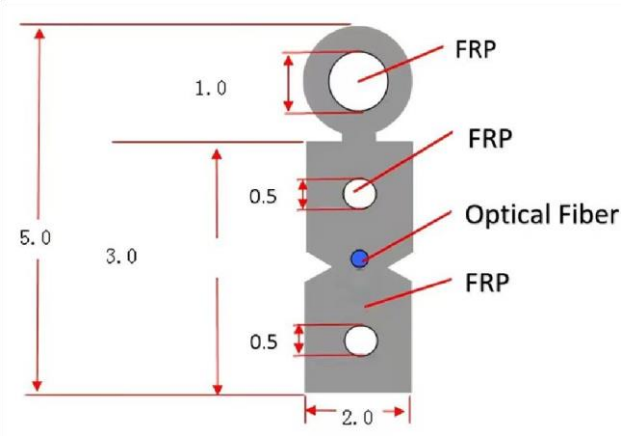
Optical Fiber Cable Technical Specification

SMO-CAB-DROP-1C-DIE

1. Cross Section of Cable



2. Cable structure size

No. of cable			1
Fiber Model			G.657A2
Messenger	Material		FRP
	Diameter（±0.05）mm		1.0
	NO.		1
Strength Member	Material		FRP
	Diameter（±0.03）mm		0.5
	NO.		2
Outer Sheath	Material		LSZH
	Color		Black
Cable Diameter（±0.1）mm			2.0×5.0
Cable Weight（±2）kg/km			21
Attenuation	1310nm	dB/km	0.4
	1550nm		0.3
Allowable Tensile Strenght	Short Term	N	100
	Long Term		200
Allowable Crush Resistance	Short Term	N/100mm	150
	Long Term		70
Min. bending radius	Static	mm	20.0×Cable-φ
	Dynamic		40.0×Cable-φ
Temperature range		℃	-40~+60

3.Fiber Parameters (ITU-T Rec. G.657A2)

Optical properties			
Attenuation	1310nm 1383nm(Hydrogen after aging) 1490nm 1550nm 1625nm	≤0.35 ≤0.35 ≤0.23 ≤0.22 ≤0.23	dB/km
Relative wavelength attenuation @1310nm @1550nm	 1285 ~ 1330nm 1525 ~ 1575nm	 ≤0.05 ≤0.05	dB/km
Dispersion in the wavelength range	1285 ~ 1340nm 1550nm	≤3.5 ≤18	ps/(nm.km)
Zero dispersion wavelength		1300 - 1324	nm
A zero-dispersion slope		≤0.092	ps/(nm2.km)
Polarization Mode Dispersion Coefficient PMD Single fiber maximum Fiber link value (M=20, Q=0.01%)		 ≤0.2 ≤0.1 0.04	ps/
Cable cut-off wavelength （λcc）		≤1260	nm
Mode field diameter （MFD）	1310nm 1550nm	8.8±0.4 9.8±0.5	μm
Attenuation discontinuities	1310nm 1550nm	≤0.05 ≤0.05	dB dB
Geometric characteristics			
Core diameter		125±0.7	μm
Cladding roundness		≤0.07	%
Coating diameter		245±5	μm
Coating / package concentricity error		≤12.0	μm
Core / package concentricity error		≤0.5	μm
The warpage (radius)		≥4	m
Environmental characteristics（1310nm、1550nm、1625nm）			
Temperature additional attenuation	-60℃ ~ +85℃	≤0.05	dB/km
Temperature-humidity cycle additional attenuation	-10℃ ~ +85℃，98% Relative humidity	≤0.05	dB/km
Flooding additional attenuation	23℃，30 days	≤0.05	dB/km
Hot and humid additional attenuation	85℃ @85% Relative humidity，30 days	≤0.05	dB/km
Dry heat aging	85℃	≤0.05	dB/km
Mechanical properties			
Screening tension		≥9.0	N
The macro bend Additional attenuation 10 CircleΦ30mm 10 CircleΦ30mm 1 CircleΦ20mm 1 CircleΦ20mm 1 CircleΦ15mm 1 CircleΦ15mm	 1550nm 1625nm 1550nm 1625nm 1550nm 1625nm	 ≤0.03 ≤0.1 ≤0.1 ≤0.2 ≤0.5 ≤1.0	dB
Coating peeling force	Typical average	1.5	N
Dynamic fatigue parameters		≤20	