Single fiber IRL Meter

DIMENSION

Dimension single fiber IRL meter uses a high stability laser source and a high precision optical power meter for mandrel-free return loss testing and high-speed insertion loss testing. The Dual-wavelength loss test time is less than 0.6s, and the minimum return loss detection can be achieved -80dB. Includes 6 testing wavelengths for single mode and multiple mode (multiple mode :850nm, 1300nm, single mode :1310nm, 1490nm, 1550nm, 1625nm). RLM fast and accurate measurement function make it an ideal tool for improving production efficiency and quality control.

Main Features

- Platform + module design, multi-application and scalable
- RL mandrel-free test, dual wavelength test speed less than 0.6s
- RL minimum detectable down to -80dB(single fiber, single mode)
- Minimum measuring fiber length 0.7m
- Rich interchangeable, high reliability detector adapter
- Support physical button, touchscreen, network, USB control methods
- Auto save test data + report, support remote control function

Applications

- Fiber patchcord and connector performance test
- Other optical passive device performance test

◀ Platform + module design, high scalability

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, programmable, 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.
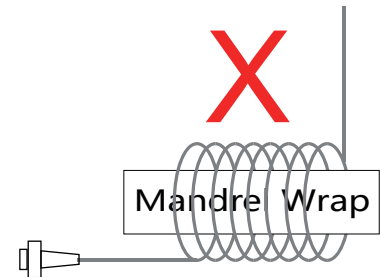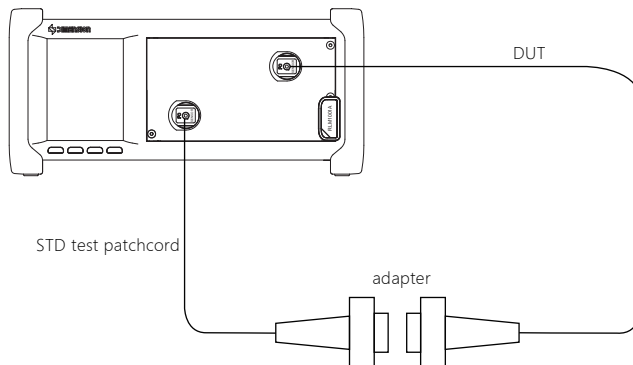
OMEGA test platform

ALPHA test platform

◀ RL mandrel-free test, dual wavelength test speed less than 0.6s

Based on the principle of optical time domain reflection(OTDR) detection, the return loss test is realized without winding. The integrated design test module can realize insertion loss and return loss testing simultaneously. Using high speed sampling circuit and algorithm optimization, the speed of dual wavelength test is less than 0.6s(Fast mode).

DUT

STD test patchcord
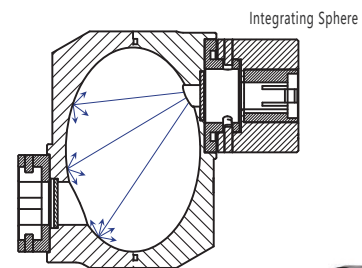
adapter

X

Mandrel Wrap

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

Using the dimension self-developed high-sensitivity detection circuit and the optimized software algorithm, RL can achieve the detection of -80dB(single fiber single mode), which can meet the detection requirements of high-performance single mode patchcord (SM/APC).
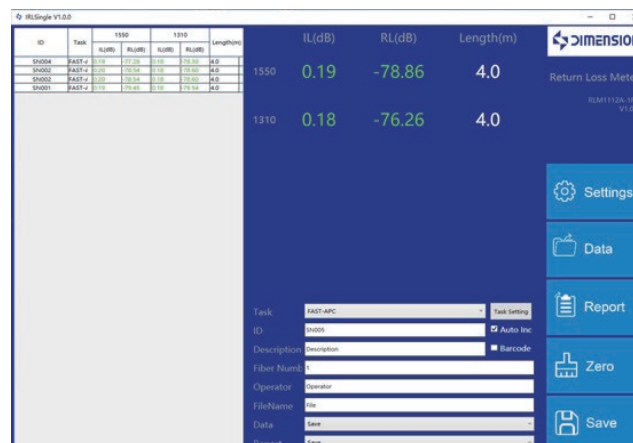
Integrating Sphere

◀ Rich interchangeable, high reliability detector adapter

To meet the needs of customers, dimension has developed a series of interchangeable, high reliability detector adapter, that are flexible and convenient to use. Optimized integrating sphere, compatible with MPO/ duplex LC adapters, no need to repeatedly plug and plug in one test.

