

Technical Specification

Optical PLC Splitter

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C.1 General

C.1.1 This specification describes and specifies the materials, design, parameter and package of single mode Optical PLC Splitter. 1xN/2xN PLC splitters optically split the downstream signals from a single fiber to the Home-Passive Optical Network path into 2 or more paths toward the Optical Network Unit(ONU).

C.1.2 Reliable's Optical PLC Splitter could have a single or two input and multiple outputs and the optical power is split evenly between the outputs.

C.1.3 Reliable's Optical PLC Splitter could meet all applicable requirement stated in Telcordia Standard GR.1209.CORE and GR.1221.CORE.

C.2 Design requirement

C.2.1 Reliable's Optical Splitter uses Planar Lightwave Circuit (PLC) technology for split channels 4, 8, 16, 32 and 64.

C.2.2 Reliable's Optical Splitter is suitable for both indoor and outdoor application. It is constructed in suitable packages to secure the fiber and provide pleasing appearance.

C.2.3 Reliable's Optical Splitter Module is suitable for mounting in Outdoor cabinet, Termination Box or Fibre Distribution Point or in Central Office in rack. mounted tray and provide a high level of reliability in services.

C.2.4 Reliable's Optical PLC Splitter Device and Module features Low Insertion loss and PDL, Compact Design with high reliability and stability.

C.2.5 Reliable's Optical Splitter Device with fanout and Module can be equipped with ruggedized pigtail or adapter or connector.

C.3 Parameter

Parameter	Specification					
Operating Wavelength (nm)	1280 ~ 1650					
Type	1x2	1x4	1x8	1x16	1x32	1x64
Insertion Loss (dB) Max. *	<4.0	<7.3	<10.8	<14.0	<17.5	<21.5
Uniformity (dB) Max.*	<0.6	<0.8	<1.0	<1.5	<2.0	<2.5
PDL(dB)Max.*	<0.2	<0.2	<0.2	<0.3	<0.3	<0.3
Directivity (dB) Min *	55					
Return Loss (dB) Min *	55(50)					
Operating Temperature ()	-40~ +85					
Storage Temperature ()	-40 ~ +85					
Fiber length	1m or custom length					
Fiber Type	Corning SMF-28e fiber					
Connector Type	Custom specified					
Power Handling (mW)	300					

* 1.Measured at room temperature and excludes connector loss.

2.For devices with connectors, insertion loss will be 0.3dB higher. Return Loss >55dB(APC),>50dB(UPC).

Parameter	Specification					
Operating Wavelength (nm)	1280 ~ 1650					
Type	2X2	2x4	2x8	2x16	2x32	2x64
Insertion Loss (dB) Max. *	<4.2	<7.6	<11.2	<14.5	<18.2	<21.8
Uniformity (dB) Max.*	<0.8	<1.2	<1.5	<2.0	<2.5	<3.0
PDL(dB)Max.*	<0.3	<0.3	<0.3	<0.4	<0.4	<0.4
Directivity (dB) Min *	55					
Return Loss (dB) Min *	55(50)					
Operating Temperature ()	-40~ +85					
Storage Temperature ()	-40 ~ +85					
Fiber length	1m or custom length					
Fiber Type	Corning SMF-28e fiber					
Connector Type	Custom specified					
Power Handling (mW)	300					

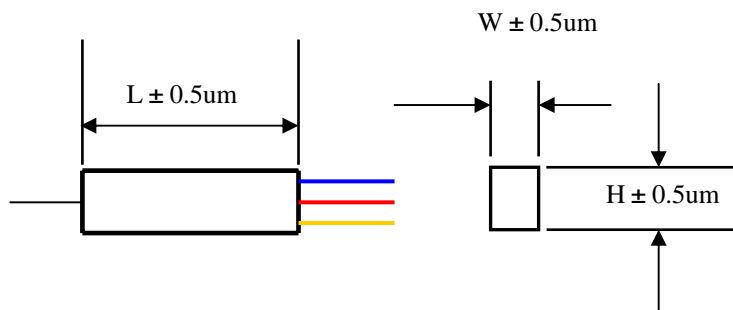
* 1.Measured at room temperature and excludes connector loss.

2.For devices with connectors, insertion loss will be 0.3dB higher. Return Loss >55dB(APC),>50dB(UPC).

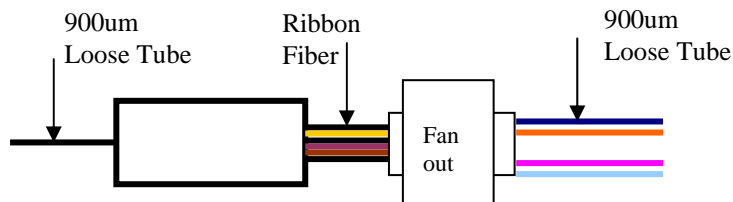
C.4 Package information

A. Device package dimension options

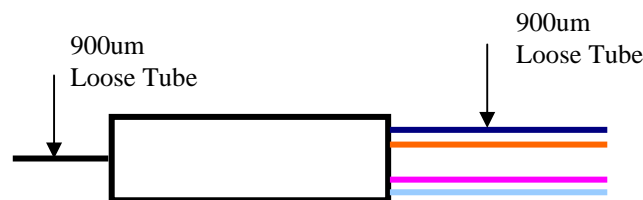
Type	1x4	1x8	2x4	2x8	1x16	2x16	1x32	2x32	1x64	2x64
R1 R2	4x4x40	4x4x40	4x4x40	4x4x40	4x7x55	4x7x55	4x7x55	4x7x55	4x11x65	4x11x65
R3	4x12x60				6x20x80				6x20x80	



