Photonics On Crystals

POC-OC-120205-TAP In-Line Isolators Datasheet

Key Features

- Integrated power monitoring port for efficient output signal analysis.
- Supports a range of output power ratios, including customizable ratios for specific applications.
- High isolation and low insertion loss (<1.2 dB) for optimal system performance.
- Extinction ratio exceeding 18 dB for polarization-maintaining models.
- Wide wavelength range compatibility (980 nm to 1940 nm), ensuring versatile application.

General Description

Photonics of Crystals (POC) offers advanced TAP In-Line Isolators, featuring an integrated power monitoring port that extracts light in constant proportions for precise output power monitoring. These isolators are engineered for high isolation and low insertion loss, ensuring the stability and performance of optical systems.

Designed for versatility, POC's TAP isolators accommodate diverse power ratios such as 0.1 ± 0.05%, 1 ± 0.5%, 2 ± 0.8%, 5 ± 1.0%, and 10 ± 2.0%, with further customizations available upon request. The devices are constructed with robust environmental stability, making them suitable for demanding operational conditions.

With a focus on high power handling, these isolators are ideal for advanced optical systems, including EDFA and DWDM setups. The availability of bare fiber or FC/APC connections further enhances integration flexibility. Whether used for signal analysis or as part of an optical network, POC TAP In-Line Isolators provide unparalleled precision and reliability.

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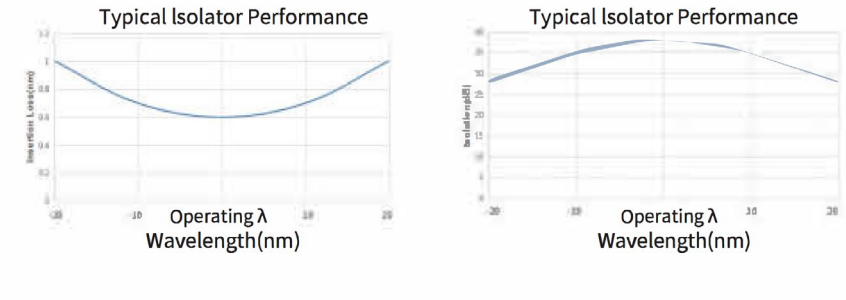

General Applications and Examples

1. **Optical Power Monitoring in Laser Systems:**
   TAP isolators are used to monitor laser output power by diverting a small, proportional signal to diagnostic equipment. This ensures consistent performance while safeguarding the primary signal.
2. **DWDM Systems (Dense Wavelength Division Multiplexing):**
   In TAP isolators, the power monitoring function ensures accurate channel analysis and optimization in multi-wavelength communication systems, reducing signal degradation and ensuring system reliability.
3. **EDFA (Erbium-Doped Fiber Amplifiers):**
   TAP isolators prevent feedback in amplifiers while providing real-time power data, enhancing the efficiency and stability of high-power optical amplification systems.

Our Standard Products and Model Numbers

Type	Power	Fiber Type	Wavelength (nm)	Pigtail Diameter	Fiber Length	Filter	Housing
TAP (Monitoring)	0.3–500 W	HI1060	980–1940	900 µm Loose Tube / 3 mm Loose Tube	1 m / 1.5 m	Contained / Not Contained	A15 / A23

Typical Specifications

Withstand Power	Extinction Ratio	Insertion Loss	Peak Isolation
10 W	>18 dB	≤1.2 dB	>30 dB
50 W	>18 dB	≤1.2 dB	>30 dB

Note: Specifications apply to polarization-maintaining TAP in-line isolators.

Housing Dimensions (mm)

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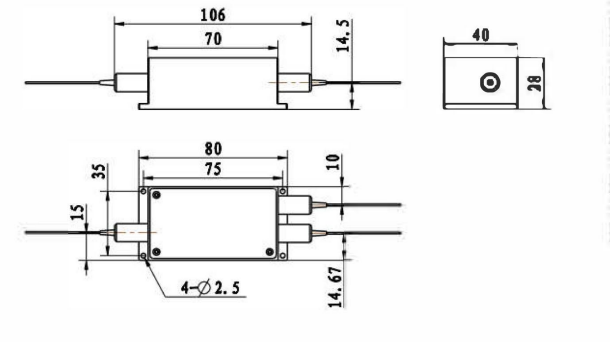
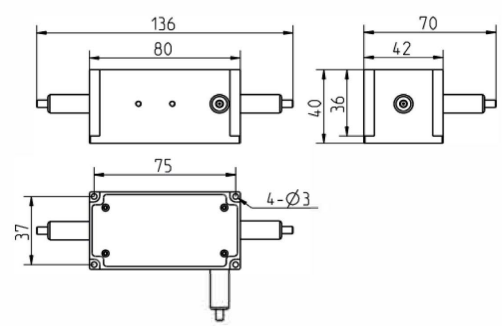
- **A15:** 106 x 70 x 40 (compact design for integration in smaller setups).
- **A23:** 136 x 80 x 42 (larger dimensions for higher-power applications).

A15



A23



POC Strength and Capabilities

At Photonics of Crystals (POC), our commitment to delivering top-tier optical solutions is unmatched. Our TAP In-Line Isolators reflect our expertise in engineering high-performance photonic devices tailored to customer needs.

Why Choose POC?

- **Customization:** We offer a broad range of customization options, from power ratio configurations to housing dimensions, to suit specific requirements.
- **Precision Manufacturing:** All isolators are fabricated in-house with rigorous quality control, ensuring exceptional reliability and performance.
- **Global Reach:** Serving industries such as telecommunications, medical imaging, and research, POC's isolators are trusted worldwide for their durability and technical excellence.
- **Customer Support:** A dedicated team of engineers and sales representatives is available to assist clients from project initiation to deployment.

Contact POC to learn how our TAP In-Line Isolators can enhance your optical systems.