

TwoWay Fiber Polarity and Return Loss Meter



The TwoWay Dual-Channel Polarity and Return Loss Tester is an innovative product from Dimension Technology, designed to address current challenges in testing duplex fiber jumpers. It employs a groundbreaking design concept that enables simultaneous automatic testing of IL, RL, and Polarity. The concurrent testing time for IL, RL, and Polarity is less than 1.2 seconds (in fast mode), significantly improving testing efficiency and reducing customer equipment investment costs. While enhancing efficiency, it also ensures the measurement reliability of IL and RL, achieving a minimum detectable return loss of -80dB (single-mode). The fast and accurate measurement capabilities of TwoWay make it an effective tool for enhancing production efficiency and quality control.

Main Features

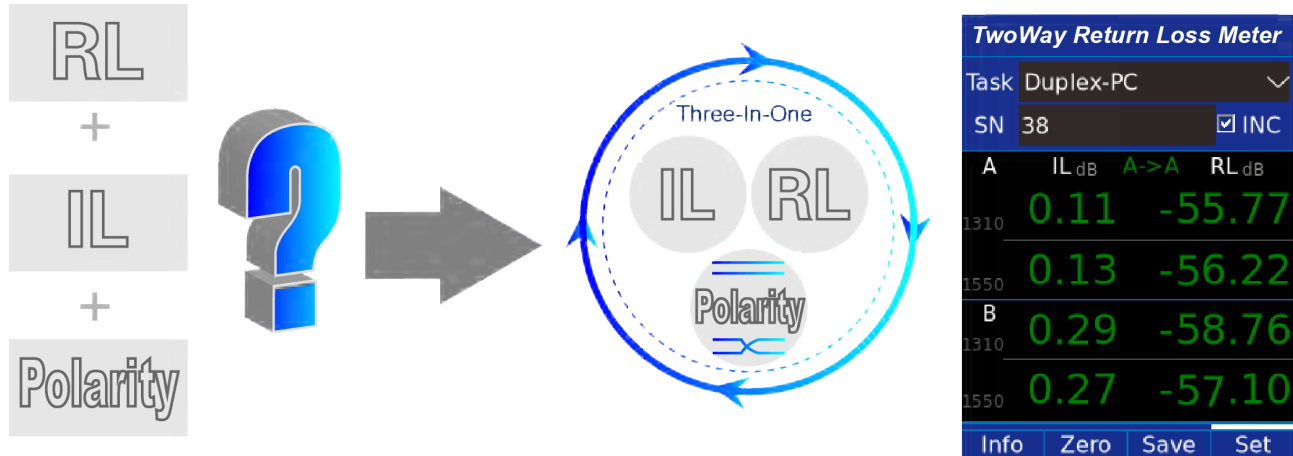
- Integrated Automatic Testing of Duplex Fiber IL, RL, and Polarity
- Tangle-free RL testing; IL, RL, and Polarity measurement time under 1.2s
- Saves workstation space and increases production test efficiency by over 300%
- Minimum detectable RL: -80dB (Single-mode)
- Minimum measurable fiber length: 0.7 meters
- Supports testing of single-core and duplex LC, CS, SN, MDC, and other fiber jumpers
- Wide range of interchangeable, highly reliable detector adapter connectors
- Supports multiple control methods: buttons, touchscreen, Ethernet, and USB
- Platform + modular design for easy application expansion
- Supports PC control software, automatically saves test data reports, and enables remote network control

Applications

- Patch Cord and Connector Performance Testing
- Optical Passive Device Performance Testing

