

VBA4100-FM02 Series

C-Band DWDM Full Function Booster EDFA Module



Description

Idealphotonics VBA4100-FM02 series is a full function gain flatness booster EDFA module with digital control circuit, adopts 70×90×15mm MSA compact package. It has high reliability, excellent optic performance and compact reasonable structure on the industry standard.

VBA4100-FM02 full function gain flatness booster EDFA module adopts the standard version of gain flatness. And it adopt high performance pump laser with cool .A standard 30-Pin electric connector (HIROSE DF11-30DP-2DSA) allows the simple electric connection. A single unit use + 3.3 VDC power supply. It adopts the most excellent optical performance, the most advanced electronic control technology and the most complete software functionalities; it is featured with wide working wavelength range, low noise and excellent gain flatness. RS232 offer serial communication. The laser will switch off automatically if optical power is missing, which offers security protection for the laser.

VBA4100-FM02 is specifically designed for C-Band 44 channels optic transmission system, main installed behind the optical transmitter to increase the output power of the transmitter and extend the signal transmission distance.

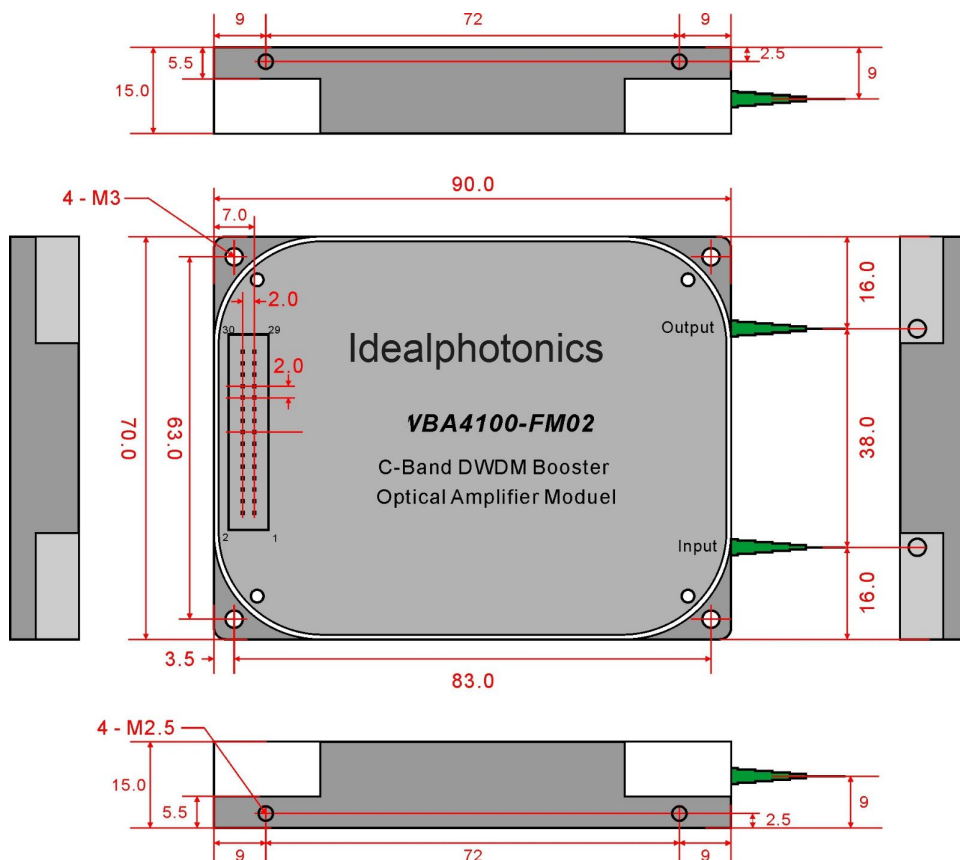
Feature

- With Digital Control Electronics (Full Function)
- Wide working wavelength: 1529.16~1563.86nm
- Accord with the communication technology requirements of 44 channels DWDM system
- Excellent gain flatness feature (GF<1.0dB)
- Low noise figure
- Standard RS232 communication interface
- Output power 13~20dBm optional
- MSA compact package (70×90×15mm)
- Low power consumption, Wide operating temperature range
- Excellent P/P ratio in area.

