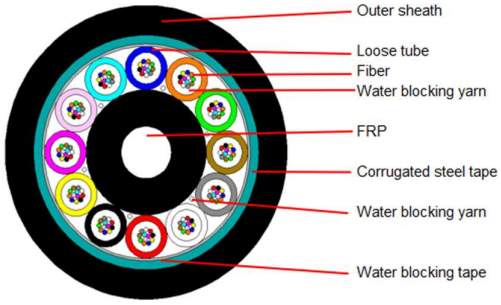
Datasheet

DIGITUS®

DIGITUS Multi-Tube Armored Cable with FRP strength 8-144 cores OS2 SM PE



Construction

Items		Description				
Number of fiber		8	24	48	72	144
Number of fibers per tube		8	12	12	12	12
Number of loose tube		1	2	4	6	12
Number of fillers		4	3	1	0	0
Loose tube	diameter(mm)	2.0±0.15				
	material	PBT				
	tube-filling	Water blocking yarn				
Central strength member	material	FRP				
Armoring	material	Corrugated steel tape				
Water blocking system	material	Water blocking yarn and water blocking tape				
Outer sheath	material	PE				
	diameter(mm)	9.6±0.4			10.5±0.5	14.9±0.5
Min Bending Radius(mm)	Static	15D				
Min BendingRadius(mm)	Dynamic	30D				
Tensile strength (N)		1200				
Crush Load (N/100mm)	Long term	1000				
	Short term	2000				
Storage or transportation (℃)		-20+70				
Operation and transport temperature (℃)		-20+70				

Fiber characteristics

Characteristics	Conditions	Specified	Unit
Attenuation(Cable)	1310nm	≤0.36	dB/KM
	1550nm	≤0.25	dB/KM
Attenuation vs.Wavelength Max. αdifference	1285-1330nm	≤0.03	dB/KM
	1525-1575nm	≤0.02	dB/KM
Zero dispersion wavelength		1312±10	nm
Zero dispersion slope		≤0.090	ps/nm².km
PMD		-	
Maximum Individual Fiber		≤0.2	ps/√km
Link Design Value (M=20,Q=0.01%)		≤0.1	ps/√km
Typical value		0.04	ps/√km
Cable cutoff wavelength λcc		≤1260	nm
Mode field diameter (MFD)	1310nm	9.2±0.4	um
	1550nm	10.4±0.5	um
Effective group index of refraction	1310nm	1.466	-
	1550nm	1.467	-
Point discontinuities	1310nm	≤0.05	dB
	1550nm	≤0.05	dB
Geometrical Characteristics			
Cladding diameter		124.8±0.7	um
Cladding non-circularity		≤0.7	%
Coating diameter		254±5	um
Coating-cladding concentricity error		≤12.0	um
Coating non-circularity		≤6.0	%
Core-cladding concentricity error		≤0.5	um
Curl (radius)		≥4	m

Fiber color

1	2	3	4	5	6
Blue	Orange	Green	Brown	Grey	White
7	8	9	10	11	12
Red	Black	Yellow	Violet	Pink	Aqua

Tube Color

1	2	3	4	5	6
Blue	Orange	Green	Brown	Grey	White
7	8	9	10	11	12
Red	Black	Yellow	Violet	Pink	Aqua

Safety notes

- Avoid direct contact with light sources: Fiber optic cables, especially those with active light sources such as lasers (e.g. in optical communication systems), can emit dangerous radiation that can damage
- eyes. Take care never to look directly into the light of an optical fiber, even if the light source is invisible to the naked eye.
- When working with fiber optic cables, especially during tests or when working with lasers, protective goggles should always be worn to protect against harmful radiation.
- When plugging and unplugging the cable, only grasp the plug and do not pull directly on the cable.
- Do not kink or crush: Fiber optic cables are sensitive to mechanical stress.
- To protect cables from physical damage, they should be laid in special ducts or with protective materials
- Keep cable connectors clean: Fiber optic cables are sensitive to dust and dirt. Even small particles on the connectors can severely impair the signal quality.
- Cables should not be used in environments with extremely high or very low temperatures. Observe the product information on the maximum operating temperature of the cable
- Check cables regularly for visible damage such as cracks, kinks or signs of wear. Defective cables should be replaced immediately.