

Product Specification

M2300CD Fixed Gain EDFA Booster with output VOA, 19 dBm OP, 22 dB Gain

PN: FOA-M2300CD-EFV1C-AA009

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Customer: General

Product Features

- Fixed Gain EDFA Booster with control electronics and VOA on the output
- APC or AGC control modes
- Flat spectrum for gain of 22 dB
- Output power up to 19 dBm
- Low noise figure
- Standard 70x90 package
- Standard command protocol according to IEC 61291-6-1
- Low power dissipation
- RoHS compliant and lead free
- Class 1M* laser safety classification



Applications

- Regional, metro and access DWDM networks
- Booster for ROADM line cards.

The M2300CD Fixed Gain (FG) EDFA is a micro processor-controlled module for C-band amplification. It is packaged in a standard 70x90 multi-source amplifier package, meaning that it can be mounted on any line card already designed to accommodate a multi-source EDFA.

The amplifier quickly reacts to network conditions as they unfold, seamlessly adjusting to variations in the system conditions of Metro and Long Haul environments in real-time. It has a VOA on its output allowing the output power to be varied while keeping a flat gain spectrum. Its fast AGC allows the amplifier to keep the gain constant also in cases when there is a fast and large change in the input power.

Optical Specification

Parameter	Units	Specification			Notes
		Min.	Typ	Max.	
Wavelength Bandwidth	Nm	1529.5		1564	
Input Power Range		-18		+2	
Output Signal Power Range	dBm	-15		19	Range includes VOA attenuation. Signal power, excluding ASE With ASE output is higher.
Saturated Output Power	dBm	19			
Nominal Gain	dB		22		Before the VOA
Effective VOA Attenuation Range	dB	1		20	
VOA Repeatability	dB			0.1	
Noise Figure	dB			5.5	
Gain Stability	dB			±0.10	
Gain Setting Accuracy	dB	-0.25		+0.25	
Gain Flatness vs. Wavelength	dB		± 0.5	± 0.6	
Overshoot/Undershoot for 16dB Add/Drop transient	dB			±1.5	
Stabilization Time after transient	µsec			500	
Transient Error Band	dB			0.5	
In/Out Return Loss (pumps on)	dB	40			
PDG + PDL	dB			0.3	
PMD	ps			0.3	
Power Measurement Accuracy	dB			± 0.5	

Optical Connectors

The EDFA is equipped with 3 Optical connections with fiber length of 100 +/- 5cm.

Connector	Type	Color	Description
Output	LC/UPC	White	Output optical port
Input	LC/UPC	Black	Input optical port
Monitor Output	LC/UPC	Blue	1% Output monitor

Electrical Specification

Parameter	Units	Specification			Notes
		Min.	Typ	Max.	
Supply voltage	V	4.75		5.25	
Power consumption	W			11	Over case temp range to EOL

