Variable Optical Attenuator Array

PhotonIC

The Gemfire PhotonIC™ family of waveguide-based VOA arrays deliver the kind of enhanced functionality, integration, and overall performance to more than meet the needs of today's rapidly expanding optical networks. They're capable of delivering more than 20dB of dynamic attenuation while consuming less than 20mW per port of drive power. Gemfire VOA components are based on a thermo-optic polymer waveguide design that provides low insertion loss, a small footprint, and electronically controllable attenuation. This unique combination of innovative features and performance benefits—along with their excellent price-performance value—give our VOA component family a distinct advantage in DWDM, metro networks, and other applications that demand compact, reliable, electrically-efficient devices.

- **8- & 16-Port Configurations**
- **Small Footprint**
- **No TEC Required**
- **Low Insertion Loss**
- **Low Power Consumption**
- **Simple Electronic Design**
- **High-Reliability Thermo-Optic Polymer Waveguide Design**

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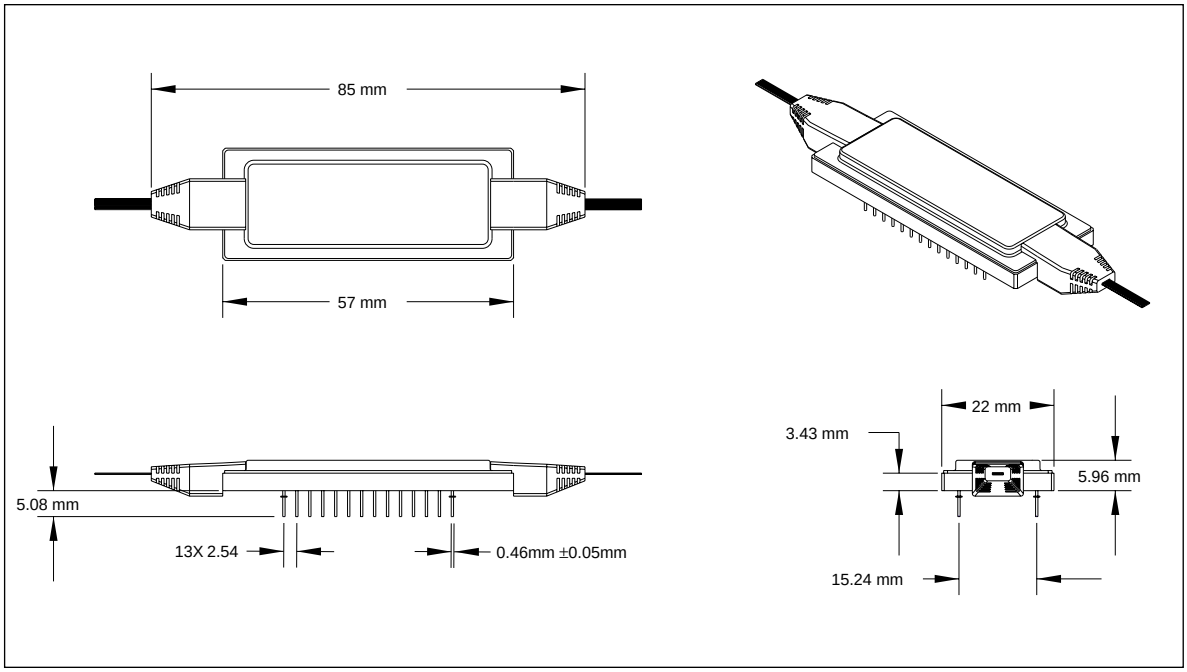
Insertion loss (T_{op} = 30ºC) [1]	1.3dB
Wavelength range	1525–1610nm
Dynamic range	20dB
Attenuation steps [2]	Continuous
Power consumption @ 20dB	20mW/Port
Number of ports	8 or 16
Input/output fiber	SMF–28™
Polarization dependent loss (PDL)	<0.3dB @ 10dB
Polarization mode dispersion (PMD)	<0.1psec
Return loss	<-50dB
Response time (0 - 20dB)	<3msec
Crosstalk	<-50dB
Optical module operating temperature, T_{op}	-5ºC – 70ºC
Optical module qualification	Designed to meet Telcordia requirements including GR-910, GR-1209 and GR-1221

1. Add 0.005 dB/ºC for T_{op} > 30ºC
2. Limited only by drive electronics



Evaluation units of the Gemfire VOA are shipped with an analog/digital drive card.

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