

SBA4100-FM02 (70×90×15mm)

Full Function Single Channel MSA Compact Booster EDFA Module

PRODUCT DESCRIPTION

SBA4100-FM02 is a full-function optical booster with digital control electronics, adopts 70 × 90 × 15mm MSA compact package. It is featured with high reliability, superior optical performance and compact reasonable configuration by Industrial standard, creating the most flexible and variable low-cost amplifier in the market. This module is suitable for multiple network application, especially the application that requires 40GB/S transmission speed.

SBA4100-FM02 full-function optical booster module adopts the standard version of single channel and narrow bandwidth. The module uses high performance pump laser that with cooling

function (also can use high performance non-cooling pump laser). A standard 30-PIN electric connector (HIROSE DF11-30DP-2DSA) allows the simple electric connection.

SBA4100-FM02 full-function booster EDFA module, main installed behind the optical transmitter to increase the output power of the transmitter and extend the signal transmission distance.



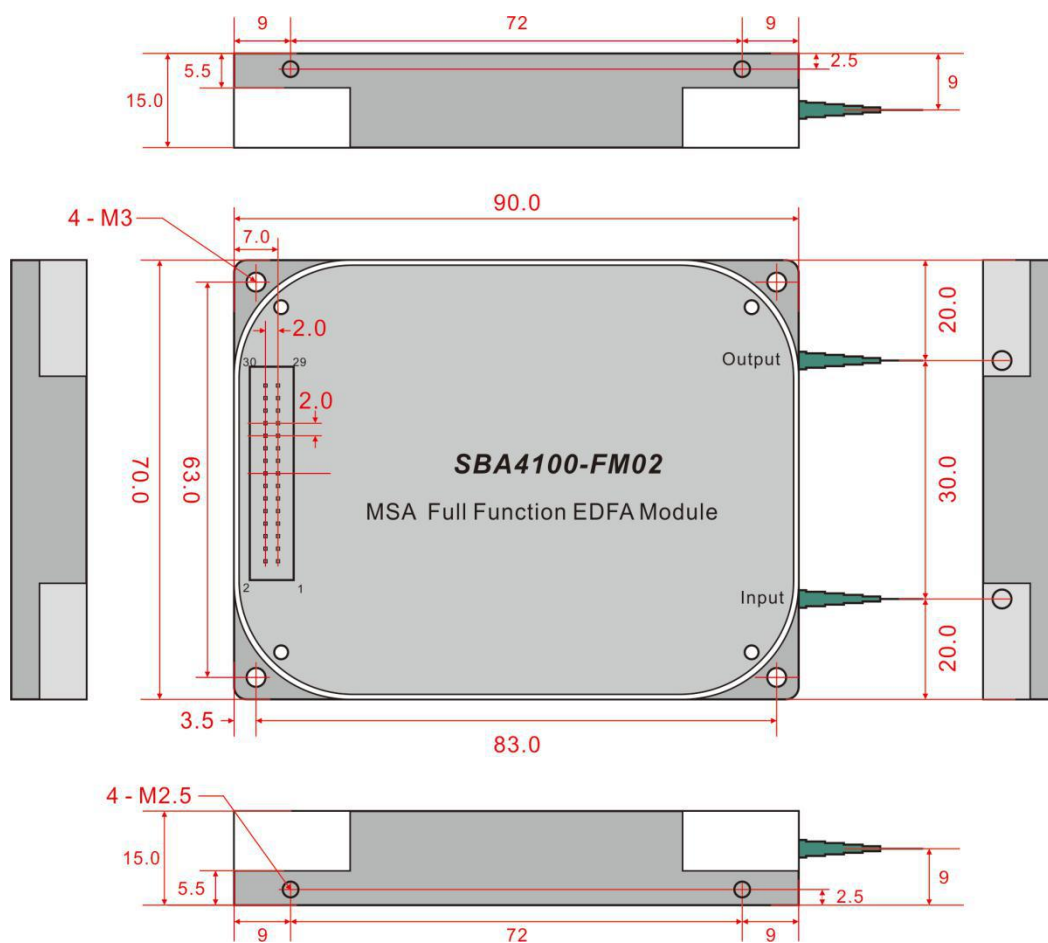
PRODUCT FEATURES

- ▶ With Digital Control Electronics (Full Function)
- ▶ APC,ACC mode
- ▶ RS-232 standard communication interface, (Optional I²C)
- ▶ Output power 13~23dBm optional
- ▶ MSA compact package (70×90×15mm)
- ▶ Low power consumption
- ▶ Low cost
- ▶ Wide operating temperature range

