

1650nm Single-mode acousto-optic modulator 100MHz



Product Description

Idealphotonics' acousto-optic modulators are widely used in fiber optic sensing applications due to their high modulation extinction ratio, high power tolerance, and other advantages. This product is specifically developed to meet the application needs of fiber optic sensing, featuring a compact size, low power consumption (<1W), fast rise time (12ns), good modulation pulse shape (small overshoot), and excellent pulse repetition (low jitter in repetition period). Additionally, the modulator and driver can be integrated into a single package, facilitating system integration. It can be widely applied in fiber optic sensing systems that require pulse modulation, such as φ -OTDR, BOTDR, OFDR, etc.

Part Number

AOM100-1650-1-SA





Product features

Compact size、 Low power consumption (<500mW)、 Fast rise time (12ns)、 Good modulation pulse shape (small overshoot)、 Excellent pulse repetition (low jitter in repetition period)

• Application area

Fiber optic sensing、 LiDAR、 BOTDA



• Main Parameters:

		PN#				
Parameter	Unit	AOM100-1650-1	AOM150-1650-1	AOM200-1650-1		
Material	_	(X) (X) (X)				
Wavelength	nm	1650				
Max Laser Power	W	≤0.5				
Max Pulsed Laser Peak Power	KW	≤ 1 (5kW Custom)				
Insertion Loss	dB	≤3	≤4	≤5		
Extinction Ratio	dB	≥50				
Polarization Extinction Ratio (for PM devices)	dB	≥20				
Voltage Standing Wave Ratio	1	≤ 1.2:1				
Optical Pulse Rise Time	ns	40	20	12		
Operating Frequency	MHz	100	150	200		



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Fiber Type	-	SM or PM				
Fiber Connector	-	FC/APC				
Structure	-	Picture A				
Driver		D100-02-M-1D	D150-02-M-1D	D200-02-M-1D		

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• Driver

Parameter	Unit	PN#			
		D100-02-M-1D	D150-02-M-1D	D200-02-M-1D	
Operating	MHz	100	150	200	
Frequency					
Drive Power	W	≤2.5	≤3	≤3	
Electrical Pulse	ns	≤20	≤ 15	≤7.5	
Rise Time					
Power Switch	15	≥55			
Ratio	üВ				
Supply Voltage	V	24			
(DC)	v				
Harmonic	dBc	≥25			
Suppression	übe				
Modulation	_	ТТІ			
Mode					
Output	Q	50			
Impedance					
Structure	-	Picture B			







• Electrical Signal Configuration

Modulation Signal: Pulse signal Modulation Frequency: 500 kHz Modulation Amplitude: 0V (low level), 2.5V (high level) Pulse Width: 100 ns



1600nm laser pulse time-domain graph

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1600nm laser pulse rise time test



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• General parameters

Modulation curve













• Dimensions

A: AOM Dimensions



B,Driver dimension diagram





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