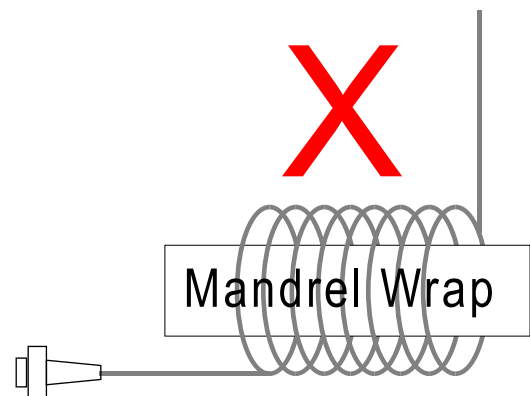
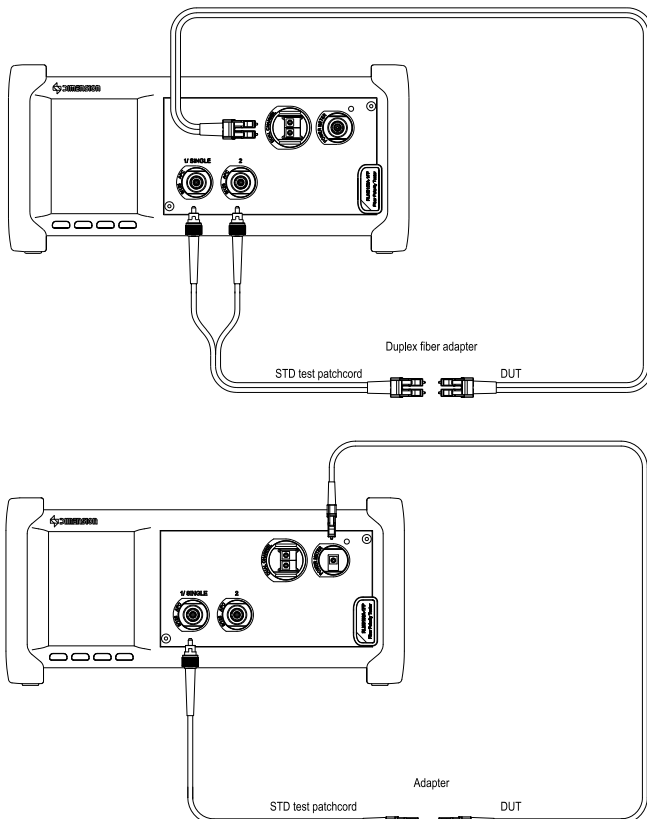
Three-in-one automatic test of duplex fiber IL,RL and polarity

TwoWay fiber polarity and return Loss meter can quickly complete the winding-free return loss and insertion loss test of the duplex fiber jumper. At the same time, it can realize the polarity detection of the duplex fiber, and truly realize the three-in-one automatic loss and polarity test.



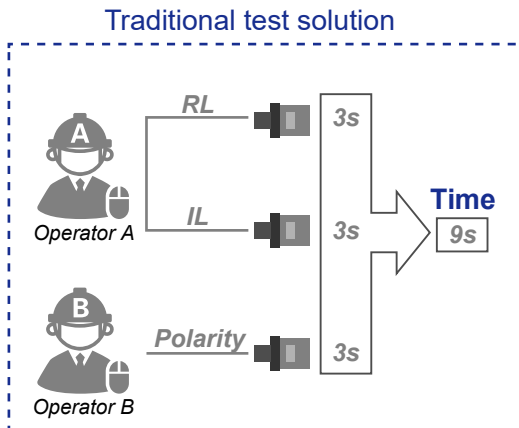
RL mandrel-free test, IL,RL and polarity test time is less than 1.2s

TwoWay is based on the principle of optical time domain detection to realize the winding-free return loss test. Using high-speed sampling design and software optimization algorithm, the total time of insertion loss, return loss and polarity detection is less than 1.2s (fast mode)



Reduce test work station and increase production test efficiency by more than 300%

TwoWay fiber polarity and return Loss meter can automatically test IL, RL, and Polarity at the same time, eliminating the need for employees to switch between testing IL/RL and polarity multiple times to switch testing STD jumpers and equipment. IL, RL, Polarity test time is less than 1.5s at the same time (fast mode), the test efficiency is improved by more than 300%, and the customer's test equipment investment cost can be reduced at the same time.



**EFFICIENCY
IMPROVE**

300%



TwoWay test solution

Three-in-one
RL IL Polarity

Time
1.2s

RL minimum detectable down to -80dB(SM),
Minimum measuring fiber length 0.7 m

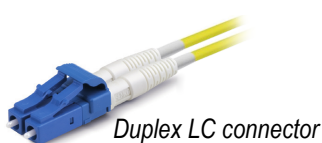
TwoWay adopts Dimension's self-developed high-sensitivity detection circuit and optimized software algorithm, achieving a minimum RL measurement of -80dB (single-mode), meeting the testing requirements of high-performance single-mode jumpers (SM/APC).

