

Aero Flat Drop Cable 48

Cable Design

Drop Cable-GFRP Reinforcing-Dielectric-Dry Core-G.652D/G.657A1 Fiber



- **Loose Tube:** PBT plastic material, containing 24 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		48
FRP		2×2.2mm
Loose Tube Diameter	mm	2.2
Thickness of PE Sheath	mm	1.0
Nominal Cable Diameter	mm	10.8×4.2
Nominal Cable Weight	Kg/km	39

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	1600N, 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

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Cabled Fiber Performance (G.652D)

Characteristics		Acceptance Value
	@1550nm	$\leq 0.30\text{dB/km}$
Mode Field Diameter	@1310nm	$9.2\pm 0.4\mu\text{m}$
	@1550nm	$10.4\pm 0.5\mu\text{m}$
Dispersion	@1300 +30/-15nm	$\leq 3.5\text{ps}/(\text{nm}\cdot\text{km})$
	@1550nm	$\leq 18.0\text{ps}/(\text{nm}\cdot\text{km})$
	@1625nm	$\leq 22\text{ps}/(\text{nm}\cdot\text{km})$
Zero-Dispersion wavelength		$1300\text{nm}\sim 1324\text{nm}$
Zero-Dispersion slope		$\leq 0.092\text{ps}/(\text{nm}^2\cdot\text{km})$
Cable cutoff wavelength $\lambda_{cc}(\text{nm})$		$\leq 1260\text{nm}$
Cladding diameter		$125\pm 0.7\mu\text{m}$
Cladding non-circularity		$\leq 0.7\%$
Core/cladding concentricity error		$\leq 0.5\mu\text{m}$
Fiber diameter with coating (uncoated)		$242\pm 5\mu\text{m}$
Cladding/coating concentricity error		$\leq 12.0\mu\text{m}$
Proof stress		$\geq 0.69\text{GPa}(100\text{kpsi})$
Dynamic stress corrosion susceptibility parameter (typical value)		≥ 20

Cabled Fiber Performance (G.657A1)

Characteristics		Acceptance Value
Attenuation	@1310nm	$\leq 0.35\text{dB/km}$
	@1383nm	$\leq 0.34\text{dB/km}$
	@1550nm	$\leq 0.21\text{dB/km}$
	@1625nm	$\leq 0.23\text{dB/km}$
Mode Field Diameter	@1310nm	$8.8\pm 0.4\mu\text{m}$
	@1550nm	$10.2\pm 0.4\mu\text{m}$
Dispersion	@1300 +30/-15nm	$\leq 3.5\text{ps}/(\text{nm}\cdot\text{km})$
	@1550nm	$\leq 18\text{ps}/(\text{nm}\cdot\text{km})$
	@1625nm	$\leq 22\text{ps}/(\text{nm}\cdot\text{km})$
PMD	Individual value	$\leq 0.20\text{ps}/\sqrt{\text{km}}$
	Link value	$\leq 0.15\text{ps}/\sqrt{\text{km}}$
Zero-Dispersion Wavelength		$1300\text{nm}\sim 1324\text{nm}$
Zero-Dispersion Slope		$\leq 0.092\text{ps}/(\text{nm}^2\cdot\text{km})$
Cable Cutoff Wavelength $\lambda_{cc}(\text{nm})$		$\leq 1260\text{nm}$
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		$\geq 0.69\text{GPa}(100\text{kpsi})$
Dynamic Fatigue		≥ 20

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Fiber & 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

Sheath Marking

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

In Accordance with Custom's Requirement

Delivery Length

Standard delivery length will be 2 or 4km.

Drum Marking

Drum marking will comply with custom's requirement.