

FINISAR®

Key Features

- ▶ Low power consumption
- ▶ Compact form factor
- ▶ Up to 22 dBm output power
- ▶ Flat gain
- ▶ Low noise figure
- ▶ Fast transient suppression
- ▶ Can support G.657 low bend radius fiber connectors
- ▶ Software-configurable as pre-amplifier or booster in same part number
- ▶ RS232 and I2C communication, full set of control options and alarms
- ▶ Qualified to Bellcore GR1312 and GR1089
- ▶ Class 1M* laser product classification

Applications

- ▶ Metro and regional DWDM networks
- ▶ Sonet/SDH and Datacom networks
- ▶ Free space optics communications
- ▶ Military and industrial applications
- ▶ Test and measurement systems
- ▶ Video surveillance systems
- ▶ LIDAR
- ▶ Microwave optics

Fixed Gain EDFA

Overview

Finisar's 70x90 mm Fixed Gain (FG) EDFA product line supports a full range of C- or L-band fixed gain WDM EDFAs, as well as narrow band, CWDM and single channel EDFAs. The products support either cooled or uncooled pumps, thus allowing the optimal combination of size, power consumption and performance to be achieved for each application.

The platform incorporates advanced control and monitoring functions, and provides fast transient suppression for stable gain in all operating conditions. The FG EDFA can be software-configured as a pre-amplifier, booster or inline amplifier, thus allowing a single part-number to address different network functions.

These products are available in a wide variety of gain configurations targeting different output powers. In addition, they can be configured with a VOA (Variable Optical Attenuator) to more precisely maintain optical output power.



Specifications

Parameter	P/N	FOA-M1100MB-ESC1C-AA001		FOA-M1500CB-ESC1C-AA011		FOA-M2200CB-EFG1C-AA002		FOA-M2200CB-EFG1C-AA003		FOA-M2200CB-EFG1C-AA004		FOA-M2200CB-EFG1C-AA005		FOA-M2200CB-EFG1C-AA006		FOA-M2200CB-EFG1C-AA007		FOA-M2200CB-EFG1C-AA008		FOA-M2300CD-EFV1C-AA009			
		Specification		Specification		Specification		Specification		Specification		Specification		Specification		Specification		Specification		Specification			
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Form Factor	mm	70x45x12		90x70x15		90x70x15		90x70x15		90x70x15		90x70x15		90x70x15		90x70x15		90x70x15		90x70x15			
Amplifier Type	-	Single Channel		OSC EDFA		WDM FGA		WDM FGA		WDM FGA		WDM FGA		WDM FGA		WDM FGA		WDM FGA		WDM FGA + Output VOA			
Operating Wavelength Range	nm	1528.77	1567.13	1504.5	1517.5	1529	1563	1528.77	1564	1528.77	1565	1529	1563	1528.77	1565	1528.77	1565	1529	1563	1529.5	1563		
Input Power Range	Booster mode	dBm	-10	5	-2	7	-27	2	-25	8	-35	-5	-24	5	-25	10	-25	10	-25	8	-18	2	
	Pre-amp mode						-35	-3	-40	-5					-32	0	-35	0					-40
Output Power Range	Booster mode	dBm	5	16	13		-7	17	-7	17.4	-7	17	-5	20	-5	21	-5	21	-5	20.8	-15	19	
	Pre-amp mode						-10	13	-7	17.4					-10	13							
Saturated Output Power	dBm	16			13		17			17.4	17		20		20		20		21		19		
Settable Gain Range	Booster mode	dB	5	26	N/A	N/A	10	20	4	28	15	30	10	20	15	25	10	26	10	20	0	20	
	Pre-amp mode						13	25	13	33					13	25	15	30					15
Optimal Flat Gain	dB	N/A		N/A		15		23		23		15		22		26		20		22			
Gain/Power Setting Accuracy	Booster mode	dB	-0.5	0.5	-0.5	1	-0.5	0.5	-0.5	0.5	-0.5	0.5	-0.5	0.5	-0.5	0.5	-0.5	0.5	-0.5	0.5	-0.5	0.5	
	Pre-amp mode						-0.5	0.5	-0.5	0.5					-0.5	0.5	-0.5	0.5					-0.5
Gain Flatness vs. Wavelength	dB	N/A		N/A		±0.6		±0.6		±0.5		±0.6		±0.6		±0.6		±0.6		±0.6		1.5pk-pk	
Dynamic gain tilt	dB/dB	N/A		N/A		±0.06		0.9		0.9		0.9		0.9		0.9		0.9		0.9		N/A	
Gain / Power Stability	dB	-0.2	0.2	-0.1	0.1	±0.1		±0.1		±0.1		±0.1		±0.1		±0.1		±0.1		±0.1		±0.1	
Noise Figure (at OFG or equivalent)	dB		6.5		8		6		5.5		5.5		6		5.5		5.5		5.5		5.5	5.5	
Return loss	dB	40		40		40		40		40		40		40		40		40		40		40	
PDG	dB		0.5		0.3		0.5		0.4		0.3		0.5		0.4		0.4		0.5		0.5	0.5	
PMD	ps		0.3		0.15		0.3		0.2		0.3		0.3		0.2		0.2		0.3		0.3	0.3	
Multi-Path Interference	dB		-40		-40		-40		-40		-40		-40		-40		-40		-40		-40	-40	
Laser Safety Classification	-	Class 1M		Class 1M		Class 1M		Class 1M		Class 1M		Class 1M		Class 1M		Class 1M		Class 1M		Class 1M		Class 1M	
Optical Connectors	-	2: In, Out		2: In, Out		2: In, Out		3: In, Out, Out Mon		3: In, Out, Out Mon		2: In, Out		3: In, Out, Out Mon		3: In, Out, Out Mon		3: In, Out, Out Mon		3: In, Out, Out Mon		3: In, Out, Out Mon	
Operating Modes	-	APC, Manual		APC, Manual		AGC, APC, Manual		AGC, APC, Manual		AGC, APC, Manual		AGC, APC, Manual		AGC, APC, Manual		AGC, APC, Manual		AGC, APC, Manual		AGC, APC, Manual		AGC, APC, Manual	
Power Supply Voltage	V	2.97	3.63	3.13	3.46	4.75	5.25	4.75	5.25	4.75	5.25	4.75	5.25	4.75	5.25	4.75	5.25	4.75	5.25	3.15	3.45	4.75	5.25
Power Consumption	W		2.5		9.5		8		8		8		11		11		8		12		8	8	
Operating Case Temperature	°C	0	70	0	70	0	70	0	70	0	70	0	70	0	70	0	70	0	70	0	70	0	70
Communications Protocol	-	RS-232		RS-232		RS-232		RS-232		RS-232 LVTTTL		RS-232		RS-232 LVTTTL		RS-232 LVTTTL		RS-232		RS-232		RE-232 LVTTTL	
Default Baud Rate	Baud	9600		19200		19200		9600		19200		19200		19200		19200		19200		19200		57600	
Eval Board P/N	-	1178581		1185403		1185403		1185403		1185403		1185403		1185403		1185403		1185403		1185403		1185403	
Eval Board Cable P/N	-	18-10-0006R		18-10-0006R		18-10-0006R		18-10-0006R		18-10-0006R		18-10-0006R		18-10-0006R		18-10-0006R		18-10-0006R		18-10-0006R		18-10-0006R	

Standard, available part number currently in production are listed above. Custom specifications can be considered to meet customers' needs.



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