

Conventional Multi-Channel Fiber IL Tester utilizes optical switches for wavelength/channel switching via optical path reconfiguration, exhibiting the following limitations:

1. The jitter and twisting of the optical fiber during optical path switching leads to a relatively slow switching speed;
2. The optical path repeatability is poor and the measurement error is large;
3. The test equipment is sensitive to vibration. In order to ensure the stability of the optical path, the environment requirements are stringent;
4. The equipment size is large and cannot be made into a portable instrument;
5. The production cost is high, because it requires high-precision calibration components and circuit control systems.



Working principle

The multi-channel ultra-fast tester divides the light source into 24 continuous light sources through a splitter, and then passes through a uniquely designed blocker, which only allows one light path to pass at any time and blocks the other light paths, so that the 24 channels can pass through one by one. Each output end is received by a high-speed power meter to measure the power value, so that efficient testing can be achieved.

Product Feature

- Using a completely different working principle, the test speed is ten times faster than that of existing equipment.
- Multi-channel testing can be completed in one second, greatly improving test efficiency.
- Since there is no need to rebuild the optical path, the error of repeated testing is very low, and it can be used as a calibration device.
- The output connector only adopts non-contact MPO interface, which is very simple.
- The large-area PD detector interface can be compatible with various connector tests by simply replacing the interface flanges.

Technical Specification

Technical Index	Specification
Overall Equipment	
Wavelength Range (nm)	800 ~ 1700
Operating Temperature (°C)	-10 ~ +60
Storage Temperature (°C)	-25 ~ +70
Power Supply	AC220V ± 10%, 50Hz ± 10Hz
Weight (kg)	< 3
Dimensions (mm)	260 x 230 x 90
24-Channel Test Time of double wavelength (s)	< 1
Laser	
Laser Type	DFB (To be confirmed)
Operating Wavelength (nm)	1310 / 1550
Central Wavelength Deviation (nm)	± 2
Optical Output Mode	CW (Continuous Wave)
Output Power	2 mW
Short-Term Power Stability (dB)	± 0.01
Long-Term Power Stability (dB)	± 0.025
Output Return Loss (dB)	> 45
Communication Port	RS232
Optical Output Interface	24-way non-contact MPO male connector (8 degrees)
Channel Blocker	
Fiber Type	SM (Single Mode)
Number of Channels	24 + 1
Detector	
Detector Type	InGaAs
Detector Size (mm)	4 x 8