R1: Output bare Ribbon fiber without fanout



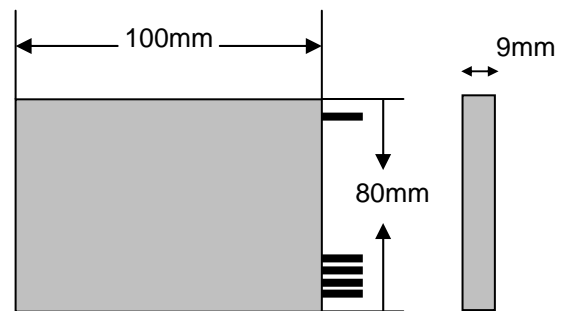
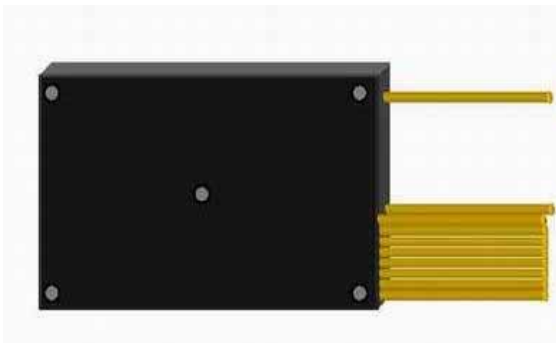
R2: Output Ribbon fiber with 900um loose tube fanout



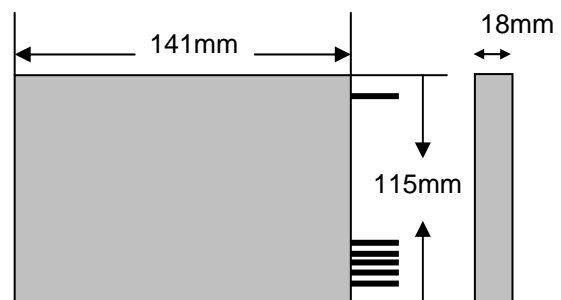
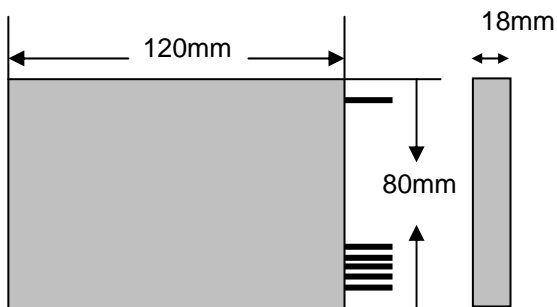
R3: Output fiber with 900 um loose tube without fanout

B Module package dimension options

Port	1x4	1x8	2x4	2x8	1x16	2x16	1x32	2x32	1x64	2x64
B4	100x80x9				120x80x18		142x102x14.5 /141x115x18		141x115x18	
B5	482.4x160x43.6 or 482.4x180.3x43.6									