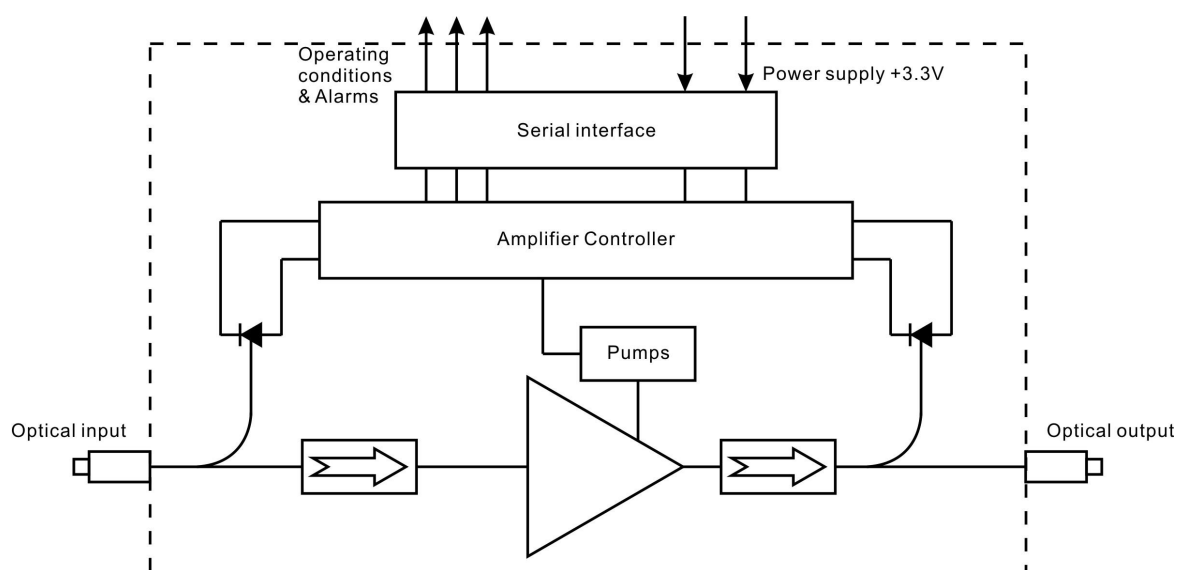
MAIN APPLICATION

- ▶ Metropolitan and access networks
- ▶ CATV
- ▶ Single-channel or DWDM sub-systems
- ▶ Optical Add/Drop and Cross-Connects
- ▶ Transmitter and Receiver Amplification
- ▶ Power equalization and flexible pre-emphasis

DIMENSIONS



FUNCTIONAL DIAGRAM



TECHNICAL INDEX

Performance			Min.	Typ.	Max.
Optical feature	Operating wavelength range		(nm)	1528	1564
	Input optical power (pin)		(dBm)	-10	+4
	Total output power @ Pin=0dBm	SBA4113-FM02	(dBm)	13	
		SBA4114-FM02		14	
		SBA4115-FM02		15	
		SBA4116-FM02		16	
		SBA4117-FM02		17	
		SBA4118-FM02		18	
		SBA4119-FM02		19	
		SBA4120-FM02		20	
		SBA4121-FM02		21	
		SBA4122-FM02		22	
		SBA4123-FM02		23	
	Noise figure		(dB)	4.0	5.0
	Polarization dependent gain (PDG)		(dB)		0.3
	Polarization mode dispersion (PMD)		(ps)		0.3
	Polarization dependent loss (PDL)		(dB)		0.3
	Pump power leakage		(dB)		-30
	Output & input isolation		(dB)	30	
	Return loss	UPC	(dB)	45	
		APC		55	
	Fiber type			SMF-28, 900μm loose tube	
	Connector type			LC, SC, FC	
	Connector polish			UPC, APC	
General feature	Communication interface			RS232	
	Power Supply Voltage ¹⁾		(V)	3.1	3.5
	Power Consumption	Uncooled	(W)	1.0	2.0
		Cooled		2.0	10.0
	Operating temp.		(°C)	-5	70
	Storage temp.		(°C)	-40	+85

Relative humidity	(%RH)	+5	+95
Size (W) × (L) × (H)	(mm)	70× 90 × 15	

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

ELECTRICAL 30-PIN ASSIGNMENTS

Pin	Definition	Pin	Definition
1	+3.3V	2	+3.3V
3	NC	4	NC
5	GND	6	GND
7	Upper computer receive	8	Upper computer transmit
9	GND	10	GND
11	NC	12	NC
13	Amplifier switch (enable) input, (low level enable)	14	NC
15	NC	16	NC
17	NC	18	NC
19	NC	20	NC
21	GND	22	GND
23	NC	24	NC
25	GND	26	GND
27	NC	28	NC
29	+3.3V	30	+3.3V

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

PRODUCT SERIES

Model	Input optical power (dBm)	Output power (dBm) (Pin=0dBm)	Noise figure (dB)
SBA4113-FM02	-10~+4	13	<4.0
SBA4114-FM02	-10~+4	14	<4.0
SBA4115-FM02	-10~+4	15	<4.0
SBA4116-FM02	-10~+4	16	<4.0
SBA4117-FM02	-10~+4	17	<4.0
SBA4118-FM02	-10~+4	18	<4.0
SBA4119-FM02	-10~+4	19	<4.5
SBA4120-FM02	-10~+4	20	<4.5
SBA4121-FM02	-10~+4	21	<4.5
SBA4122-FM02	-10~+4	22	<5.0
SBA4123-FM02	-10~+4	23	<5.0

MODEL EXPLANATION

SBA 4 1 □□ - FM 02 / □□ - □□

Product series	Optical bandwidth		Product Type		Output power		Module Type		Exterior		Connector		Fiber length	
Single-channel 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	125×150×20	SA	SC/APC	10	1.0M
					16	16dBm								
					17	17dBm								
					18	18dBm								
					19	19dBm								
					20	20dBm								
					21	21dBm								
					22	22dBm								
					23	23dBm								
											SP	SC/UPC		
											FA	FC/APC		
											FP	FC/UPC		