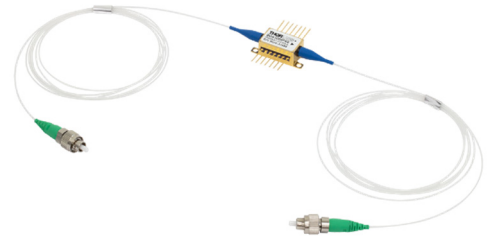


Polarization-Dependent Optical Shutter / Switch

BOA1004PXS
PM Fiber

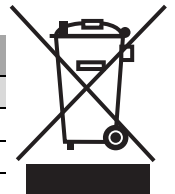


Description

Thorlabs' BOA1004PXS polarization-dependent switch enables full control of the power level, making it ideal for high-power laser pulse generation systems such as cavity ring-down sensors and LIDAR systems. The device comes in an industry-standard, 14-pin butterfly package with PM fiber pigtails that are terminated with FC/APC connectors and key-aligned to the slow axis.

Specifications

BOA1004PXS				
	Symbol	Min	Typical	Max
Operating Current	I_{OP}	-	600 mA	750 mA
Operating Wavelength	λ	1500 nm	-	1600 nm
Optical Isolation (P_{IN} / P_{OUT}) @ 0 mA & 1550 nm	-	40 dB	-	-
Extinction Ratio (On/Off @ $P_{IN} = -20$ dBm & 1550 nm)	-	-	70 dB	-
Switching Speed	-	-	1 ns	-
Max Output Power for CW Input Signal	-	-	18 dBm	-
Max Output Power for Modulated Input Signal	-	-	10 dBm	-
Saturation Output Power (@ -3 dB)	P_{SAT}	13 dBm	15 dBm	-
Small Signal Gain Across BW (@ $P_{IN} = -20$ dBm)	G	22 dB	25 dB	-
Polarization Dependent Gain	PDG	-	-	-
Noise Figure	NF	-	8.0 dB	9.5 dB
Forward Voltage	V_F	-	1.6 V	1.8 V
Chip Length	-	-	1.5 mm	-
Waveguide Refractive Index	-	-	3.2	-
TEC Operation (Typ. / Max @ $T_{CASE} = 25$ °C / 70 °C)				
-TEC Current	I_{TEC}	-	0.23 A	1.5 A
-TEC Voltage	V_{TEC}	-	0.5 V	4.0 V
-Thermistor Resistance	R_{TH}	-	10 k Ω	-
Fiber Specifications				
-Fiber Type			PMF-1550	
-Fiber Length			1.5 \pm 0.1 m	
-Fiber Connector			FC/APC, Key Aligned to Slow Axis	



Drawings

T. Case

1. TEC +	8. NC
2. Thermistor	9. NC
3. NC	10. Dev Anode
4. NC	11. Dev Cathode
5. Thermistor	12. NC
6. NC	13. Case
7. NC	14. TEC -

