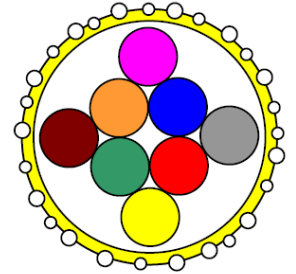


## Introduction

### LightWave® Air Blown Fiber Unit

The ABF EPFU or EPSU types are optical fiber cable with small diameter, lightweight, highly flexibility and proper stiffness, and it can be blown into the micro duct of 5.0/3.5mm.

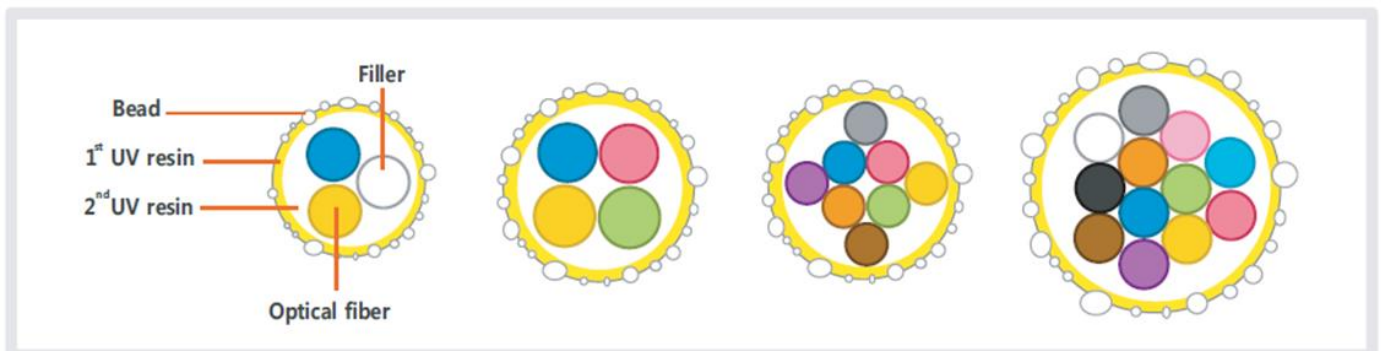
Lenora has been devoted to developing and producing the air blown fiber cable. So far, it has produced various air blown fiber cable types which are of good performance and compose a complete series of air blown products.



The fiber is coated with a soft acrylate resin which provides excellent dimensional and thermal stability to cushion the fibers, in addition, the resin can be easily stripped in connecting the fiber. The outer sheath is a thermoplastic that is of low friction. The surface of the sheath is designed with special grooves, compared to the surface of the traditional optical fiber cable, it provides not only the high level of mechanical protection, but also the perfect blowing performance.

## Technical Specification

Fiber optic bundles for FTTx systems are dedicated for the smallest microducts. Thanks to small diameter they are suitable to be used in projects requiring large number of slots and the fiber number not exceeding 12.



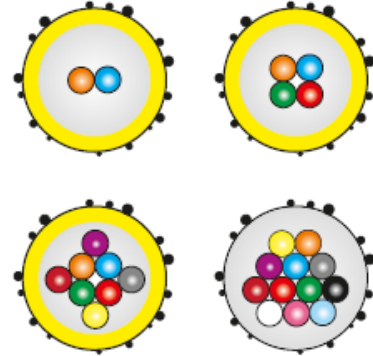
Units	2 fiber	4 fiber	8 fiber	12 fiber
Diameter	1.02±0.06mm	1.02±0.06mm	1.40±0.05mm	1.60±0.10mm

## Application

- Outdoor and indoor connections,
- FTTH and last mile connections,
- Distribution networks with dense fiber capacity,
- Terminal connections,
- Tele-technical canalization: existing and secondary,

## Configurations & Colors

Max. fiber bundle diameter: 1,0 - 1,3 mm  
 Microtube suggested: 4/3mm and 5/3,5 mm  
 Construction: fiber bundle  
 Fibers: SM or MM in acryl layers, dry core  
 Color: code of fiber coating encodes type of used fibers  
 Jacket: made of 3 acryl layers, UV resistant  
 Outer Coating: with special rough surface improve blowing distance



Drawings without scale

## Testing Parameter Fiber Unit Attenuation

Fiber Type	SM G.652D, G.655, G.657	MM 62.5/125	MM 50/125, OM3
Attenuation	0.38dB/km max @1310nm 0.26dB/km max @1550nm	3.5dB/km max @850nm 1.5dB/km max @1300nm	3.0dB/km max @850nm 1.0dB/km max @1300nm