TwoWay Return Loss Meter			
Task	Duplex-APC		
SN	58	INC	
A	IL dB	A->A	RL dB
1310	0.10		-75.77
1550	0.13		-76.22
B	IL dB	B->B	RL dB
1310	0.09		-78.76
1550	0.08		-77.10
Info Zero Save Set			

Setting			
Task	Duplex-APC		
☒ IL Check	☒ RL Check	☒ Quick	
☒ DualCore	☐ CrossLine	☐ Polarity	
λ(nm)	IL(dB)	IL Compensate	Cor
1550	0.2	☐	
1310	0.2	☐	
New Edit Delete			
Import Export Back			
Tab	^	v	Enter

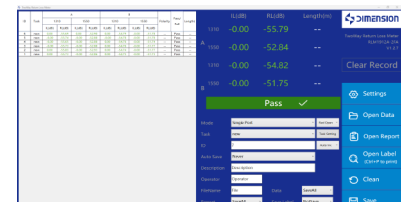
Rich interchangeable, high reliability detector adapter,
Compatible with single fiber/ duplex fiber test

To meet the needs of customers, Dimension has developed a series of interchangeable, high reliability detector adapter, including duplex LC, SN, CS, MDC new connectors, that are flexible and convenient to use, and test loss and polarity at one time, no need re-plug.



Support pc-side control software,
automatic saving test data/report, Support remote network control

Concise and clear software UI design, users can customize test reports, and can automatically save and upload test data and reports.



Platform + module design, multi-application and scalable

Dimension's universal optical test platform provides a whole set optical test solution, it includes a dual-slot ALPHA test platform and an 11-slot OMEGA test platform, which is compatible with a wide range of functional test modules such as IRL test module. With hot swappable, rogrammable, and scalable,easy to maintain&manage, with low overall cost. Supports many remote control modes, including network, USB, touch screen and physical button, etc.

Users can integrate and expand different functional modules in following-up, such as optical switches,stable light sources, POA testers, BER testers, and high-speed optical power meters, to achieve one-stop test for optical devices and other products' various performances.



OMEGA test platform



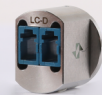
ALPHA test platform

Specifications

Basic product model		RLM-HP-1912A-2FA	RLM-HP-5956A-2FA	RLM1912A-2FA	RLM5956A-2FA	RLM-L-1912A-2FA	RLM-L-5956A-2FA
Product series		High Performance	High Performance	Professional	Professional	Lite	Lite
light source	Fiber Type	SM 9/125	MM 50/125	SM 9/125	MM 50/125	SM 9/125	MM 50/125
	Wavelength	1310/1550nm	850/1300nm	1310/1550nm	850/1300nm	1310/1550nm	850/1300nm
	Source Type	Laser	LED/Laser	Laser	LED/Laser	Laser	LED/Laser
	Encircled Flux Standard	NA	IEC-61280-4-1	NA	IEC-61280-4-1	NA	IEC-61280-4-1
IL section	IL Stability*	168h, ±0.02db		±0.01dB(<0.5H); ±0.02dB(<8H)		±0.02dB(<0.5H); ±0.03dB(<8H)	
	IL Repeatability*	±0.02dB					
	IL Accuracy*	0~1dB: ±0.02dB 1~10dB: +0.1dB 10~15dB: +0.5dB	0~1dB: ±0.02dB 1~10dB: ±0.1dB 10~15dB: ±0.5dB	0~1dB: ±0.02dB 1~10dB: +0.1dB 10~15dB: +0.5dB	0~1dB: ±0.02dB 1~10dB: ±0.1dB 10~15dB: ±0.5dB	0~1dB: ±0.02dB 1~10dB: ±0.1dB 10~15dB: ±0.5dB	0~1dB: ±0.02dB 1~10dB: ±0.1dB 10~15dB: ±0.5dB
RL section	RL Range	-30~-80dB	-15~-60dB	-30~-80dB	-15~-60dB	-30~-72dB	-15~-55dB
	RL Accuracy	-30~-70dB: ±1.0dB -70~-75dB: ±2.0dB	-15~-50dB: ±1.0dB -50~-55dB: ±2.0dB	-30~-70dB: ±1.0dB -70~-75dB: ±2.0dB	-15~-50dB: ±1.0dB -50~-55dB: ±2.0dB	-30~-65dB: ±1.0dB -65~-70dB: ±2.0dB	-15~-50dB: ±1.0dB -50~-55dB: ±2.0dB
Others	Fiber length (Min)	DUTreflections (both ends)<-50dB: 0.7m; DUTreflections (both ends)>-50dB: 1.5m					
	Once Testing Time	<0.6s (Single wavelength)					
	Display resolution	0.01dB					
Mainframe	Input power	AC90~ 260V/50HZ					
	Warming up time	30minutes (if the storage temperature is different from the service temperature, the preheating time is 90 minutes)					
	Working temperature	10℃~40℃					
	Storage temperature	-40℃~70℃					
	Size	ALPHA platform: 359mmx274mmx115mm, OMEGA platform: 462mmX374mmX171mm					