Control and Monitoring

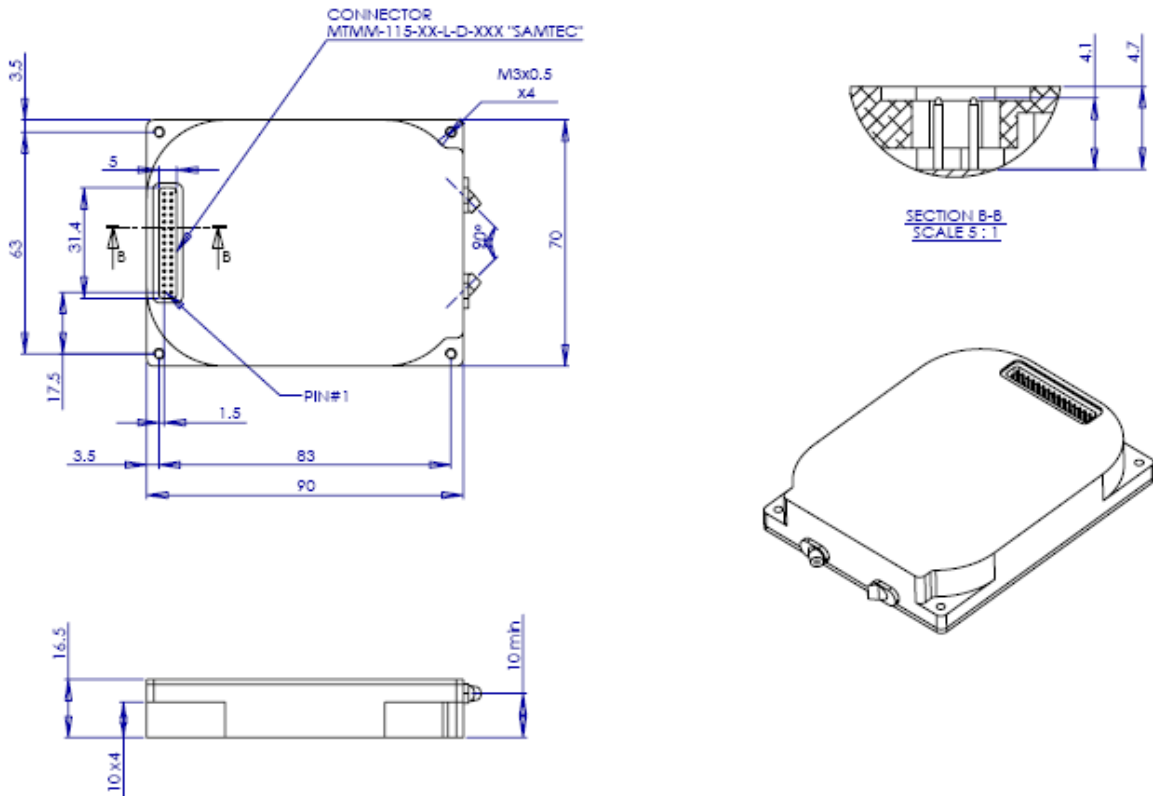
Parameter	Specification
Communications	<ul style="list-style-type: none"> • RS232 Command Protocol
Mode of Operation	<ul style="list-style-type: none"> • Automatic Gain Control (Default startup mode) • Automatic Power Control • Manual pump power
Monitoring Functions	<ul style="list-style-type: none"> • Output Power Monitoring • Input Power Monitoring • LD and PCB Temperatures

Electronic Pin-out

Pin	Function	Pin	Function
1	5V	2	5V
3	N/C	4	N/C
5	Ground	6	Ground
7	Serial Input RS232 (LVTTTL)	8	Serial Output RS232 (LVTTTL)
9	Ground	10	Ground
11	N/C	12	RESET Input (Active Low)
13	Pump Disable (Active High)	14	Output Power Mute Input (Active High)
15	Case Temperature Alarm (Active High)	16	Common Alarm (Active High)
17	N/C	18	Pump Bias Alarm (Active High)
19	Loss of Input Alarm (Active High)	20	Loss of output alarm/Mute Alarm (Active High)
21	N/C	22	N/C
23	N/C	24	N/C
25	Ground	26	Ground
27	N/C	28	N/C
29	5V	30	5V (If N/C then outputs 5V)

Mechanical Drawing

The following drawing shows the EDFA's width, height and length dimensions.



Environmental and Qualification

Parameter	Value/Range
Operating Case Temperature	0°C to +70 °C
Operating Humidity	5 to 85%
Storage Temperature	-40°C to +85°C
Storage Humidity	5 to 95%
Qualification	Telecordia GR1312
Laser Safety	Class 1M*

* Class 1M products are not hazardous under normal circumstances, but may pose an eye hazard when the laser output is viewed with certain optical instruments (for example eye loupes, magnifiers and microscopes) within a distance of 100 mm

Ordering Information:

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Email orders to: sales@xsoptix.com
 Fax orders to: 800-878-7282