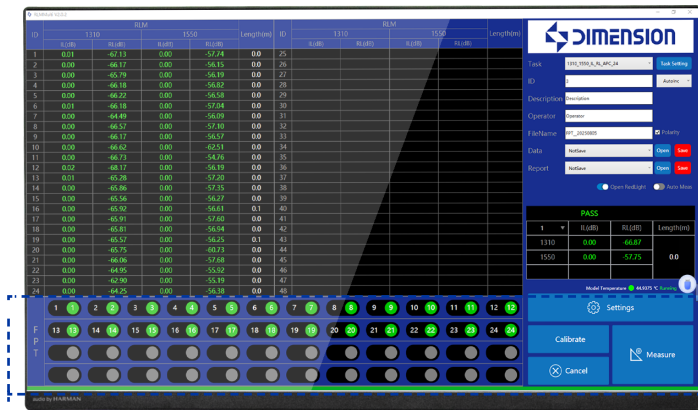
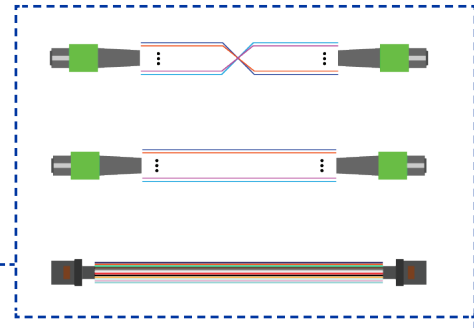


Multi-channel polarity IRL



DUT polarity detection



Currently, insertion and return loss testers on the market can only measure IL and RL, but cannot quickly determine the polarity of multi-core fibers simultaneously. Dimension Technology's Polarity Insertion & Return Loss Tester adopts a brand-new design and technology to achieve fully automated three-in-one testing of multi-core fiber IL, RL, and polarity.

This device not only provides simple polarity judgment but also features polarity learning, which addresses the increasing variety of fiber arrangements. It greatly improves production efficiency, reduces equipment investment costs, and ensures the reliability and accuracy of IL and RL measurements while enhancing efficiency.

Main Features

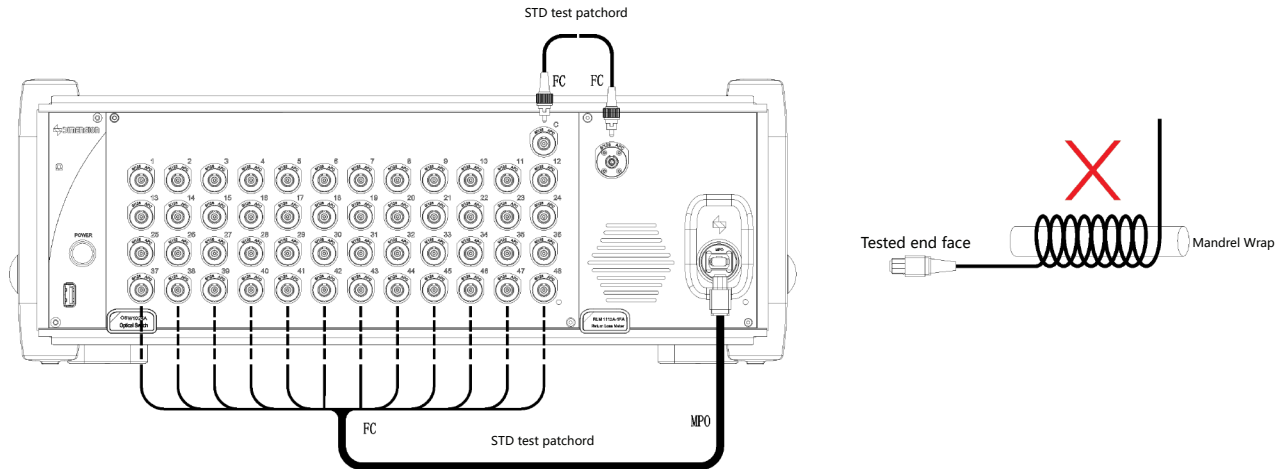
- RL Non-Wrap Testing-Single-channel IL RL & Polarity in as fast as 1.5s
- Supports fiber polarity testing for various optical components
- Three-in-one automated testing of multi-core fiber IL, RL & Polarity
- Save work stations and increase production and test efficiency by more than 6 times
- Abundant and interchangeable, high-reliability detector adapter connectors
- Support PC segment control software, automatically save test data reports, and support remote network control

Applications

- Jumper, connector performance testing
- Performance testing of optical passive components
- Construction of automatic jumper production line

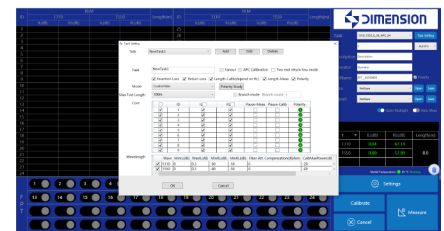
RL mandrel-free test, IL, RL and polarity detection, Single channel test time as low as 1.5S

Based on the principle of optical time domain detection, the mandrel-free test of return loss is realized. Using high-speed sampling design and software optimization algorithm, low IL, RL and polarity detection single channel to 1.5S (fast mode).

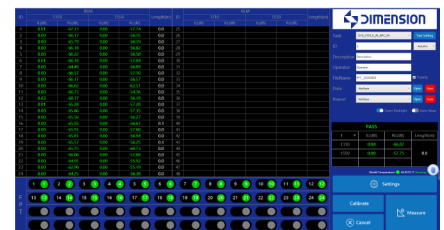


Support various optical devices to test fiber polarity

Based on Dimension Technology's extensive experience in optical lens research, the system features an ultra-wide photosensitive detection area, enabling flexible and efficient polarity learning for optical components within the range.



