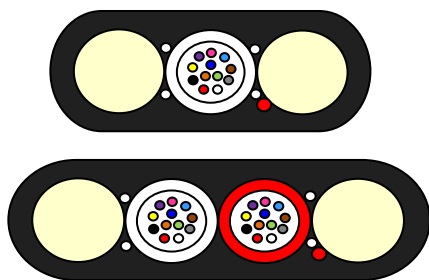


Aero Flat Drop Cable 12 / 24

Cable Design

Drop Cable-GFRP Reinforcing-Dielectric-Dry Core-G.652D/G.677A1 Fiber



- **Loose Tube:** PBT plastic material, containing 12 fibers and filled with a suitable water tightness compound.
- **FRP:** additional strength member.
- **Longitudinal Water Tightness:** dry core with water swellable elements.
- **Outer Sheath:** Black HDPE

Cable Specification

Cable Cores		12	24
FRP		2×2.0mm	2×2.0mm
No. of Tubes		1	2
Loose Tube Diameter	mm	2.0	2.0
Thickness of PE Sheath	mm	1.0	1.0
Nominal Cable Diameter	mm	7.7×3.8	9.1×3.8
Nominal Cable Weight	Kg/km	36	39
Coefficient of Thermal Expansion		8.9E-6	9.5E-6
Modulus of Elasticity	MPa (N/mm ²)	11500	9500

Cable Application

Temperature Range		Minimum Bend Radius	
Transportation & Storage	-40~+70°C	Load	20×D
Operation	-40~+70°C	Unload	10×D

Main Mechanical and Environmental Characteristic

Test	Test Standard	Specified Value	Acceptance Criteria
Tensile	IEC 60794-1-2-E1	1000N, 1min	$\Delta\alpha\leq 0.1\text{dB}$, no damage
Crush	IEC 60794-1-2-E3	5000N/10cm, 1min, 3times	$\Delta\alpha\leq 0.1\text{dB}$, no damage
Impact	IEC 60794-1-2-E4	20J, R=300mm, 3impacts	$\Delta\alpha\leq 0.1\text{dB}$, no damage
Repeated Bending	IEC 60794-1-2-E6	R=20D, 20N, 20cycles	$\Delta\alpha\leq 0.1\text{dB}$, no damage
Temperature Cycling	IEC 60794-1-2-F1	-40~+70°C, 2cycles, 8h	$\Delta\alpha\leq 0.1\text{dB/km}$, no damage

Aero Flat Drop Cable 12 / 24

Fiber and Tube Color

Color Identification of Fiber

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

Color Identification of Tube

No	1	2
Color	Red	Green

Cabled Fiber Performance (G.652D)

Characteristics		Acceptance Value
Attenuation	@1310nm	≤0.40dB/km
	@1550nm	≤0.30dB/km
Mode Field Diameter	@1310nm	9.2±0.4μm
	@1550nm	10.4±0.5μm
Dispersion	@1300 +30/-15nm	≤3.5ps/(nm·km)
	@1550nm	≤18.0ps/(nm·km)
	@1625nm	≤22ps/(nm·km)
Zero-Dispersion wavelength		1300nm~1324nm
Zero-Dispersion slope		≤0.092ps/(nm ² ·km)
Cable cutoff wavelength λ_{cc} (nm)		≤1260nm
Cladding diameter		125±0.7μm
Cladding non-circularity		≤0.7%
Core/cladding concentricity error		≤0.5μm
Fiber diameter with coating (uncoated)		242±5μm
Cladding/coating concentricity error		≤12.0μm
Proof stress		≥0.69GPa(100kpsi)
Dynamic stress corrosion susceptibility parameter (typical value)		≥20

Cabled Fiber Performance (G.652D)

Characteristics		Acceptance Value
Attenuation	@1310nm	≤0.35dB/km
	@1383nm	≤0.34dB/km
	@1550nm	≤0.21dB/km
	@1625nm	≤0.23dB/km
Mode Field Diameter	@1310nm	8.8±0.4μm
	@1550nm	10.2±0.4μm
Dispersion	@1300 +30/-15nm	≤3.5ps/(nm·km)
	@1550nm	≤18ps/(nm·km)
	@1625nm	≤22ps/(nm·km)
	Individual value	≤0.20ps/vkm

Aero Flat Drop Cable 12 / 24

PMD	Link value	$\leq 0.15\text{ps/Vkm}$
Zero-Dispersion Wavelength		1300nm~1324nm
Zero-Dispersion Slope		$\leq 0.092\text{ps}/(\text{nm}^2\cdot\text{km})$
Cable Cutoff Wavelength λ_{cc} (nm)		$\leq 1260\text{nm}$
Macrobend loss	30mm radius, 10 turn, @1550	$\leq 0.25\text{dB}$
	30mm radius, 10 turn, @1625	$\leq 0.10\text{dB}$
	20mm radius, 1 turn, @1550	$\leq 0.75\text{dB}$
	20mm radius, 1 turn, @1625	$\leq 1.5\text{dB}$
Cladding Diameter		$125\pm 0.5\mu\text{m}$
Cladding Non-circularity		$\leq 0.7\%$
Core/Cladding Concentricity Error		$\leq 0.5\mu\text{m}$
Proof Test		$\geq 0.69\text{GPa}$ (100kpsi)
Dynamic Fatigue		≥ 20

Sheath Marking, Delivery Length, Drum Marking

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

In Accordance with Custom's Requirement

Standard delivery length will be 2 or 4km.

Drum marking will comply with custom's requirement.