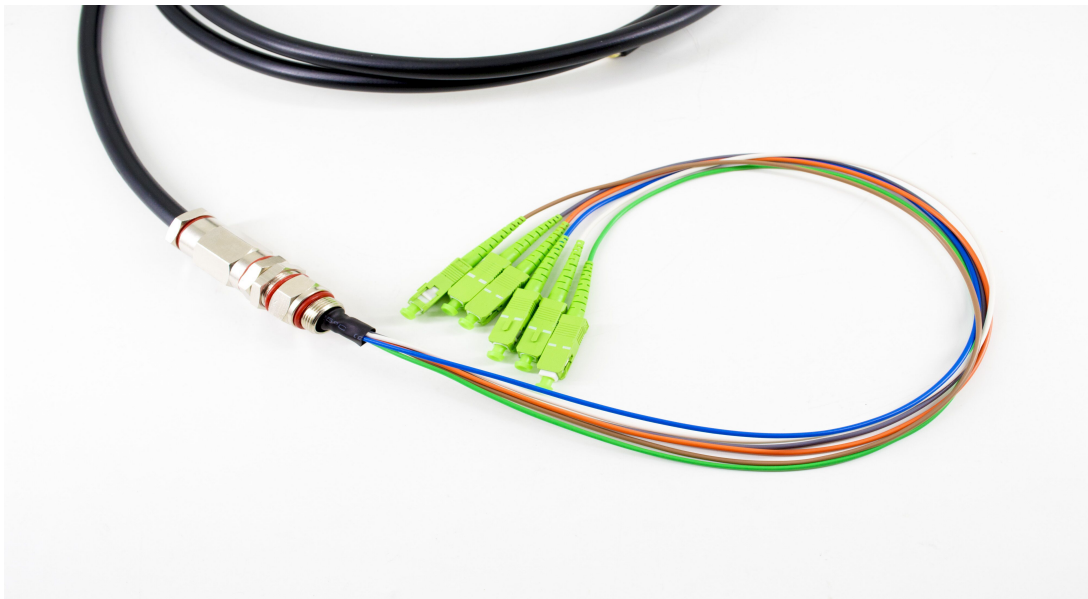


Optical Node cables

1. Introduction

The optical node cable is a factory terminated cable assembly ideal to complete connection of CATV optical node to the network, either indoors or outdoors. Highly customizable assemblies, they come in a variety of fiber types, core counts, lengths and connector interfaces. They all include a metal coupler to facilitate a water tight connection with the optical node.



Features

- 1, Low Insertion Loss
- 2, High Return Loss
- 3, Good Repeatability
- 4, Good Exchangeability
- 5, High Temperature Stability

2. Optical Characteristic

Optical Characteristics for G657A single mode fiber		
Attenuation	@ 1310nm	$\leq 0.35\text{dB} / \text{km}$
	@ 1383nm	$\leq 0.35\text{dB} / \text{km}$
	@ 1460nm	$\leq 0.25\text{dB} / \text{km}$
	@ 1490nm	
	@ 1550nm	$\leq 0.21\text{dB} / \text{km}$
	@ 1625nm	$\leq 0.23\text{dB} / \text{km}$
Attenuation vs. Wavelength	@1310nm	1285 ~ 1330nm $\leq 0.03\text{dB} / \text{km}$
	@1550nm	1525 ~ 1575nm $\leq 0.02\text{dB} / \text{km}$
Dispersion coefficient		1285 ~ 1340nm -3.0~3.0ps / (nm.km)
	@ 1550nm	
	@1625nm	22 ps/(nm.km)
Zero dispersion wavelength		1302~1322 nm.km
Zero dispersion slope		
Zero dispersion slope (Typical)		$\frac{2}{2}$
Polarization Mode	Maximum Individual Fiber	$\leq 0.2 \text{ ps} / \sqrt{\text{km}}$
	Design Link Value (M=20, Q=0.01%)	$\leq 0.1 \text{ ps} / \sqrt{\text{km}}$
Cable cut-off wavelength		$\leq 1260\text{nm}$
Mode field diameter (MFD)	@1310nm	$9.0 \pm 0.4 \mu\text{m}$
	@1550nm	$10.1 \pm 0.5 \mu\text{m}$
Group Index of Refraction	21310nm	1.466
	21550nm	1.467
Backscatter Characteristics (@1310nm / @1550nm)		
Step (Mean of bidirectional measurement)		$\leq 0.05\text{dB}$
Irregularities over fiber length and point discontinuity		$\leq 0.05\text{dB}$
Difference backscatter coefficient (Bidirectional measurement)		$\leq 0.03\text{dB} / \text{km}$
Geometrical Characteristics		
Cladding diameter		$124.8 \pm 0.7 \mu\text{m}$
Cladding non-circularity		$\leq 1.0\%$
Coating diameter		$245 \pm 7 \mu\text{m}$
Coating /cladding concentricity error		$\leq 12.0\mu\text{m}$
Environmental Characteristics (@1310nm/@1550nm)		
Attenuation at temperature cycling $\Delta\alpha$ (-60 °C~+85°C)		$\leq 0.05\text{dB} / \text{km}$
Attenuation at temperature-humidity cycling (-10°C~+85°C,98%R.H.)		$\leq 0.05\text{dB} / \text{km}$
Mechanical Characteristics		
Proof Test (Off line)		$\geq 9.0 \text{ N} (\geq 100 \text{ kpsi})$
Attention at bending dependence	1 turn, 15mm diameter	-
	1 turn, 20mm diameter	$\leq 0.1 \text{ dB}$
	10 turns, 30mm diameter	$\leq 0.1 \text{ dB}$
	100 turns, 50mm diameter	$\leq 0.05\text{dB}$

3. Technical details



Cable	Indoor	6 to 144 fibers distribution cable
	Outdoor	Any type of cable (armored, dielectric, self-supported, figure 8)
Node coupler	Protects the cable from tough installation pulling	
	Its main components are:	
	Metallic body	
	Inside nut	
	Outside nut	
SC Connector	Latching	Push-pull
	Body	Plastic
	Ferrule	2.2mm zirconia
	Boot	Green (APC)
	Polish	APC
	Insertion loss	<0.1 dB
	Return loss	≥55 dB (APC) ≥70dB

Metallic connector

Material: Stainless Steel, node connector & adapter

Finish: Polished

Thread: SCTE 5/8"-24 UNEF Threaded port

Environment: IP-68 water and duct protection

Retention: 500N (112.5 lbs.)