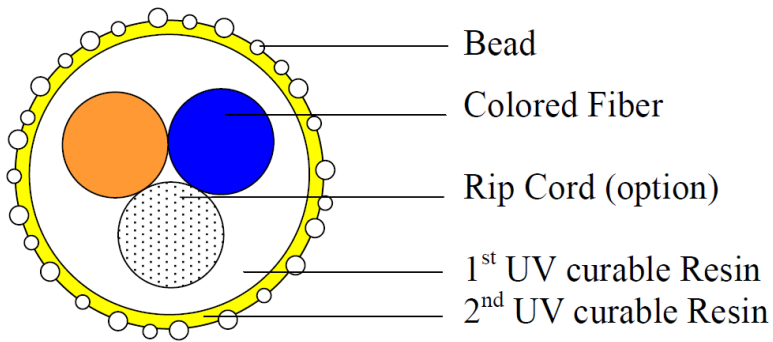
## Blowing Test

Fiber Count	2 fibers	4 fibers	6 fibers	8 fibers	12 fibers
Test equipment	PLUMETTAZ : UM25, PRM196, ERICSSON : F, CATWAY : FBT-1.1				
Standard duct	5.0/3.5 mm				
Pressure	7bar / 10bar				
Typical blowing distance	500m / 1000 m	500m / 1000m	500m / 1000m	500m / 1000m	500m / 800m
Blowing time	10 min / 18 min	10 min / 18 min	12 min / 18 min	13 min / 18 min	15 min / 20 min

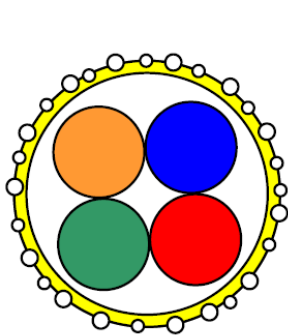
## Cable Specifications vs Microduct Configuration

Cable Type	Cable Count	Cable size (OD/mm)	Microduct (ID/mm)	Microduct Configuration	Microduct Configuration
ABF	2~12 F	1.2 ~ 1.6mm	2.1mm	4/2.1mm	1, 7, 12, 24way
	2~12 F	1.2 ~ 1.6mm	3.5mm	7/3.5mm	1, 2, 3, 4, 5, 6, 7, 12, 14, 19, 24, 24+1way
	2~12 F	1.2 ~ 1.6mm	3.5mm	5/3.5mm	1, 2, 4, 7, 12, 19, 24+1way

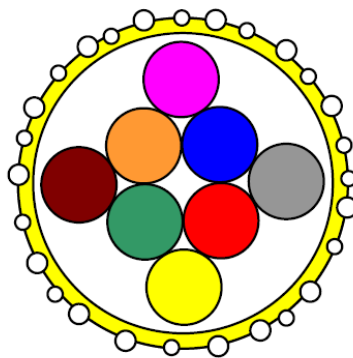
## Cross-sectional Drawing of Cable



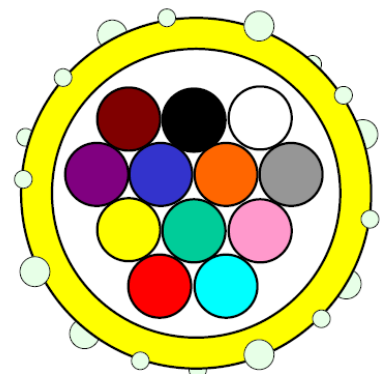
2-Fibers



4-Fibers

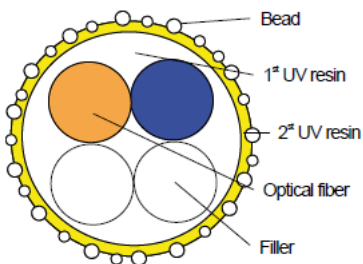


8-Fibers

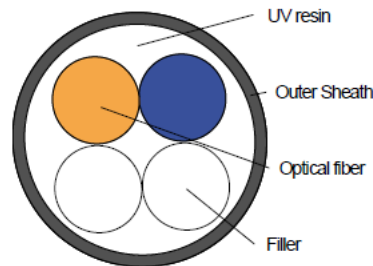


12-Fibers

### EPFU



### EPSU



## Diameter, Weight and Minimum Bending Radius

No. of Fibers	Nominal Diameter (mm)	Approx. Cable Weight (kg/km)	Minimum Bending Radius (mm) (Handling)
2 & 4	1.02 ± 0.06	0.90 ± 0.05	40
8	1.40 ± 0.05	1.70 ± 0.08	60
12	1.60 ± 0.10	2.20 ± 0.10	60

## FIBER IDENTIFICATION

The color code of the individual fibers within the Air blown fiber shall be in accordance with the table below.

The fiber color order of Air Blown Fiber unit

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

## Packaging

Standard length of cable is 4,000 meters. Other cable length is also available if required by customer.

### Unit Storage Pan

The fiber unit shall be supplied in its storage pan. Fiber units shall be laid in the pans in the format of resetted coils

## Marking

The jacket shall be marked with white characters at intervals of one meter with following information.

Other marking is also available if requested by customer.

- 1) Cable type and fiber number
- 2) Name of the manufacturer
- 3) Year of manufacture
- 4) Length marking

## Ordering Information

Product Code	Description
LN-LW-ABF-SM-2F	Air Blown Fiber Unit Single Mode 2 cores
LN-LW-ABF-SM-4F	Air Blown Fiber Unit Single Mode 4 cores
LN-LW-ABF-SM-8F	Air Blown Fiber Unit Single Mode 8 cores
LN-LW-ABF-SM-12F	Air Blown Fiber Unit Single Mode 12 cores

**Notice: The data in this document are only reference and will be changed without any notice.**

This specification is intended as a guide only.