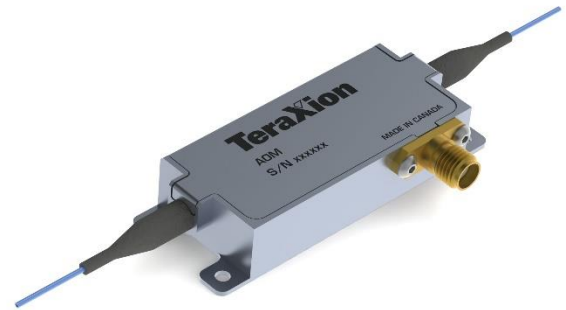


TeraXion

Acousto-Optic Modulator (AOM)



TeraXion's acousto-optic modulator (AOM) is a low rise time modulator used to control the repetition rate of pulses in ultrafast lasers. Its large passband design transmits femtosecond pulses efficiently and, without loss of quality. The fiber-coupled AOM's high damage threshold optics and assembly design ensure long term operation without performance degradation over time.

The AOM allows users to choose any repetition rate with a duty cycle of up to 100 %. This reduces the laser oscillators' fundamental repetition rate. In chirped-pulse amplification systems, a lower repetition rate increases each pulse's energy for more efficient processing.

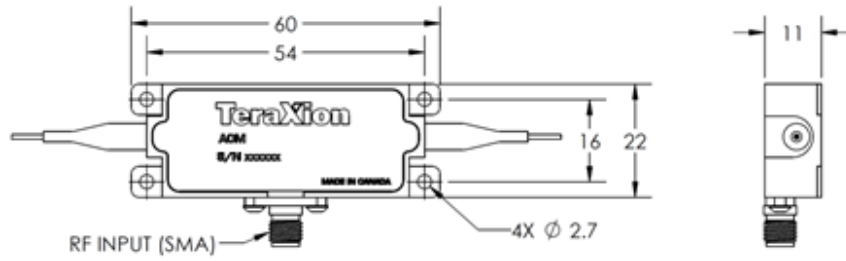
TeraXion's AOM is the result of more than 15 years of experience in ultrafast laser components, RF electronics and robust packaging.

Top 5 Features

- **Low Rise Time:** The AOM distinctly separates the pulse train with a rise time of only 10 ns.
- **Low Insertion Loss:** The AOM transmits pulses efficiently with minimal loss of energy.
- **Large Passband:** The AOM's anti-reflection coating ensures the broadest transmission for optimal pulse quality.
- **Compact:** Only 60 x 22 x 11 mm, for easy integration.
- **High Damage Threshold:** Designed specifically for ultrashort pulses with a high peak power.

Acousto-Optic Modulator (AOM)

Module Dimensions



Optical Specifications

Parameters		Units
Wavelength	1020-1070	nm
Maximum average power	1	W
Maximum peak power	1000	W
Insertion loss	≤ 4	dB
Return loss	≤ -40	dB
Extinction ratio	≥ 45	dB
PER	≥ 18	dB
Rise/fall time	≤ 10	ns
Duty cycle	0 to 100	%

RF Specifications

Parameters		Units
Driver RF frequency	200	MHz
Input impedance	50	Ω
Recommended driver type	200 MHz driver	
VSWR ⁽¹⁾ at 200 MHz	≤ 1.5:1	
Maximum RF power	2	W

(1) Voltage standing wave ratio

Mechanical Specifications

Parameters		Units
Fiber type	PM-980 compatible	
Buffer type	900 µm loose tube	
Fiber termination	None	
Fiber length	≥ 1	m
RF connector	SMA – female	
Operating temperature ⁽²⁾	10 - 50	°C
Storage temperature	-40 to +85	°C
RoHS compliant	Yes	
IP54 compliant	Yes	

(2) Non condensing.

Ordering information

For orders, questions, specific requirements or to learn more TeraXion's products, contact us at info@teraxion.com

TeraXion

teraxion.com
2716 Einstein Street
Quebec, Quebec, CANADA G1P 4S8
+1 (877) 658-8372 / info@teraxion.com

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