



LadonX™ 4/8/12/18/24/36/48/64/96F Double Jacket Direct Burial Cable

NHFRPE OUTER SHEATH/STEEL TAPE/MICA TAPE/NHFRPE SHEATH/APL TAPE

Flame Resistant

IEC 60332-1-2

IEC 60332-3-22

Design Reference

IEC 60794-1-1

IEC 60794-1-21/22

IEC 60794-3

IEC 60794-3-10

IEC 60794-3-11

ITU-T G.652.D

Application

Applicable to direct burial installation.

Working Conditions

Storage Temperature

-40°C ~ +70°C

Installation Temperature:

-40°C ~ +70°C

Operation Temperature

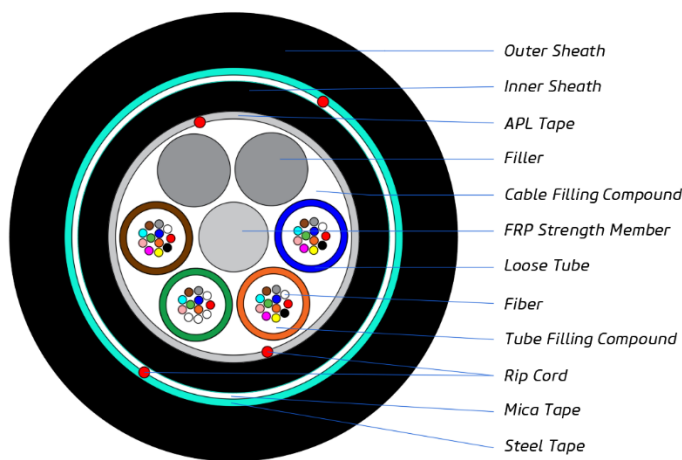
-20°C ~ +70°C

Min. Allowable Bending Radius

Static: > 12.5 D

Dynamic: > 25 D

D is the out diameter of the cable



Technical data

Number of Fibers	4/8/12/18/24/36/48/64/96	
Fiber Type	G652D	
Central Strength Member	FRP / FRP+PE layer	
FRP Diameter (Nom.)	mm	2/2/2/2/2/2/2.25/2.5/2.5
Fiber Per Tube	4/4/6/6/6/6/12/8/12	
Moisture Barrier	APL tape	
Inner Sheath	Black NHFRPE	
Thickness of Inner Sheath (Nom.)	mm	1.0
Outer Sheath	Black NHFRPE	
Thickness of Outer Sheath (Nom.)	mm	1.8
Water Blocking	Cable filling compound	
Armor	Steel tape	
No. of Rip Cord	2+2	
Overall Diameter (Nom.)	mm	13.7/13.7/13.7/13.7/13.7/13.7/14.7/15.7/15.7
Weight Approx.	kg/km	165/165/165/165/165/165/186/216/216



Fiber Chromatogram

No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Slate	White
No.	7	8	9	10	11	12
Color	Red	Black	Yellow	Violet	Pink	Aqua

Loose Tube Chromatogram

No.	1	2	3	4	5	6
Color	Blue	Orange	Green	Brown	Slate	White
No.	7	8	9	10	11	12
Color	Red	Black	Yellow	Violet	Pink	Aqua

Mechanical Property

No.	Mechanical Specification	Unit	Designed Value
1	Max. tensile strength	N	2700
2	Crush resistance	N/100mm	2200

Optic Fiber

Optic Fibers supplied in this specification meet the requirements of ITU-T G.652.D

Parameter	Specification
MFD (1310nm)	8.8 ~ 9.8um
Cladding diameter	125+/- 1.0um
Fiber diameter	235~255um, with UV coating, and colored to : 250±15um
Core/ cladding concentricity error	≤ 0.6um
Coating/cladding concentricity error	≤ 12.0um
Cladding non- circularity	≤ 1.0%
Cut- off wavelength	$\lambda_{cc} \leq 1260\text{nm}$
Attenuation Coefficient	1310nm: 0.35dB/km max after cabling 1550nm: 0.21dB/km max after cabling
Bending-loss performance of optical fiber @1310nm&1550nm	≤0.05dB (100 turns around a mandrel of 50mm diameter)
Polarization mode dispersion maximum individual fibre	0.2ps/ $\sqrt{\text{km}}$
Polarization mode dispersion design link value	0.1ps/ $\sqrt{\text{km}}$
Zero-Dispersion Wavelength	1300~1324nm
Zero Dispersion Slope	≤0.092ps/nm ² ·km



Test Characteristics

The mechanical and environmental performance of the cable are in accordance with the following table. Unless otherwise specified, all attenuation measurements required in this section shall be performed at 1550nm.

	Test Method	Requirements
Tension	IEC 60794-1-21-E1; Load: According to 3.5 Sample length: Not less than 50m. Duration time: 1min.	Additional attenuation: $\leq 0.05\text{dB}$ after test No damage to outer jacket and inner elements
Crush	IEC 60794-1-21-E3A; Load: According to 3.5 Duration of load: 1min	Additional attenuation: $\leq 0.05\text{dB}$ after test No damage to outer jacket and inner elements
Impact	IEC 60794-1-21-E4; Radius: 300 mm Impact energy: 10 J; Impact number: 1 Impact points: 3	Additional attenuation: $\leq 0.1\text{dB}$ No damage to outer jacket and inner elements
Repeated bending	IEC 60794-1-21-E6; Bending radius: $20 \times D$ Cycles: 25; Load: 150N	Additional attenuation: $\leq 0.05\text{dB}$ No damage to outer jacket and inner elements
Torsion	IEC 60794-1-21-E7; Cycles:10 Length under test: 1m; Turns: $\pm 90^\circ$; Load:150N	Additional attenuation: $\leq 0.1\text{dB}$ No damage to outer jacket and inner elements
Water Penetration	IEC 60794-1-22-F5B; Time: 24 hours Sample length: 3m; Water height: 1m	No water leakage.
Temperature cycling	IEC 60794-1-22-F1 Sample length: at least 1000m Temperature range: $-40^\circ\text{C} \sim +70^\circ\text{C}$; Cycles:2 Temperature cycling test dwell time: 12 hours	The change in attenuation coefficient shall be less than 0.05 dB/km
Other parameters		According to IEC 60794-1

Sheath Marking

The outer sheath is marked in 1meter intervals as follows

HERMESYS LADONX XXXF DOUBLE JACKET DIRECT BURIAL CABLE G652D WW YYYY XXXXM

Shipping Information

Packing Method

Wooden Drum with proper protection

Delivery Length

2/4 km per drum

Info@hermesys.com
Phone +65 66921168
42 Emerald Hill Road, Singapore



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