

# Polarization Scrambler

IQ-5100B



Very low activation dependent loss (ADL)

High-performance technical specifications

Impressive spectral range of 1260 nm to 1650 nm

Production line testing requires a fast, highly reliable instrument with low activation dependent loss, coupled with a wide wavelength range. The dependability of the IQ-5100B comes from its unique fiber-based design, which features no mechanical parts.

The IQ-5100B's ADL is much lower than other polarization scramblers on the market, resulting in very small power variations at the scrambler output. Accurate PDR measurements are dependent on low ADL since it is impossible to compensate for power variations at the scrambler output. The IQ-5100B's low ADL helps you to achieve fast, simple PDR measurements.

## Applications

- Polarization-dependent loss (PDL) measurements on passive components
- Polarization-dependent gain (PDG) measurements on EDFAs
- Polarization-dependent responsivity (PDR) measurements for detectors and receivers

Many types of polarization tests require varying the polarization states to cover most of the Poincaré sphere. Perform fast and random changes of the polarization state of a signal with the IQ-5100B Polarization Scrambler.

Combine the IQ-5100B Polarization Scrambler with the IQ-3400B PDL Meter and the IQ-2600B Tunable Laser Source or the IQ-2400 WDM Laser Source for a fast, complete PDL testing system.



Fiber-optic T&M,  
monitoring, manufacturing  
and assembly solutions

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## Specifications<sup>1</sup>

Wavelength range (nm)	1260 to 1650	
Activation dependent loss (dB)	0.006 (typ.)	0.01 (max.)
Extinction ratio (dB)	> 40	
Insertion loss (dB)	< 0.1	(excluding connectors)
	≤ 1	(with connectors)
Return loss (dB)	≥ 50 (UPC Connector)	
Scrambling (s)	1 to 99.9 s	
Poincaré sphere coverage	1 scrambling period: 98 %	2 scrambling periods: 99 %
<b>General Specifications</b>		
Operating temperature	0 °C to 40 °C	(32 °F to 104 °F)
Storage temperature	-20 °C to 70 °C	(-4 °F to 158 °F)
Dimensions (H x W x D)	12.1 cm x 3.8 cm x 26.2 cm	(4 3/4 in x 1 1/2 in x 10 5/16 in)
Weight	0.84 kg	(1.85 lb)

## Ordering Information

**IQ-5100B-01-B-XX**

Output connector <sup>2,3</sup>

EI-EUI-28 = UPC/DIN 47256

EI-EUI-89 = UPC/FC narrow key

EI-EUI-91 = UPC/SC

EI-EUI-95 = UPC/E-2000

Example: IQ-5100B-01-B-EI-EUI-89

### NOTES

1. At 23 °C and 1550 nm. Insertion loss changes with connector type.
2. Input connector APC Universal Interface only.
3. Output connector UPC Universal Interface only.

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