*Default test conditions for related parameters: Equipment warm-up time of 30 minutes; Ambient temperature of $23\pm 1^\circ\text{C}$; FC/PC single-fiber patch cord.

Detector Adaptors Selection Guide

Number	PN	Name	Description	Image
1	204910022	OPM duplex LC adapter (RLM use only)	Detection interface, suitable for LC/duplex LC connector(TwoWay RLM use only)	
2	204910026	OPM SN adapter	Detection interface, suitable for SN connector (TwoWay RLM use only)	
3	204910027	OPM CS adapter	Detection interface, suitable for CS connector (TwoWay RLM use only)	
4	204910028	OPM MDC JR adapter	Detection interface, suitable for MDC JR connector(TwoWay RLM use only)	
5	204910029	OPM MDC SR adapter	Detection interface, suitable for MDC SR connector(TwoWay RLM use only)	
6	204810002	OPM FC adapter	Detection interface, suitable for FC connector	
7	204810003	OPM SC adapter	Detection interface, suitable for SC connector	
8	204810004	OPM LC adapter	Detection interface, suitable for LC connector	
9	204810007	OPM 2.5 ferrule adapter	Detection interface, suitable for FC/SC/ST ... connector and 2.5mm ferrule	
10	204810006	OPM 1.25 ferrule adapter	Detection interface, suitable for LC/duplex LC /SN ... connector and 1.25mm ferrule	

Number	PN	Name	Description	Image
11	204810014	OPM Integrating Sphere	Provide wide numerical aperture, can be used with MPO/ duplex LC adapters	
12	204810015	OPM MPO adaptor	Detection interface, suitable for MPO12/ MPO16 connector	
13	204810017	OPM Bare- fiber adaptor	Detection interface, suitable for bare-fiber power test application	

Ordering Information

RLM								
	Series	Laser fiber type	Detector type	Laser wavelength ^[1]	RL test	Laser output port	Laser connector type	Fiber Core Count
/	Professional	1 SM 9/125	3 Dual PD& InGaAs 2mm PD	1 1310-SM	A Mandrel-Free OTDR	1 1CH	FA FC/APC	01 Single-core or Dual-core Compatible with ALPHA Chassis
-L	Liter	5 MM 50/125	9 Dual PD& Standard Integrating Sphere	2 1550-SM				
-HP	High Performance			3 1490-SM				
				4 1625-SM				
				5 850-MM				
				6 1300-MM				

Eg: RLM1312A-2FA TWOWAYMandrel-free IRLtestmodule Pro, 1310/1550, SM9/125, InGaAs 2mm(TWOWAY), Laser output 2CHFC/APC

Note: 1. RL test model A/C supports dual laser wavelength. Two-digit code represents two laser wavelengths. Customers can choose laser wavelength or customized laser wavelength in the list. Model A/B supports four single-mode wavelengths, and XX should be selected for the two-digit coding.

2. Only single-mode lite version is available.

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