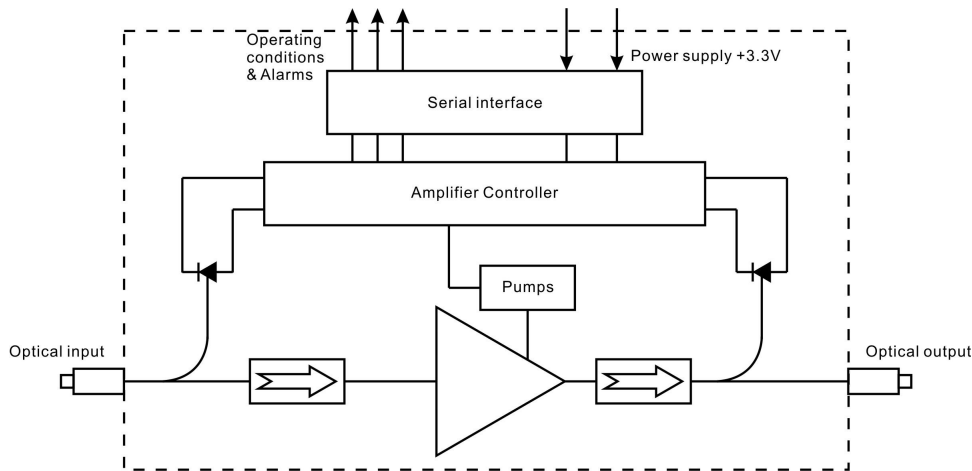
Application

- 44 channels DWDM system
- Metropolitan and access networks
- All kinds of SDH/PDH transmission system
- Optical Add/Drop and Cross-Connects
- Power equalization and flexible pre-emphasis

Dimensions



FUNCTIONAL DIAGRAM



Electrical 30-Pin Assignments

Pin	Definition	Pin	Definition
1	+3.3V	2	+3.3V
3	NC	4	NC
5	GND	6	GND
7	RS-232 Rx	8	RS-232 Tx
9	GND	10	GND
11	NC	12	RESET input, (active Low)
13	Amplifier disable input, (active high)	14	Output power mute input, (active high)
15	Case temperature alarm, (active high)	16	Common alarm, (active Low)
17	Pump temperature alarm, (active high)	18	Pump bias alarm, (active high)
19	Loss of input alarm, (active high)	20	Loss of output alarm, (active high)
21	Input power monitor ground	22	Output power monitor ground
23	Input power monitor	24	Output power monitor
25	GND	26	GND
27	NC	28	NC

29	+3.3V	30	+3.3V
----	-------	----	-------

Note: 30-Pin type: HIROSE DF11-30DP-2DSA

Note: 14-Pin type: HIROSE DF11-14DP-2DSA

Specification

Performance			Index			Supplement
			Min.	Typ.	Max.	
Optic	Work wavelength range(λ)	(nm)	1529.16		1563.86	ITU 88CH
	No. of Working channel	(CH)	1	44		
	Input optical power range	(dBm)	-10		+6	
	Maximum output optical power (P_o)	(dBm)	13		20	
	Gain flatness	(dB)		0.7	1.0	Peak to Peak
	Noise figure	(dB)		5.0		Max output, max gain
	Polarization dependence gain (PDG)	(dB)			0.3	
	Polarization mode dispersion (PMD)	(ps)			0.3	
	Polarization dependence loss (PDL)	(dB)			0.3	
	Input/output optic isolation	(dB)	30			
	Pump leakage power	(dBm)			-30	
	Echo loss	(dB)	45			UPC
			55			APC
Fiber type		SMF-28, 900 μ m loose tube				

	Connector type		LC, SC, FC			
	Connector polish		UPC, APC			
General feature	Communication interface		RS232			
	Power supply voltage ¹⁾	(V)	3.1	3.3	3.5	
	Power consumption	(W)		2.0	10	
	Operating temp.	(°C)	-5		+70	
	Store temp.	(°C)	-40		+85	
	Operating relative humidity	(%)	+5		+95	
	Size(W) × (L) × (H)	(mm)	70×90×15			

Note: 1. Power supply voltage optional DC+5V

Product series

Model	Stauration output optical (dBm)	Gain flatness (dB)	Gain flatness (dBm)	Optical port monitoring mode	OSC Optical port mode
VBA4113-FM02-M00-O00	≥13	<1.0	1529.16~1563.86nm ITU 88CH	without	without
VBA4117-FM02-M00-O00	≥17	<1.0			
VBA4118-FM02-M00-O00	≥18	<1.0			
VBA4119-FM02-M00-O00	≥19	<1.0			
VBA4120-FM02-M00-O00	≥20	<1.0			

Ordering information

VBA 4 1 □□ - FM 02 / □□ - □□

Product series	Optical bandwidth		Product Type		Output power		Module Type		Exterior		Connector		Fiber length	
C-Band DWDM BA EDFA Module	4	C-Band (1528~1564)	1	BA	13	13dBm	FM	Full function module	01	40 × 70 × 12	LA	LC/APC	05	0.5M
					14	14dBm			02	70 × 90 × 15	LP	LC/UPC	08	0.8M
	15	15dBm	GM	Gain block module	05	125 × 150 × 22	SA	SC/APC	10	1.0M				
	16	16dBm					SP	SC/UPC						
	17	17dBm	FA	FC/APC										
	18	18dBm	FP	FC/UPC										
	19	19dBm												
	20	20dBm												