

OSICS SWT AND SWT APC

OPTICAL SWITCHES AND SHUTTERS



The ideal optical switches and shutters for automating test setups in lab and manufacturing environments.

KEY FEATURES

Low insertion- and polarization-dependent loss

High repeatability

High optical isolation

Low back reflection

Broad spectral range

Switch time lower than 30 ms

Single slot module

OSICS SWT is a full suite of fiber optic switch and shutter modules based on optical prism technology. These modules are ideal for automating test setups and reducing measurement uncertainties due to optical connections in a laboratory or manufacturing environment.

- › The shutter models come in a 1x1 or a 2x (1x1) configuration.
- › The switch models consist of a 1x2, a 1x4 and a 2x2 configuration.

All OSICS SWT modules are bi-directional—that is, the 1x4 switch module can operate in the following configurations:

Common configuration: Allows you to direct a laser signal from the common input to either output channels

Reverse configuration: Allows you to steer one of the input channels through the common output channel

ADDITIONAL FEATURES

Sequential switching

This feature lets you activate each channel successively according to a preconfigured schedule (not available in the SWT APC model).

Power monitoring

The SWT APC switch features power monitoring designed to drive the OSICS platform in a **full-band laser** set-up. When used in combination with one or more OSICS T100 modules, the automatic power control (APC) automatically adjusts the output power to achieve an accurate value by compensating for any loss caused by the link laser switch (SWT APC model only).

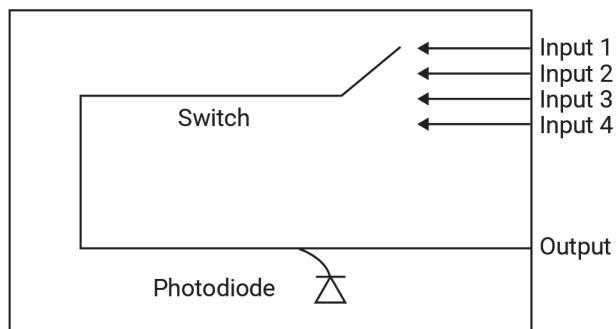


Figure 1. Diagram of OS/ICS SWT APC module



Figure 2. SWT APC in a full-band laser setup

TECHNICAL SPECIFICATIONS

	OSICS SWT		OSICS SWT APC
	SMF ^a	PMF	SMF ^a
Available configurations	1x1 shutter 2x(1x1) shutter 1x2 switch 1x4 switch 2x2 switch		1x2 switch 1x4 switch
Spectral range (nm)	SMF: 1260–1630	PM15: 1480–1630 PM13: 1240–1510	SMF: 1250–1650
Insertion loss (dB) ^{c, d}	≤ 1	≤ 1.5	≤ 1.5
Polarization-dependent loss (dB) ^{c, d}	< 0.1	N/A	< 0.1
Polarization extinction ratio (dB) ^{c, d}	N/A	≥ 20	N/A
Repeatability (dB) ^d	≤ 0.005	≤ 0.01	±0.02
Return loss (dB) ^c		> 55	> 50
Crosstalk (dB) ^d		≥ 55	> 50
On/Off ratio (shutter models only)	1x1 shutter: ≥ 80 dB 2x (1x1) shutter: ≥ 65 dB		N/A
Switching time		< 30 ms	
Connector type ^e (module front panel)		FC/APC narrow key	
Input/Output fiber type	SMF-28 fiber	PM15 or PM13	SMF-28 fiber
Synchronization ^f (mainframe: BNC connector)		OUT 2: 50 ms TTL pulses	
Power monitoring	No		Yes
Dimensions (H x W x D)	128 mm x 35 mm x 230 mm (5 in x 1.4 in x 9 in)		
Weight	1 kg (2.21 lb)		
Temperature range	15 °C to 35 °C (59 °F to 95 °F)		

Notes

- a. Specifications apply for wavelengths not equal to any water absorption line.
- b. The OSICS SWT APC has been designed to work in the full-band laser setup.
- c. Typical values including connectors.
- d. On the whole wavelength range.
- e. For PMF, slow axis is aligned to the connector key.
- f. See OSICS mainframe specifications sheet for details on OSICS common specifications and interfaces on the rear panel.

ORDERING INFORMATION

OS-XX-XX-XX-XX-XX-58

Type
SW = Without power control
SA = With power control

Number of components
1 = 1
2 = 2^a

Configuration
1-1 = 1x1 shutter^b
1-2 = 1x2 switch
1-4 = 1x4 switch
2-2 = 2x2 switch^b

Connector
58 = FC/APC

Fiber type

F = SMF28 singlemode fiber
OES-P = PM13 polarization maintaining fiber^b
SCL-P = PM15 polarization maintaining fiber^b

Example: OS-SW-1-1-4-F-58

Notes

a. Only available for SW type in 1-1 configuration.
b. Only available for SW type.

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