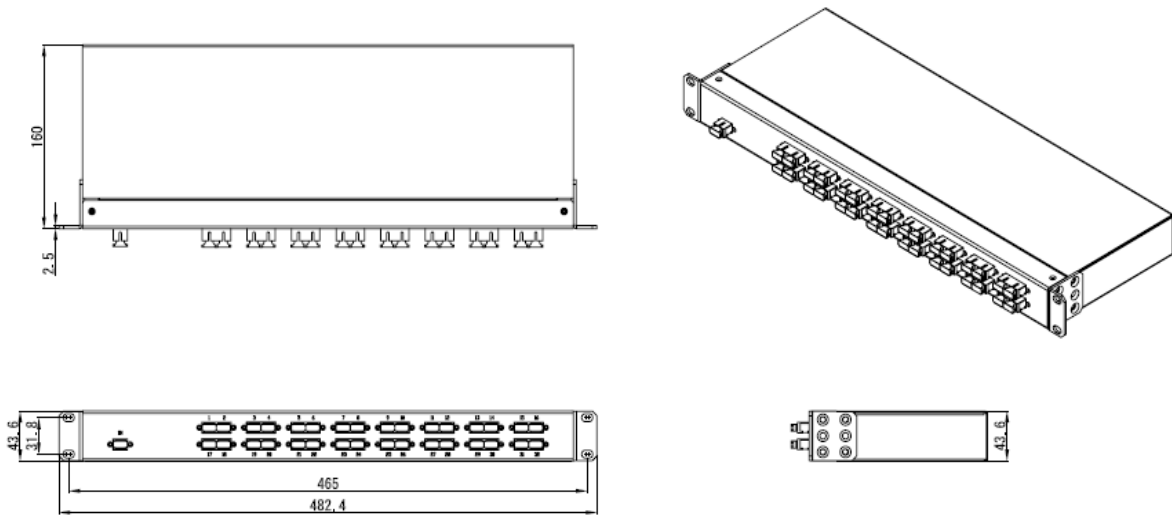


B4: Box package of Fiber with 0.9 loose tube/ 2.0 cable/ 3.0 cable or connector

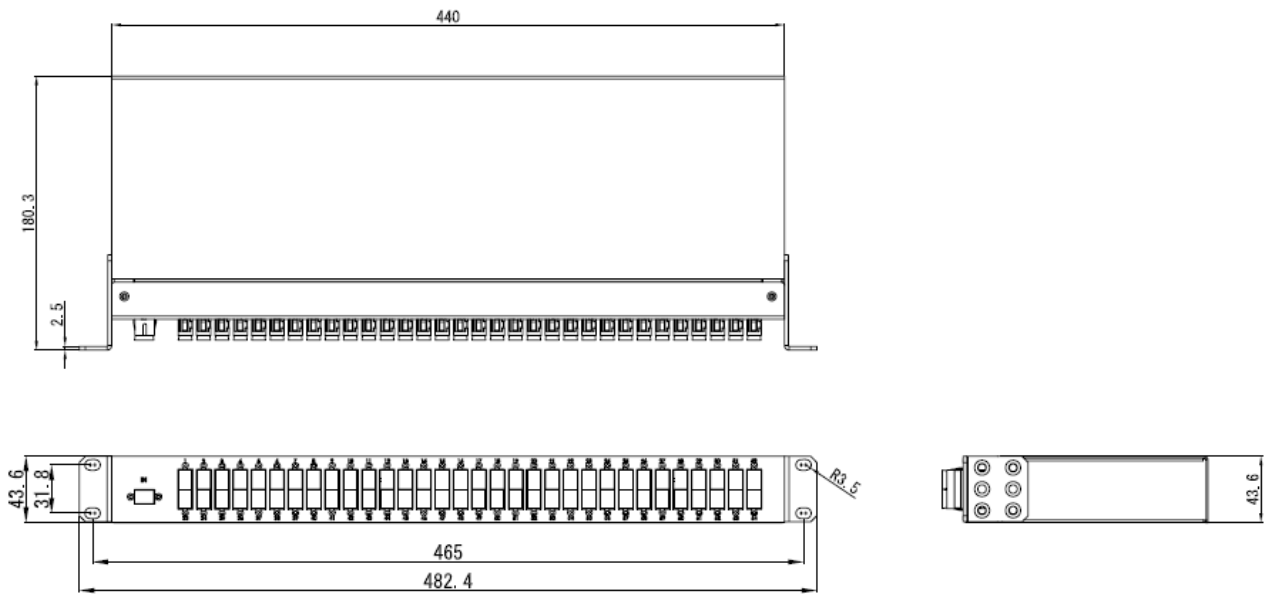


*Less port module allows to use of the larger package size of the modules(eg:1x8 type allows to package size:100x80x10mm,120x80x18mm,142x102x14.5mm ,141x115x18mm).

B5: Rack-mount package with output connector SC/PC,SC/APC,FC/PC,FC/APC,LC



1X32 PLC Splitter 19" 1U Rack mount



1X64 PLC Splitter 19" 1U Rack mount

C.5 Ordering information

RB PLC	-XXXX	-X	-X X	- X X	- X X	-X	-XX
	1	2	3	4	5	6	7

Description detail:

1. Port number: 0104: 1x4, 0204: 2x4.... 0264: 2x64
2. Type: D: device, M: module
3. Input fiber type:
 - For device: 00: bare fiber, 01: 900um loose tube
 - For module: 01: 900um loose tube, 02: 2mm cable, 03: 3mm cable
4. Input connector: 0: no connector, 1: SC, 2: FC, 3: LC, 4: ST or S: specify
5. Output fiber type:
 - For device: R1: Ribbon fiber, 01: 900um loose tube, 02: ribbon fiber with 900um loose tube fanout
 - For module: 01: 900um loose tube, 02: 2mm cable, 03: 3mm cable
6. Output connector: 0: no connector, 1: SC, 2: FC, 3: LC, 4: ST, 5:MPO/Male, 6: MPO/Female, S: specify
7. Package dimension:
 - For device: R1 or R2 or R3
 - For module: B4 or B5

C.6 Packing and package

1. Each fiber output is provided with a numbering label for circuit identification purpose.
2. Each product will attached a copy of final test report.
3. All the products will be wrapped and packed separately, and packed in standard carton boxes.
4. Other package are on request

C.7 Philosophy

Reliable's philosophy is first and foremost to fulfill our customers' requirements:

- On-time shipment and dependability
- Quality and reliability assurance
- Safeguard customers' Intellectual Property (IP)
- Efficient supply chain Management
- Comprehensive and in-time customer response system

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