



# **DISTRIBUTION TIGHT BUFFER DOUBLE JACKET LSZH - OFNP CABLE 12 FO G652D**

AR-2TDPE13-NP-TB-12F-G652D

# OPTICAL FIBRE CABLE TECHNICAL SPECIFICATION

## 1. General

This specification covers the general requirements of distribution cable. This totally dry cable is used for the distribution in access and building. The technical requirement in this specification which is not stipulated is not inferior to the requirement of ITU-T and IEC.

Cable type	Application
AR-2TDPE13-NP-TB-12F-G652D	Access and Distribution

## 1.2 Reference

The cable offered by ARTIC are designed, manufactured and tested according to the standards as follows:

ITU-T G.652D	Characteristics of a single-mode optical fibre ARTIC
IEC 60794-1-1	Optical fibre cables-part 1-1: Generic specification-General
IEC 60794-1-2	Optical fibre cables-part 1-2: Generic specification-Basic optical cable test procedure

## 1.3 Life Time

Optical fibre cables supplied in compliance with this specifications is capable to withstand the typical service condition for a period of twenty-five years (25) without detriment to the operation characteristics of the cable.

## 2. Optical Fibre

Optical Fibres supplied in this specification meet the requirements of ITU-T G.652D.

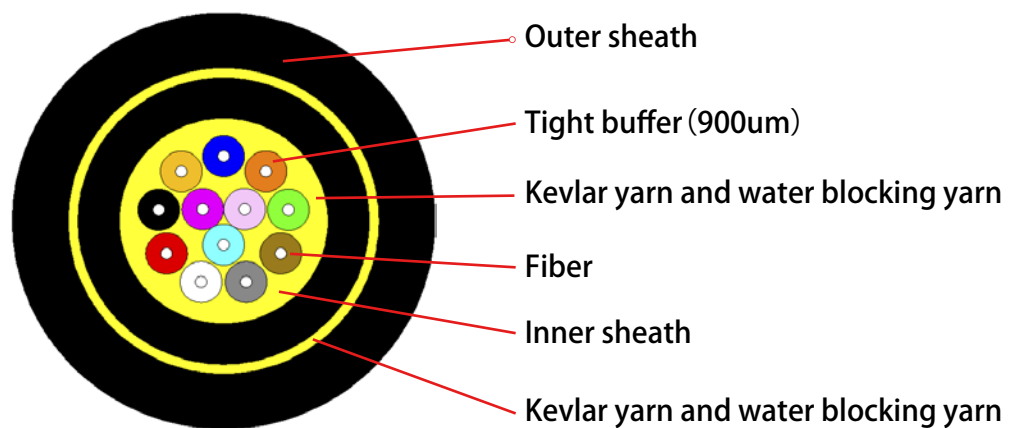
Characteristics		Units	Specified Values
<b>Optical Characteristics</b>			
Type of fiber			G652D
Attenuation	@1310nm	dB/km	$\leq 0.4$
	@1550nm		$\leq 0.3$
Attenuation vs.Wavelength	@1285-1330nm	dB/KM	$\leq 0.03$
Max. $\alpha$ difference	@1525-1575nm		$\leq 0.02$
Zero dispersion wavelength		nm	$1312 \pm 10$
Zero dispersion slope		ps/(nm <sup>2</sup> .km)	$\leq 0.090$
Polarization Mode Dispersion			
PMD Maximum Individual Fibre		ps/km <sup>1/2</sup>	$\leq 0.2$
PMD Link Design Value			$\leq 0.1$
Typical value		ps/km <sup>1/2</sup>	0,04
Cable Cut-off wavelength $\lambda_{cc}$		nm	$\leq 1260$
Mode field diameter (MFD)	@1310nm	um	$9.2 \pm 0.4$
	@1550nm		$10.4 \pm 0.5$
Effective group index of refraction	@1310nm	dB	1,466
	@1550nm		1,467
Point discontinuities	@1310nm	dB	$\leq 0.05$
	@1550nm		$\leq 0.05$
<b>Geometrical characteristics</b>			
Cladding diameter		um	$124.8 \pm 0.7$
Cladding non-circularity		%	$\leq 0.7$
Coating diameter (primary coating)		um	$254 \pm 5$
Coating non-circularity		%	$\leq 6.0$
Coating/Cladding concentricity error		um	$\leq 12.0$
Core/Cladding concentricity error		um	$\leq 0.5$
Curl (radius)		m	$\geq 4$

### 3. Optical Cable

#### 3.1 Technical Characteristics

- The unique second coating and stranding technology provide the fibres with enough space and bending endurance, which ensure good optical property of the fibres in the cable.
- Accurate process control ensures good mechanical and temperature performance.
- High quality raw material guarantees the long service life of cable.













#### 3.2 Cross Section of Cable



AR-2TDPE13-NP-TB-12F-G652D

*Schematic for reference only*

#### 3.3 Standard color of fiber

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

#### 4. Cable construction details:

Characteristics		Specified Values
Fiber count		12
Tight buffer	Material	LSZH
	Diameter	0.9±0.05mm
Strength member	Material	Kevlar yarn
Inner sheath	Material	LSZH
	Color	Black
	Diameter	6.3±0.3mm
Outer sheath	Material	OFNP
	Color	Black
	Diameter	9.5±0.5mm
Cable weight		63 kg/km
Installation Temperature range (°C)		-20+60
Operation and transport temperature (°C)		-20+70
Min Bending Radius(mm)	Dynamic	20D
Min Bending Radius(mm)	Static	10D
Tensile Strength(N)	Long term	200
	Short term	650
Crush Load (N/100mm)	Long term	500
Crush Load (N/100mm)	Short term	1000

#### 5. Packaging and Drum

##### 5.1 Cable Sheath Marking

Unless otherwise specified, the cable sheath marking shall be as follows:  
 Color: white. Contents: ARTIC, the year of manufacture, the type of cable, cable number, length marking Interval: 1m. Outer sheath marking legend can be changed according to user's requests.

##### 5.2 Reel Length

Standard reel length: 2 and 4 km/reel, other length is also available.

##### 5.3 Cable Drum

The cables are packed in fumigated wooden drums.

##### 5.4 Cable Packing

Both ends of the cable will be sealed with suitable plastic caps to prevent the entry of moisture during shipping, handling and storage. The inner end is available for testing.