GF RB-001

Single jacket non armor Revised: 2

Optical fiber / 12F Ribbon stack / Gel filled ribbon tube / Dry core / PE outer jacket

Standards

ITU-T G.652, 657
IEC 60793, 60794-1-2
ISO 9001:2015, 14001:2015
TIA 598-C
GR 20 Core compliant glass

DQS Inc.
GAON CABLE Co., Ltd.
REGISTERED TO ISO 9001:2015
20001098 TLR6

DQS Inc.
GAON CABLE Co., Ltd.
REGISTERED TO ISO 14001:2015
20001098 UM15

Application

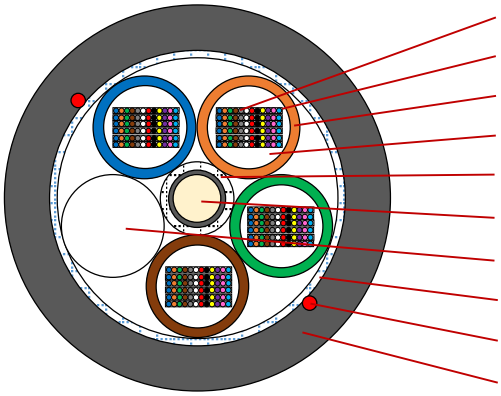
Local area network
Backbone network
Long haul communication system
High-density data center

Features

Ideal for mass fusion splicing
All dielectric optical fiber cable
Water blocking yarn in core
UV-resistant outer jacket

Cable Cross Section

In case of 288 Ribbon fiber cable



Optical fiber
Ribbon: 12 fibers per stack
Loose tube: TPEE
Filling compound: Low density white jelly
Water blocking tape
Central strength member: FRP (PE coated, if necessary)
Filler: PE or Empty tube with filling compound
Water blocking tape
Ripcord(s)
Outer jacket: Black color MDPE or HDPE

Cable Construction

Fiber count	Unit position	Active tube	Fibers per tube	Fibers per ribbon	Ribbon stacks per tube	Nominal cable outer diameter		Nominal cable weight	
						inch	mm	lbs/kft	kg/km
48	5	1	48	12	4	0.866	22.0	212	315
72	5	1	72	12	6				
144	5	2	72	12	6				
288	5	4	72	12	6				
360	5	5	72	12	6				
432	6	6	72	12	6	0.945	24.0	252	375
720	5	5	144	12	12	0.984	25.0	269	400
864	6	6	144	12	12	1.083	27.5	323	480

GF RB-001

Single jacket non armor Revised: 2

Fiber Characteristics for Single Mode Fiber

Fiber type	ITU-T G.652D	ITU-T G.657A1
Mode field diameter (MFD)	9.2 μm ± 0.4 μm @1310 nm	8.9μm ± 0.4 μm @1310 nm
Mode field concentricity error	≤ 0.8 μm	
Cladding diameter	125 μm ± 1 μm	
Cladding non-circularity	≤ 1.0 %	
Coating diameter	245 μm ± 15 μm	
Attenuation	≤ 0.40 dB/km @ 1310 nm ≤ 0.30 dB/km @ 1550 nm	
Chromatic dispersion	≤ 3.5 dB/km @ 1285 ~ 1330 nm ≤ 18 dB/km @ 1550 nm	
Cable cut-off wave length	≤ 1260 nm	
Zero dispersion wavelength	1300 nm ~ 1324 nm	
Zero dispersion slope	≤ 0.092 ps/nm^2.km	
Proof test	Nom. 100 kpsi	

Ribbon stacks numbering

Numbering	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12

Fiber & Tube Identification

Color code	Blue	Orange	Green	Brown	Grey	White	Red	Black	Yellow	Violet	Pink	Aqua

Temperature Range

Installation	- 22 °F ~ 140 °F (- 30 °C ~ + 60 °C)
Operation, Storage, Transport	- 40 °F ~ 158 °F (- 40 °C ~ + 70 °C)

Cable Bend radius & Marking & Packing

Bend radius		20 X Cable diameter (With load), 15 X Cable diameter (Without load)
Marking	**Sequence**	Customer (Upon request), Fiber type, Fiber count, Serial number (#####), Manufacturer, Manufacture year (YYYY), Length marking (Every 2 feet),
	Example	**G652D 360F 00001 GAON CABLE 2021 =00002FT**
Packing	**Length**	Standard 6,560 ft (2,000 m)

GAON CABLE

Mechanical & Environmental Tests (Based on GR-20 core & ICEA S-87-640)

Test items	Test method	Description	Acceptance criteria[1)]
Tensile strength	IEC 794-1-2 E1	≥ 90 m, 40 D[2)], 2,700 N, 60 min	Δ ≤ 0.15 dB, after test
Crush resistance	IEC 794-1-2 E3	1,100 N / 100 mm plate, 10 min	Δ ≤ 0.15 dB, after test
Impact resistance	IEC 794-1-2 E4	9.8 N.m, 3 different points	Δ ≤ 0.15 dB, after test
Cable bend	IEC 794-1-2 E11	20 D, 4 turns	Δ ≤ 0.15 dB, after test
Torsion	IEC 794-1-2 E7	2m sample, 50N, 10 cycles, ± 180°	Δ ≤ 0.15 dB, after test
Water penetration	IEC 794-1-2 F5	3m sample, 1m height, 24 h	No leakage
Temperature cycling	IEC 794-1-2 F1	≥ 500 m sample, soak: 12 h, 2 cycles, + 23 °C, - 40 °C, + 70 °C, + 23 °C	Δ ≤ 0.15 dB/km, after test

[1)] It shall be measured at 1550nm for single mode fiber. The acceptance measurement equipment error is 0.02dB.

[2)] Cable diameter

Production code

Description		P1 P2 P3 P4 – P5 / P6 – P7 / 125 X P8 C	
Cable type	P1	**O**: Optical fiber cable	
Filling material in tube	P2	**LF**: Low density white jelly compound	
Tube material	P3	**E:** TPEE	
Tube information	P4	**P**: Single jacket, PE grade	
Tube type	P5	**RT**: Ribbon tube	
PE Grade	P6	**MD:** MDPE	**HD:** HDPE
Fiber type	P7	**9E**: G.652D	**A1**: G.657A1
Fiber counts	P8	**48 ~ 864**	

Example: OLFEP-RT/MD-9E/125X360C

Revised Record

Revised number	Date	Description
0	Apr. 21, 2021	Issue
1	Apr. 28, 2021	Add up to 864F and ribbon stack numbering
2	Jul. 27, 2021	Add 48F