Finisar

Product Specification

M7300CD Variable Gain EDFA, 18 dBm, 10-25 dB, with Mid-stage Access

PN: FOA-M7300CD-EVG1C-AA004

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Customer: General

Product Features

- Variable Gain EDFA with control electronics
- APC or AGC control modes
- Flat spectrum over gain range of 10-25 dB
- Output power up to 18 dBm
- Low noise figure
- Mid-stage access for DCM applications
- 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
- ROADM line cards
- Booster, pre-amp or inline

The M7300CD Variable Gain (VG) EDFA is a micro processor-controlled module for C-band amplification. The EDFA contains mid-stage access for dispersion compensation modules. 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 can accommodate a wide variety of network topologies, fiber spans and fiber losses, thereby reducing the number of amplifier types needed for deployment in any given network environment. The amplifier provides gain flattening and low noise figure in all its operational regimes. 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			-27		+8	
Output Power Range		dBm	-8		18	Signal power, excluding ASE With ASE output is higher.
Saturated Output Power		dBm	18			
Gain range		dB	10		25	
Mid-stage range		dB	0		4	For FBG DCM only
Noise Figure	G=25dB	dB			5.8	
	G≥22dB	dB			5.9	
	G≥20dB	dB			6.5	
	G≥15dB	dB			10.2	
	G≥13dB	dB			13.0	
	G≥10dB	dB			18.5	
Gain Stability		dB			±0.10	
Settable tilt		dB	-2		+2	Positive tilt for G below 23dB
Gain Setting Accuracy		dB	-0.5		+0.5	
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	
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 5 Optical connections with fiber length of 100 +/- 10cm.

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
Mid-stage Input	LC/UPC	Red	Input to MSA DCM (Output of 1st stage)
Mid-stage Output	LC/UPC	Green	Output from MSA DCM (Input to 2nd stage)

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

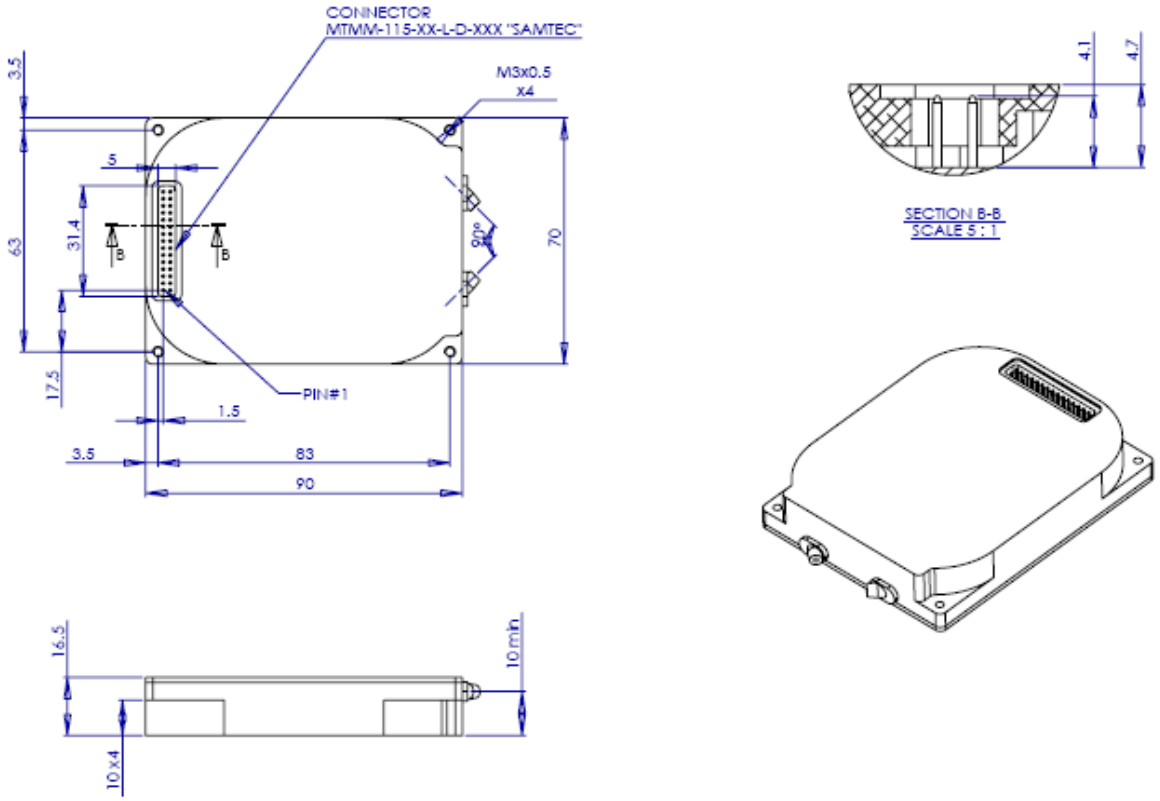
Electronic Pin-out

Pin	Function	Pin	Function
1	5V	2	5V
3	N/C	4	N/C
5	Ground	6	Ground
7	Serial Input RS232 (LVTTL)	8	Serial Output RS232 (LVTTL)
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)

Control and Monitoring

Parameter	Specification
Communications	• RS232 Command Protocol (Default baud 9600bps)
Mode of Operation	• Automatic Gain Control (Default startup mode) • Automatic Power Control • Manual pump power
Monitoring Functions	• Output Power Monitoring • Input Power Monitoring • LD and PCB Temperatures

Mechanical Drawing



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	Telcordia 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