



Key Features

- High Speed < 1 μ s
- Wide attenuation range >40 dB
- Low PDL
- No moving parts
- 4 and 8 channel array
- Compact package

Applications

- Channel power equalization and blocking
- Optical transient suppression
- Analog signal modulation
- Power control in WDM and configurable networks

Compliance

- Telcordia Qualification
- RoHS 5/6



Kotura's UltraVOA™ Array uses a silicon photonics chip to provide reliable solid-state current-controlled optical attenuation enabling ultra-fast signal level control in optical networks. Utilizing reliable silicon *p-i-n* structures, the VOA is well suited to the most demanding applications in metro and long-haul transmission applications. The high speed of these VOAs makes them particularly useful for optical transient suppression, optical channel blocking and analog signal modulation applications.

Optical Specifications

Specification	Units	Min	Typical	Max	Notes
Operating wavelengths	nm	1525	1550	1568	Inquire about L-Band
Insertion Loss	dB		1.8	2.0	Without connectors
Maximum Attenuation ¹	dB	40			Blocking state
Operational Attenuation Range	dB	0		20	
Response time	μ s		1	2	10 – 90% step response
PDL	dB			0.4	0-20 dB attenuation
Wavelength dependence of attenuation	dB/nm			0.1	0-20 dB attenuation
Optical return loss	dB	40			
Optical cross-talk	dBc			-50	Channel to channel
Electrical cross-talk	dB			0.2	Channel to channel
Chromatic dispersion	ps/nm	-0.05		0.05	0 dB attenuation
PMD	ps		0.1	0.2	0 dB attenuation
Optical power	dBm			17	

¹ Default attenuation state is 0dB at no applied current



Electrical Specifications

Specification	Units	Min	Typical	Max	Notes
TEC supply current	A			1.0	
TEC supply Voltage	V			3.5	
Recommended TEC Setting	°C	70			For optimal attenuation range
Thermistor Resistance	kΩ		1.751		Z-curve 10kΩ thermistor
Operating Current	mA		40	45	At 40 dB attenuation
Forward voltage	V			5.0	At 45 mA current

Environmental Specifications

Specification	Units	Min	Typical	Max	Notes
Operating temperature	°C	0		70	Case temperature
Storage temperature	°C	-40		85	Ambient
Operating relative humidity	%			85	

Absolute Maximum Ratings (limited duration)

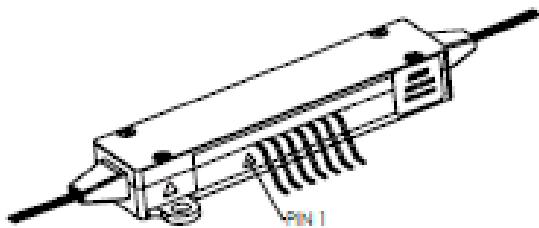
Specification	Units	Min	Typical	Max	Notes
Optical input power per channel	dBm			20	
Max current per channel	mA			80	
Reverse bias voltage	V			20	

Electrical Pin Connections

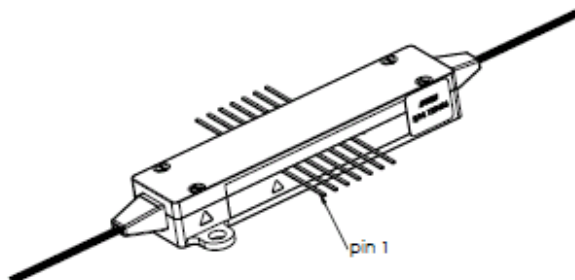
Pin	8 Channel		4 Channel	
	Name	Description	Name	Description
1	TEC-	TEC- driver	TEC-	TEC- driver
2	AN+	Anode (common)	Ch3+	Channel 3 Anode
3	N/C	No Connection	Ch4+	Channel 4 Anode
4	Ch 8-	CH8 Cathode	N/C	Not Connected
5	Ch 7-	CH7 Cathode	N/C	Not Connected
6	Ch 6-	CH6 Cathode	Ch4-	Channel 4 Cathode
7	Ch 5-	CH5 Cathode	Ch3-	Channel 3 Cathode
8	Ch 4-	CH4 Cathode	Ch2-	Channel 2 Cathode
9	Ch 3-	CH3 Cathode	Ch1-	Channel 1 Cathode
10	Ch 2-	CH2 Cathode	TH	Thermistor
11	Ch 1-	CH1 Cathode	TH	Thermistor
12	TH	Thermistor	Ch1+	Channel 1 Anode
13	TH	Thermistor	Ch2+	Channel 2 Anode
14	TEC+	TEC+ driver	TEC+	TEC+ driver



Package Style Options



Package version with formed leads



Package version with straight leads

Package dimension

Length 62 mm
Width 14 mm
Height 9.5 mm

Connector options

LC/UPC standard
Inquire about others

Fiber length

Default fiber length is 1 meter each side unless otherwise specified

Fiber type

SMF 28E Ribbon Fiber

Ordering Information

For more information on this or other products and their availability, please contact Kotura directly at (626) 236-4500 or via e-mail at sales@kotura.com.

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