◀ Support PC control software, automatically save 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 to the sever.

ID	Task	1550		1310		Length(m)
		IL(dB)	RL(dB)	IL(dB)	RL(dB)	
SN004	FAST-r	0.19	-77.28	0.18	-76.50	4.0
SN002	FAST-r	0.20	-78.56	0.19	-76.60	4.0
SN002	FAST-r	0.20	-78.54	0.18	-72.60	4.0
SN001	FAST-r	0.19	-79.45	0.18	-76.54	4.0

	IL(dB)	RL(dB)	Length(m)
1550	0.19	-78.86	4.0
1310	0.18	-76.26	4.0

Return Loss Meter
RLM1112A-1FA
V1.0.0

Settings
Data
Report
Zero
Save

Specifications

DIMENSION

Basic product model		RLM1112A-1FA	RLM5156A-1FA	RLM-L-2175A-2FA	RLM-L-5156A-1FA
Product series		Professional	Professional	Lite	Lite
light source	Fiber Type	SM 9/125	MM 50/125	SM 9/125	MM 50/125
	Wavelength	1310/1550nm	850/1300nm	1310/1550nm&(850 IL)	850/1300nm
	Source Type	Laser	LED/Laser	LED/Laser	LED/Laser
	Encircled Flux Standard	NA	IEC-61280-4-1	IEC-61280-4-1	IEC-61280-4-1
IL section	IL Stability*	±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
RL section	RL Range	-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～-65dB:±1.0dB -65～-70dB:±2.0dB	-15～-50dB:±1.0dB -50～-55dB:±2.0dB
Others	Fiber length（Min）	DUT reflections (both ends)>50dB：0.6m DUT reflections (both ends)<50dB：1.5m			
	Once Testing Time	<0.6s(Fast mode)			
	Display resolution	0.01dB			
Mainframe	Input power	AC90～260V/50HZ			
	Warming up time	30 minutes (if the storage temperature is different from the service temperature, the preheating time is 90 minutes)			
	Recalibration period	2years			
	Working temperature	10℃～40℃			
	Storage temperature	-40℃～70℃			
	Size	ALPHA platform：359mm×274mm×115mm,OMEGA platform；462mmX374mmX171mm Module：285mmX133mmX71mm			

*All specifications given at temperature 23℃±1℃,after a 30-minute warm-up,with FC/PC connector.

◄ Detector Adaptors Selection Guide

Number	PN	Name	Description	Image
1	204810002	OPM FC adapter	Detection interface, suitable for FC connector	
2	204810003	OPM SC adapter	Detection interface, suitable for SC connector	
3	204810004	OPM LC adapter	Detection interface, suitable for LC connector	
4	204810007	OPM 2.5 ferrule adapter	Detection interface, suitable for FC/SC/ST ... connector and 2.5mm ferrule	

Number	PN	Name	Description	Image
5	204810006	OPM 1.25 ferrule adapter	Detection interface, suitable for LC/duplex LC /SN ... connector and 1.25mm ferrule	
6	204810014	OPM Integrating Sphere	Provide wide numerical aperture, can be used with MPO/ duplex LC adapters	
7	204810015	OPM MPO adapter	Detection interface, suitable for MPO12/MPO16 connector	
8	204810016	OPM duplex LC adapter	Detection interface, suitable for LC/duplex LC connector	
9	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		RL test		Laser output port		Laser connector type	
-L	Lite	1	SMF-28e 9/125	1	InGaAs 2mm	0	640nm VFL	A	Mandrel-free	1	1CH	FA	FC/APC
/	Pro	5	MM 50/125			1	1310			2	2CH	FP	FC/PC
		6	MM 62.5/125	2	InGaAs 3mm	2	1550						
		2	SM&MM			3	1490						
				4	InGaAs 2mm (Fixed integrating sphere)	4	1625						
						5	850						
						6	1300						
						7	1310&1550						
						X	Customized						

> Eg: RLM1112A-1FA Mandrel-free IRL test module Pro,1310/1550,SM 9/125,InGaAs 2mm, 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/B supports four single-mode wavelengths.
RLM-L-2175A-2FA:SM&MM support 1310&1550 IL,RL   but only support IL in 850nm.

◀ Related Products

BINNA 2   EasyCheck   Offsoon Pro

Dimension Technology Co.,Ltd
Tel： +86 755-26480850
Email： sales@dimension-tech.com
Web： www.dimension-tech.com

Single fiber IRL Meter