dual layer, UV cured acrylate based coating.
This enhanced single mode fibre provides improved performance across the entire 1260 nm to 1625 nm wavelength spectrumdue to its low attenuation in 1383 nm, the water-peak region.

Standards and Norms

IEC / EN 60793-2-50 Category B.1.3	EN 50 173-1:2007, cat. OS2 and OS1
ITU-T Recommendation G.652.D and C, B, A	ISO / IEC 11801:2002, cat. OS2 and OS1
IEEE 802.3 – 2002 incl. 802.3ae	ISO / IEC 24702:2006, cat. OS2 and OS1

Optical properties

Attribute	Measurement method	Units	Limits
Mode field diameter at 1310 nm Mode field diameter at 1550 nm	IEC/EN 60793-1-45	µm µm	9.2 ± 0.4 10.4 ± 0.5
Chromatic dispersion coefficient: In the interval 1285 nm – 1330 nm At 1550 nm At 1625 nm	IEC/EN 0793-1-42	ps/km ● nm ps/km ● nm ps/km ● nm	≤ | 3.5 | **≤ 18.0** ≤ 22.0
Zero dispersion wavelength, λ0		nm	1300 - 1324
Zero dispersion slope		ps/(nm² ● km)	≤ 0.092
Cut-off wavelength	IEC/EN 60793-1-44	λCC nm	≤ 1260 *
Polarisation mode dispersion (PMD) coefficient, cabled	IEC/EN 60793-1-48	ps/√km	≤ 0.2
PDQ Link Design Value (computed with Q=0.01%, N=20)	IEC/EN 60794-3	ps/√km	≤ 0.06

** guaranteed value according to the ITU-T (ASTM G650) method*

6F 12F 24F 48F 96F 144F Single Armor Single Jacket Cable

Prysmian

A Brand of Prysmian Group

TD 20-039

Attenuation

Attribute	Measurement_method	Units	Limits
Maximum attenuation value of cable at 1310 nm	IEC/EN 60793-1-40	db/km	≤ 0.36
Maximum attenuation value of cable at 1550 nm	IECEN 60793-1-40	db/km	≤ 0.22
Inhomogeneity of OTDR trace for any two 1000 meter fibre lengths		db/km	Max. 0.1

Attenuation variation vs Bending

Attribute	Measurement_method	Units	Limits
100 turns on a R=25 mm mandrel at 1310 & 1550 nm	IEC/EN 60793-1-47	db	≤ 0.05
100 turns on a R=30 mm mandrel at 1625 nm	IEC/EN 60793-1-47	db	≤ 0.05

Group index of refraction

Attribute	Measurement_method	Units	Limits
1310 nm	IEC/EN 60793-1-22	-	1.467
1550 nm	IEC/EN 60793-1-22	-	1.468
1625 nm	IEC/EN 60793-1-22	-	1.468

Group index of refraction

Attribute	Measurement_method	Units	Limits
Cladding diameter	IEC/EN 60793-1-20	µm	125.0 ± 1.0
Cladding non-circularity	IEC/EN 60793-1-20	%	≤ 1
Core (MDF) – cladding concentricity error	IEC/EN 60793-1-20	µm	≤ 0.6
Primary coating diameter - ColorLock® and natural 10XS	IEC/EN 60793-1-21	µm	245 ±
Primary coating non-circularity	IEC/EN 60793-1-21	%	≤ 6
Primary coating-cladding concentricity error	IEC/EN 60793-1-21	µm	≤ 12

Mechanical properties

Attribute	Measurement_method	Units	Limits
Proof stress level	IEC/EN 60793-1-30	Gpa	≥ 0.7 (≈ 1%)
Strip force (peak)	IEC/EN 60793-1-32	N	1.3 ≤ Fpeak.strip ≤ 8.9
Dynamic fatigue resistance aged and unaged (Nd)	IEC/EN 60793-1-33		≥ 20
Static fatigue, aged ns	IEC/EN 60793-1-33		≥ 23

Consulte nuestro directorio de ejecutivos comerciales en https://co.prysmiangroup.com/es/contact-us