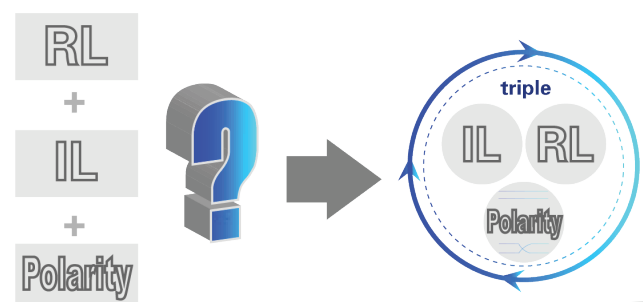
Polarity Learning Setup



IL, RL and polarity 3-in-1 test

Multi-core fiber IL, RL and polarity three-in-one automatic test

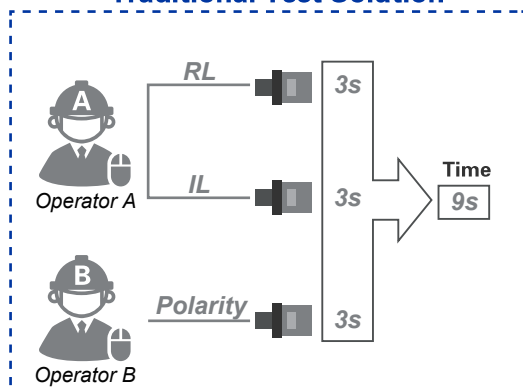
The multi-channel polarity IL/RL tester enables fast, wrap-free return loss and insertion loss testing for multi-fiber patch cords, while simultaneously performing polarity detection - achieving a true 3-in-1 automated test for insertion loss, return loss, and polarity.



Save work stations, increase production and test efficiency by more than 6 times

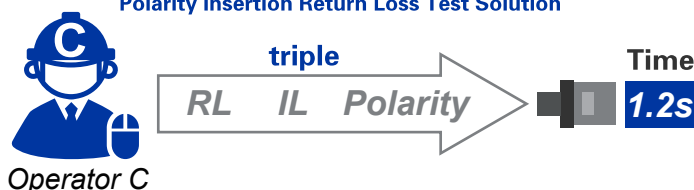
The multi-channel polarity return loss tester can automatically test IL, RL, and Polarity at the same time, reducing the need for employees to plug and unplug the measurement jumper and equipment multiple times between testing IL/RL and polarity. Single-channel IL, RL, Polarity simultaneously test time as low as 1.2S (fast mode). The test efficiency is increased by more than 600%, and the cost of customer equipment investment can also be reduced.

Traditional Test Solution



Efficiency developed to **600%**

Polarity Insertion Return Loss Test Solution



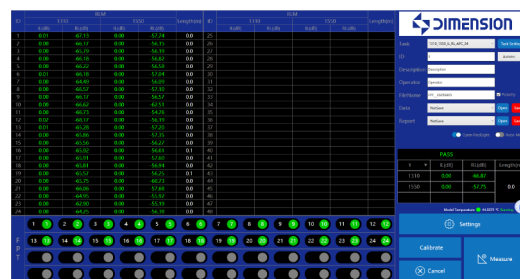
Abundant and interchangeable, high-reliability connectors

In order to meet the different needs of customers, a series of rich and interchangeable detectors with high reliability have been developed. Adapter connector, easy to use, one-time test loss and polarity, no need to plug and unplug again.



Humanized software design

With a simple and clear software UI design, users can customize the test report, which can automatically save and upload test data and reports.



Save work stations, increase production and test efficiency by more than 6 times

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Basic product model		RLM-HP-1612A-1FA-24	RLM-HP-5656A-1FA-24	RLM1612A-1FA-24	RLM5656A-1FA-24	RLM-L-1612A-1FA-24	RLM-L-5656A-1FA-24
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
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~-60dB	-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; DUTrefections (both ends)>-50dB: 1.5m					
	Once Testing Time	<18 seconds (Fast Mode: SM MPO12 <18s; MM MPO12 <21s)					
	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°C~40°C					
	Storage temperature	-40°C~70°C					
	Size	ALPHA platform: 359mmx274mmx115mm, OMEGA platform: 462mmX374mmX171mm					

*All specifications given at temperature 23 °C $\pm$ 1 °C, after a 30-minute warm-up, with FC/PC connector.

*Added variable caused by optical switch would be $\pm 0.03\text{dB}$ if using MPO/MTP.

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	6	Polarity integrating sphere	1	1310-SM	A	Tangle-Free OTDR OMEGA Chassis	1	1CH	FA	FC/APC	24	24CH
-L	Lite	5	MM 50/125	7	External polarity integrating sphere- Dual	2	1550-SM	C	Tangle-Free OTDR OMEGA Lite Chassis					48	48CH
-HP	High Performance	9	SM 9/125&MM 50/125 Dual Module	8	External polarity integrating sphere- Single	3	1490-SM							96	96CH
						4	1625-SM								
						5	850-MM								
						6	1300-MM								

Example:

RLM1612A-1FA-24 24-core Mandrel-free polarized IRL test module, 1310/1550, SM 9/125 InGaAs 2mm (Polar integrating sphere), Laser output 1CH FC/APC

Note: 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/C supports four single-mode wavelengths, and XX should be selected for the two-digit coding.