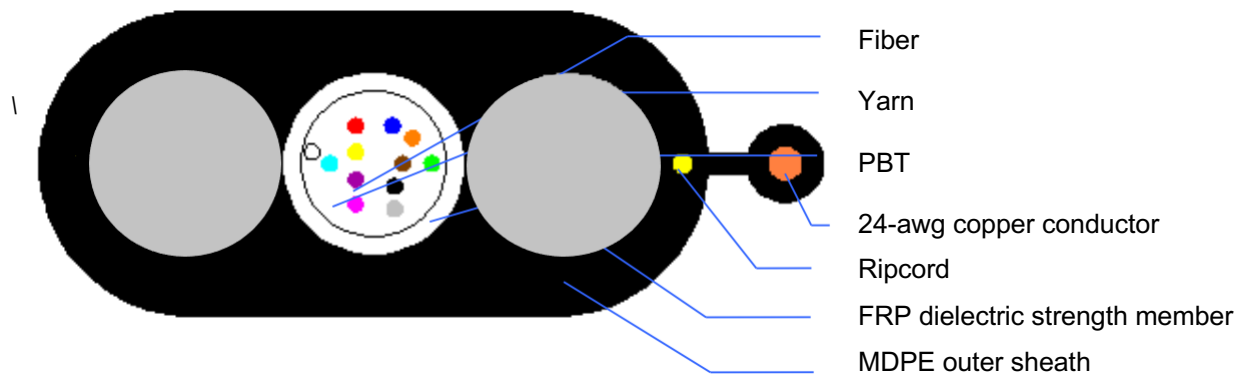
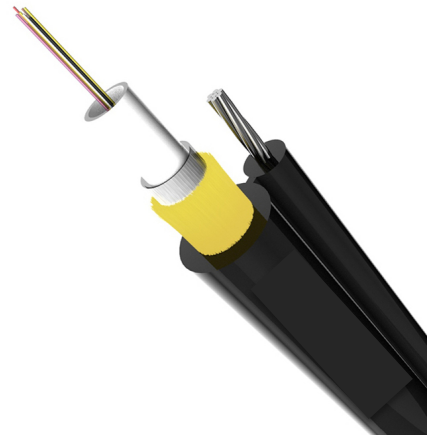




# Toneable, Gel-Free, Flat Drop Fiber Optic Cable, Copper Conductor – GYXC8Y

Wasin Fujikura® toneable flat drop is the ideal cable solution for fiber to the premise applications. One single loose tube made of PBT, consists of 1-24 optical fibers. The jacket is rugged and durable medium density polyethylene with two easy strip ripcords. Two FRP strength members located symmetrically on each side of the loose tube under the cable jacket provide considerable tensile strength and crush resistance. The toneable copper conductor unit allows for easy location after installation.

Cable Design	
Preform glass fiber	Fujikura
Strength members	FRP
Fiber Type	G.652D
Loose Tube	PBT
Water Blocking, Buffer Tube	Aramid Yarn SAP
Copper Conductor	24-AWG
Sheath	Polyethylene (MDPE)
Ripcord	Two



Fiber Count	Maximum Fiber Per Tubes	Nominal Overall Diameter Inches (mm)	Nominal Weight Lbs./1000ft (Kg/km)
01-12	12	0.16*0.40 (4.1*10.1)	30 (44)
24	24	0.20*0.38 (5.0*9.6)	41 (56)

\*Note: The minimum thickness of the sheath is 0.3mm

\*Note: Nominal Overall Diameter (O.D.) ± 0.3mm



## FIBER CHARACTERISTICS- G.652D

The single mode, fiber optic cable complies with the requirements of this specification and meet relevant ITU-T Recommendation G.652. All optical and geometrical parameters are checked to ensure that they meet or exceed industry specifications:

### GEOMETRIC CHARACTERISTICS

Geometric Characteristics		Construction
Mode field diameter	1310nm	9.2±0.4μm
Cladding diameter		125±1.0μm
Core concentricity error		≤0.6μm
Cladding non-circularity		≤1.0%
Cut-off wavelength ( $\lambda_{cc}$ ) (for cable)		≤1260nm
Cut-off wavelength ( $\lambda_{cc}$ ) (for fiber)		1180nm –1330nm
Primary coating diameter	(Color layer not included)	245±10μm
	(Color layer included)	250±15μm
Coating-cladding concentricity error		≤12.5μm
Fiber curl radius		≥4m

### TRANSMISSION CHARACTERISTICS

Transmission Characteristics		Performance
Attenuation	1310nm	≤0.36dB/km
	1550nm	≤0.25dB/km
Macro bending loss	Φ=60mm, 100 turns at 1550nm	≤0.1dB
Chromatic dispersion	Within 1288~1339nm	≤3.5ps/nm·km
	1550nm	≤18ps/nm·km
Zero dispersion wavelength		1300~1324nm
Zero dispersion slope		≤0.092ps/nm <sup>2</sup> ·km

## PERFORMANCE

Performance	Test Method	Specification
Tension Performance IEC749-1-21-E1 (EIA-455-33)	- Short-term load: 1350N - Time: 5 minutes	- Loss change $\leq$ 0.10 dB @1550nm (after test) - Fiber strain: $\leq$ 0.60% - No sheath damage
	- Long term load: 400N - Time: 5 minutes	- Loss change $\leq$ 0.10 dB @1550nm (during test) - Fiber strain: $\leq$ 0.20% - No sheath damage
Crush Test IEC749-1-21-E3 (EIA-455-41)	- Load: 1000N / 100mm - Time: 5 minutes - Length: 100 mm	- Loss change $\leq$ 0.10 dB @1550nm (during test) - No sheath damage
Impact Test IEC749-1-21-E4	- Impact height: 1m - Impact weight: 100g - Points of impacts: 3 - Impacts per point: 1	- Loss change $\leq$ 0.10 dB @1550nm (during test) - No sheath damage
Repeated Bending IEC794-1-21-E6 (EIA/TIA-455-104)	- Bending Radius: 20 X D - Load 150N - Flexing rate: 2 sec/cycle - No. of cycle: 25	- No fiber degradation - No sheath damage
Water Penetration IEC794-1-E5B (EIA-455-82A)	- Height of water: 1m - Sample length: 3 m - Time: 24 hr.	- No water leakage
Twist / Torsion IEC794-1-21-E7 (EIA-455-81)	- Length: 1 m - Load: 150N - Twist rate: $\leq$ 60 sec/cycle - Twist angle: $\pm$ 180° - No. of cycle: 5	- Loss change $\leq$ 0.10 dB @1550nm (during test) - No sheath damage
Temperature Cycling IEC60794-1-22-F1 (EIA/TIA-455-3)	- Temperature step: (+68°F $\rightarrow$ -4°F $\rightarrow$ +158°F $\rightarrow$ +68°F) - Number of cycle: 2 turns - Time per each step: 12 hrs.	- Loss Change $\leq$ 0.15 dB@1550nm - Loss Change $\leq$ 0.05 dB@1550nm - No sheath damage

\*D: Cable Diameter

## COLOR CODE

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

## Color codes for Loose Tube

Position	Loose Tube Color
1	White

## SHEATH MARKING



## CABLE & LENGTH MARKING

The sheath shall be marked with white characters at intervals of one meter with following information. Other marking is also available if requested by customer.

- 1) Name of the manufacturer: "NWF"
- 2) Year of manufacture: "2021"
- 3) Name of customer and contact detail
- 4) Fiber type and counts: "GYFXC8Y-12B1"
- 5) Length marking in meter (or one foot) intervals: "xxxxm or "xxxxf"