



产品特点 / Features



应用领域 / Applications

- ◇ 偏振模式色散 (PMD) 补偿

PMD compensation

- ◇ 偏振解复用

Polarization demultiplexing

- ◇ 消除偏振退化

Eliminate polarization-induced degradation

- ◇ 相干光通讯系统

Coherent optical communication

- ◇ 光纤传感器

Fiber optic interferometer

- ◇ 工作波长 1064 / 1310 / 1550 nm 或其它

Operating wavelength 1064 / 1310 / 1550 nm or others)

- ◇ 低插入损耗 (典型值 1.0 dB @ 1550 nm)

Low insertion loss (Typical 1.0 dB @ 1550 nm)

- ◇ 恢复时间短 ≤ 3 ms

Short recovery time ≤ 3 ms)

- ◇ 跟踪速度快 $\leq 48\pi$ rad/s @ 非复位状态

Fast tracking speed ($\leq 48\pi$ rad/s in non-reset state)

- ◇ 全光纤光路低回波损耗 (≥ 50 dB @ 1550 nm)

All-fiber optical path with low return loss (≥ 50 dB @ 1550 nm)

- ◇ 内部集成偏振控制器与检偏器

Built-in polarization controller and inline polarizer

- ◇ 可提供内部反馈或外部反馈版本

Internal or external feedback version available

- ◇ 可扩展工作温度范围至 -35 to +65 °C

Extended temperature range up to -35 to +65 °C

POS-100 型光纤偏振态追踪器, 是一款基于光纤偏振控制器与偏振检测器设计的闭环光纤偏振态反馈控制设备。由偏振控制器、偏振检测器 (POS-100-I 内部反馈版)、偏振控制电路及专有算法组成, 可以将任意输入偏振态稳定为特定偏振态输出。

The POS-100 Polarization Stabilizer is a closed-loop fiber-optic polarization feedback system, engineered with a fiber-based polarization controller and a polarimeter. It integrates a polarization controller, a polarimeter (included in the POS-100-I internal feedback version), control electronics, and proprietary algorithms to stabilize any arbitrary input state of polarization (SOP) into a specific, user-defined output SOP.

对于输入光偏振态 (SOP) 连续变化可进行主动补偿, 使偏振输出偏振态稳定在线偏振态 (POS-100-I 内部反馈版), 最高跟踪速度可达 48π rad/s。设备可配置为内部反馈 (线偏振输出) 或外部反馈工作模式。内部反馈模式可实现稳定的线偏振输出。外部反馈模式时, 需要用户提供模拟电压反馈量用来进行闭环控制, 反馈量可以为偏振度 (DOP)、误码率 (BER)、RF 频谱或者光功率对应的电压值。

It actively compensates for continuous changes in the input light polarization (SOP), maintaining a stable linear polarized output (POS-100-I internal feedback version) with a maximum tracking speed of up to 48π rad/s. The unit can be configured for either internal feedback (linear polarized output) or external feedback operation. In internal feedback mode, it provides a stable linear polarized output. In external feedback mode, the user must supply an analog voltage feedback signal for closed-loop control; this feedback signal can represent polarization degree (DOP), bit error rate (BER), RF spectrum, or an optical power-correlated voltage value.

主要应用于抵偿光纤系统中的偏振波动、抑制光放大器中的噪声系数、减少偏振相关损耗 (PDL) 效应以及消除相干通信和光纤传感器系统中的偏振变化。

The product is primarily used to compensate for polarization fluctuations in fiber optic systems, suppress the noise figure in optical amplifiers, reduce polarization-dependent loss (PDL) effects, and eliminate polarization variations in coherent communication and fiber optic sensing systems.



性能指标 / Specifications

性能参数 / Parameters	技术指标 / Specifications
工作波长 / Wavelength	1064 / 1310 / 1550 nm 或其它 / or others
波长范围 / Wavelength range	±50 nm
插入损耗 / Insertion loss	<1.2 dB (Typ. 1.0 dB) @ 1550 nm
SOP 恢复时间 / SOP recovery time	<3 ms
SOP 精度 / SOP accuracy	<0.3 dB (内部反馈版 / Internal feedback version)
重复性 / Repeatability	0.1 dB
SOP 旋转跟踪速度 (无复位) / SOP rotation tracking speed (Reset free)	48π rad/s
正交偏振隔离度 / Isolation in Orthogonal Polarization	>23 dB
输入光功率范围 / Input optical power range	-20 to +10 dBm (内部反馈版) / -20 to +10 dBm (Internal feedback version)
回波损耗 / Return loss	>50 dB
光纤类型 / Fiber optic type	SMF28e / HI1060 900 um 松套管 / SMF28e or HI1060 900 um loose tube
光功率损伤阈值 / Damage threshold	300 mW
光接口类型 / Fiber connector type	FC/APC 或 FC/PC 或指定 / FC/ACP or FC/PC or others
工作温度 / Operation temperature	0 to +65°C (标准 / Standard)
	-35 to +65 °C (扩展 / Extended)
存储温度 / Storage temperature	-40 to +85 °C
电源类型 / Power supply	DC 12V / 0.5A
通信接口 / Communications Interface	RS 422
外形尺寸 / Dimensions	134 × 88 × 20.5 mm (长×宽×高 / L×W×H)

注释 / Notes:

- 1) 以上列出的规格参数为标准配置下的参数，不同波长或输入功率范围的规格可能有所不同。

The specifications listed above are for the standard configuration; specs may differ for instruments with different wavelength or input power ranges.

- 2) 用户下单时可指定产品参数要求。

Per user specification when product is ordered.

- 3) 其他波长和控制算法可根据需求提供。

Other wavelengths and control algorithms may be available upon request.