

# Optical Polarization Scrambler Q8163

## High speed and precise polarization scrambler

Photo 43385-1



## Brief description

A key performance factor in optical communication is the Polarization Dependant Loss (PDL) of the optical devices. The quality tends to deteriorate when PDL increases. The Q8163 is a high speed and precise polarization scrambler, which forms a measurement system together with an optical power meter that uses ultra-low PDL dependant power sensors.

The scrambler uses a polarization retaining fiber and a piezoelectric element instead of a conventional fiber loop method offering non-mechanically moving parts and long durability.

The so-called overall polarization measurement takes hundreds of different states of polarized light on the device, measures the optical power of the transmitted light and calculates the ratio between maximum and minimum values.

The power meter to recommend is the model Q8221 with the plug-in Q82203 and the power sensors Q82232 or Q82233.

When for example a PDL of 0.2 dBpp is measured a repeatability of 0.005 dBpp can be obtained for a measurement time of less than 1 sec.

## Main features

- High-speed polarization variance
- Low insertion loss 3 dB and fluctuations  $\pm 0,005$  dB
- High reliability

## Specifications in brief

Wavelength range	1290 ... 1580 nm
Insertion loss	< 3.0 dB
Insertion loss fluctuation	$\pm 0.005$ dB
Return loss	< 43 dB
Polarisation variance speed	> 500 rotations of the poincare sphere
Input/output connector	FC
Interface	GPIB

## Ordering information

<b>Optical Polarization Scrambler</b>	Q8163
<b>Extras</b>	
Power meter	Q8221
Plug-in for Q8221	Q82203
Power sensors	Q82232 or Q82233