

MICRO CABLE DATA SHEET



Optical Micro Fiber Cable TGT-MY2L1

1 GENERAL

This specification presents the characteristics of air-blown cable. The cables and corresponding fiber optics are all compatible with latest relevant ITU recommendation for G.652D. The cable structure is well-designed to be installed inside micro ducts, thanks to the improved sheath used as the cable coating.

2 FIBER CHARACTERISTICS

Optics Specifications		
Attenuation(dB/km)	@1310nm	≤0.34dB/km
	@1383nm (after hydrogen aging)	≤0.32dB/km
	@1550nm	≤0.20dB/km
	@1625nm	≤0.24dB/km
Dispersion	@1285nm~1340nm	-3.0~3.0ps/(nm*km)
	@1550nm	≤18ps/(nm*km)
	@1625nm	≤22ps/(nm*km)
Zero-Dispersion wavelength		1300~1324nm
Zero-Dispersion slope		≤0.092ps/(nm ² *km)
Mode field diameter @ 1310nm		9.2±0.4μm
Mode field diameter @ 1550nm		10.4±0.8μm
PMD	Max. value for fiber on the reel	0.2ps/km 1/2
	Max. Designed value for link	0.08ps/km 1/2
Cable cutoff wavelength cc		≤1260nm
Effective group index(Neff)@1310nm		1.4675
Effective group index(Neff)@1550nm		1.4680
Macro-bend loss(Φ60mm,100 turns)@1550nm		≤0.05db

Back scatter characteristic (@1310nm&1550nm)	
Point discontinuity	≤0.05db
Attenuation uniformity	≤0.05db/km
Attenuation coefficient difference for bi-directional measurement	≤0.05db/km

Geometrical characteristics	
Cladding diameter	125±1μm
Cladding non-circularity	≤1%
Core/cladding concentricity error	≤0.4μm
Fiber diameter with coating (uncolored)	245±5μm
Cladding/coating concentricity error	≤12.0μm
Curl	≥4m

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Mechanical characteristics

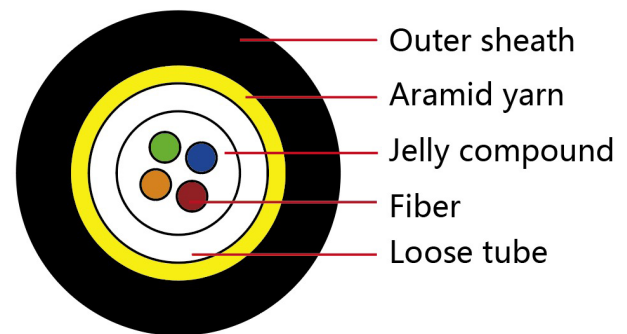
Proof test	0.69GPa
Coating strip force (typical value)	1.4N
Dynamic stress corrosion susceptibility parameter (typical value)	≥20

Environmental characteristics (@1310nm&1550nm)

Temperature induced attenuation (-60~+85°C)	≤0.5dB/km
Dry heat induced attenuation (85±2°C,30days)	≤0.5dB/km
Water immersion induced attenuation (23±2°C,30days)	≤0.5dB/km
Damp heat induced attenuation (85±2°C,RH85%,30days)	≤0.5dB/km

3 OPTICAL FIBER CABLE

3-1. Cross section



No. of cable	6	12	24
Fiber Model	YOFC G 652D		
Loose Tube	Material	PBT	
	Diameter (±0.1) mm	1.6	2.4
	Thickness (±0.03) mm	0.2	0.35
Strength Member (Material)	Aramid Yarn		
Low Friction Outer Sheath	Material	HDPE	
	Thickness (±0.1) mm	0.3	0.5
Cable Diameter (±5%) mm	2.3	3.0	
Cable Weight (±10%) kg/km	5.0	8.0	
Attenuation	1310nm	≤0.36dB/ km	
	1550nm	≤0.22dB/ km	
Min. bending radius	Without Tension	10.0×Cable-φ	
	Under Maximum Tension	20.0×Cable-φ	
Temperature range (°C)	Installation	-20~+60	
	Transport & Storage	-40~+70	
	Operation	-40~+70	

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The fibres shall be marked by a coloured coating with 12 different colors following the standard EIA/TIA598 as below: (Fiber cores with more than 12 cores are identified by dots.)

1	2	3	4	5	6	7	8	9	10	11	12
Blue	Orange	Green	Brown	Grey	White	Red	Nature	Yellow	Violet	Pink	Aqua
13	14	15	16	17	18	19	20	21	22	23	24
Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

3-2. Performance

NO	ITEM	TEST METHOD	SPECIFICATION
1	Tensile performance IEC60794-1-21-E1	- Short-term load: 20N - Time: 5 minute	Loss change \leq 0.10 dB@1550 nm (after test) - Fiber strain \leq 0.60 % - No sheath damage
2	Crush test IEC60794-1-21-E3	- Load: 100 N /100mm - Time: 5 minute - Length: 100 mm	Loss change \leq 0.10 dB@1550 nm (during test) - No sheath damage
3	Repeated bending IEC60794-1-21-E6	- Bending radius.: $20 \times D$ - Load: 25N - Flexing rate: 2sec/cycle - No. of cycle: 25	- No fiber break - No sheath damage
4	Water penetration IEC60794-1-22-F5	- Height of water: 1m - Sample length: 3 m - Time: 24 hr	- No drip through the cable core assembly
5	Twist IEC60794-1-21-E7	- Length: 1 m - Load: 40N - Twist rate: ≤ 60 sec/cycle - Twist angle: $\pm 180^\circ$ - No. of cycle: 5	Loss change \leq 0.10 dB@1550 nm (during test) - No sheath damage
6	Temperature Cycling IEC60794-1-22-F1	- Temperature step: $+20^\circ\text{C} \rightarrow -20^\circ\text{C} \rightarrow +70^\circ\text{C} \rightarrow +20^\circ\text{C}$ - Number of cycle: 2 turns - Time per each step: 12 hrs	- Loss change \leq 0.15dB/km@1550 nm (during test) - Loss change \leq 0.05dB/km@1550 nm (after test) - No sheath damage

D*: Cable diameter

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4 SHEATH MARKING

Manufacturer Cable type Manufacturing year ID Length marking in feet or meter.

5 PACKING AND DRUM

The cables are packed in carton, coiled on Bakelite & Fumigated wooden drum. During transportation, right tools should be used to avoid damaging the package and to handle with ease. Cables should be protected from moisture; kept away from high temperature and fire sparks; protected from over bending and crushing; protected from mechanical stress and damage.
Packing length: 2km/reel-4km/reel.

6 ORDERING INFORMATION

Part No	Core Type	No of Cores	OD-mm
TGT-MY2L1-06	YOFC-G652D	6	2.3 ± 0.2
TGT-MY2L1-12	YOFC-G652D	12	2.3 ± 0.2
TGT-MY2L1-24	YOFC-G652D	24	3.0 ± 0.2