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Technical Specification

Planar Lightwave Circuit Splitter NS-PLC-X-xx

1. Introduction

1.1 General

This specification covers the standards and requirements for the construction, properties, testing and packing of the Optical Splitter.

1.2 Description

The optical Splitter is divided uniformity optical signals from input ports to multiple outputs.

Splitter can also be operated in the reverse direction to combine multiple wavelengths into one or two fibers.

The optical Splitters are used in distribution equipment like FTTH Ethernet PON System.

1.3 Reliability

Through qualification test of this product, we ensure product reliability. Several qualification tests are carried to assure the product's performance and durability while operation.

1.4 Reference

Telcordia Technologies Generic Requirements GR-1209-CORE & GR-1221-CORE.



Optical Characteristics

1×N PLC Splitter

Parameters	1×2	1×4	1×8	1×16	1×32	1×64	1×128
Operating Wavelength (nm)	1260~1650						
Fiber Type	G657A1 or customer specified						
Maximum Insertion Loss (dB) (P/S Grade) Measurement@1310&1550nm	3.8/4.0	7.1/7.3	10.2/10.5	13.5/13.7	16.5/16.9	20.5/21.0	23.8/24.2
Loss Uniformity (dB) Maximum	0.4	0.6	0.8	1.2	1.5	2.0	2.5
Polarization Dependent Loss (dB) Maximum	0.2	0.2	0.2	0.25	0.3	0.35	0.4
Return Loss (dB) Minimum	55	55	55	55	55	55	55
Directivity (dB)	55	55	55	55	55	55	55
Temperature Stability (-40~85 °C)(dB)	0.4	0.4	0.4	0.5	0.5	0.5	0.5
Operating Temperature (°C)	-40~85						
Storage Temperature (°C)	-40~85						

3. Configuration

1.1 Mechanical Specification

1×N PLC Splitter

Parameters	1×2, 1×4, 1×8	1×16	1×32	1×64	1×128	
Package Type 1: Device Standard SUS Case with Ribbon Fiber for Output	Material	Stainless Steel				
	Dimension (L×W×H,mm)	40×4×4	50×4×4	50×7×4	60×12×4	N/A
Package Type 2: Mini-Module Standard SUS Case with 900um tube for Input and Output pigtail	Material	Stainless Steel				
	Dimension (L×W×H,mm)	60×7×4	60×12×4	100×20×6 or 80×20×6	100×40×6	N/A
Package Type 3: Box Module Plastic Box	Material	PPO				
	Dimension (L×W×H,mm)	100×80×10	120×80×18	140×115×18		
Package Type 4: 19" Rack-mountable or customized Optical distribution box or cabinet	Material	Aluminum or customized				
	Dimension (L×W×H,mm)	482.6 x 300 x 44 (1U) or 482.6 x 250 x 44(1U)		482.6 x 300 x 44 (1U) or 482.6* 250*44 Duplex Adaptor		482.6 x 300 x 88 (2U)



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3.2 Label

Each Splitter shall be labeled the following indication:

- Type of Splitter
- Serial Number
- Others

3.3 Picture of Product Series



PLC Splitter Device



PLC Splitter Mini-Module



19", Rack-mountable (1U)

4. Qualification

Compliant with following requirements:

- 1) Telcordia GR-1209, Generic Requirements for Fiber Optic Branching Components
- 2) Telcordia GR-1221, Generic Reliability Assurance Requirement for Passive Optical Components
- 3) RoHS Conformance

5. Test Report

Test report shall be provided with each module including the following measured data in one paper.

- Insertion Loss (at 1310nm and 1550nm) (@25°C)
- Uniformity (@25°C)
- PDL (@25°C)

ORDERING INFORMATION

NS-PLC-X-xx-yy

X - Splitter Type 2/4/8/16/32/64/128

xx – port type

NC Stainless Steel

SA SC/APC

SU SC/UPC

LU LC/UPC

FU FC/UPC

yy - Package Type

« » (na)

B – ABS Box

R – 19: Rack

Центральный офис в Москве:
Тел: +7 (499) 346 00 00

E-mail: info@newnets.ru

Филиал в Новосибирске:
Тел: +7 (383) 376 66 75



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