



NanoSpeed™ Fiberoptic (5MHz) Modulator

(Protected by U.S. patents 7,403,677B1; 6,757,101B2; and pending patents)

Product Description

The NS modulator provides a fixed sine wave (5MHz) light intensity modulation with depth adjustable up to 100%. The NS modulator is designed to meet the most demanding operation requirements of ultra-high reliability and fast response time with minimum mechanical footprint. This device comes with a miniature integrated driver that only requires a 5 V power supply.

The VOA is available in either normally-transparent or normally-opaque configurations.

Features

- No Moving Parts
- High Reliability
- Solid-State High Speed
- Low Insertion Loss
- Epoxy-Free Optical Path
- Low Power Consumption
- Simple Driver

Performance Specifications

NS 5MHz Modulator/VOA	Min	Typical	Max	Unit
Wavelength	760		1800	nm
Insertion Loss *	1260-1800nm	0.6	1.0	dB
	960-1260nm	0.8	1.3	dB
	760-960nm	1.0	1.5	dB
Polarization Dependent Loss		0.1	0.3	dB
Return Loss	45	50		dB
Attenuation Range	20	28	36	dB
Response Time (Rise, Fall)			300	ns
Modulation Rate** (up to 90% depth)		5		MHz
Resolution		Continuous		dB
Operating Optical Power			500	mW
Operating Temperature	-5 ~ 70			°C
Storage Temperature	-40 ~ 85			°C
Package Dimension		50X25X10		mm

*. Excluding connectors.

**. For narrow Frequency Range

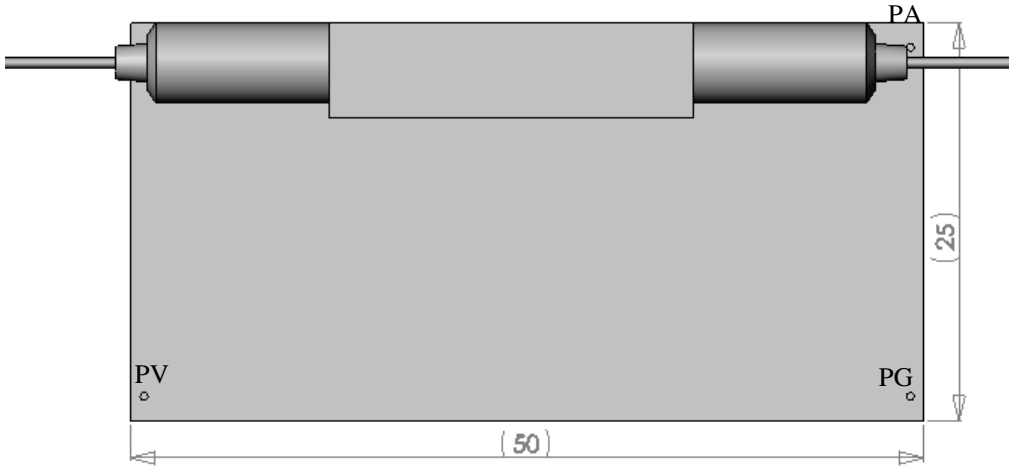
Applications

- Power Control
- Power Regulation
- Power Balance
- Instrumentation



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Mechanical Footprint Dimensions (Unit:mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

VOA Pin Definition

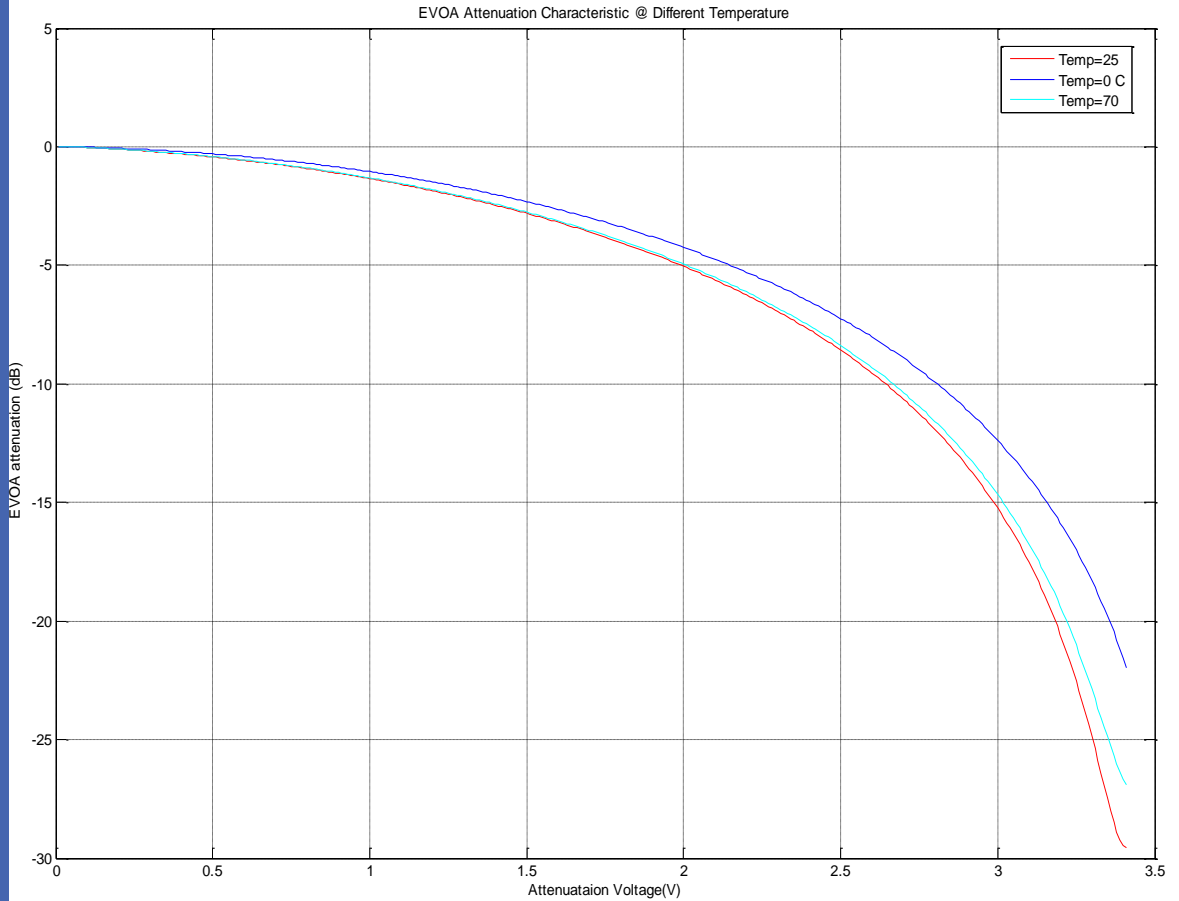
- PA: Attenuation Driving Signal
- PV: Vcc +5 Volts
- PG: Gnd

Electrical Performance Specifications

Parameter	Minimum	Typical	Maximum	Unit	Notes
Power Supply Current			70	mA	
Power Supply Voltage	4.75	5	5.25	V	

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Typical Curve of Attenuation versus Voltage



Ordering Information

NVOA-	6 2	<input type="checkbox"/>	<input type="checkbox"/>	1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Type	Wavelength	State	Package	Fiber Type	Fiber Length	Connector	
		1310 = 3 1550 = 5	Transparent = 1 Opaque = 2		SMF-28 = 1 Special = 0	Bare fiber = 1 900um loose tube = 3 Special = 0	0.25m = 1 0.5m = 2 1.0 m = 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0

