

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.



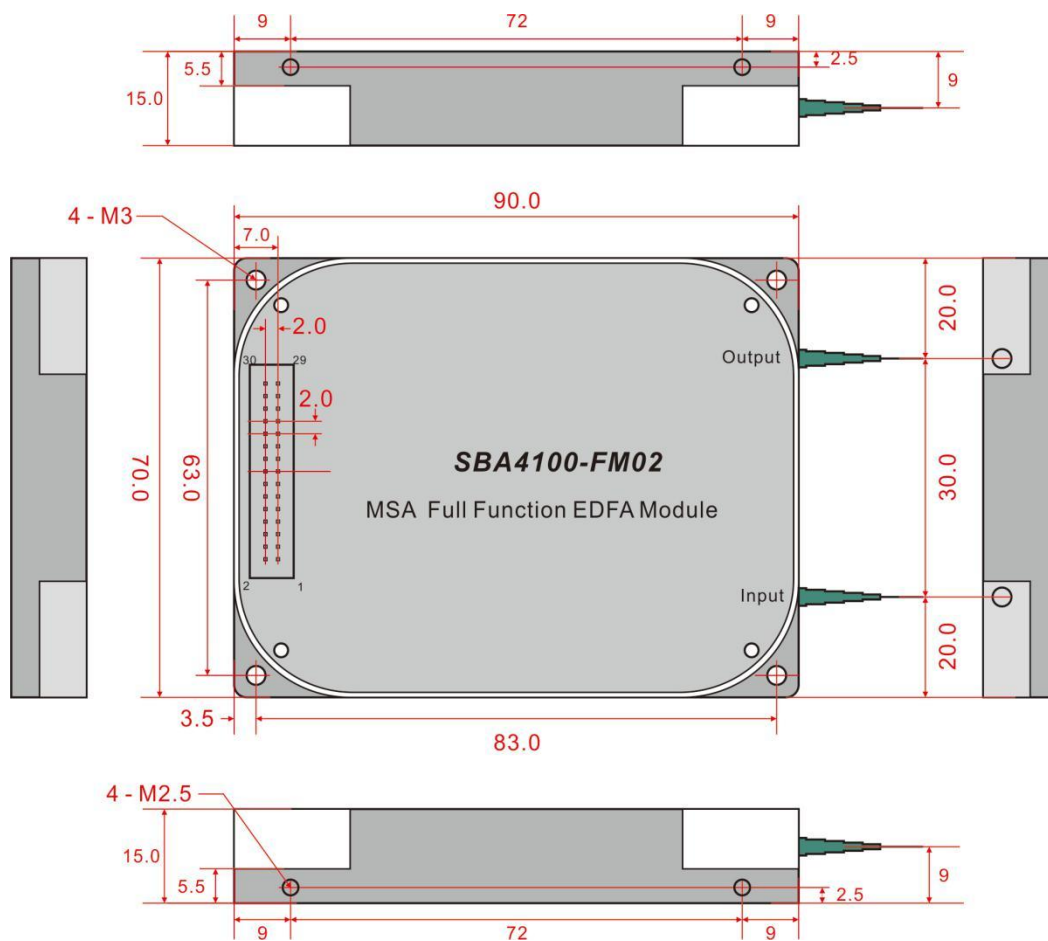
PRODUCT FEATURES

- ▶ 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

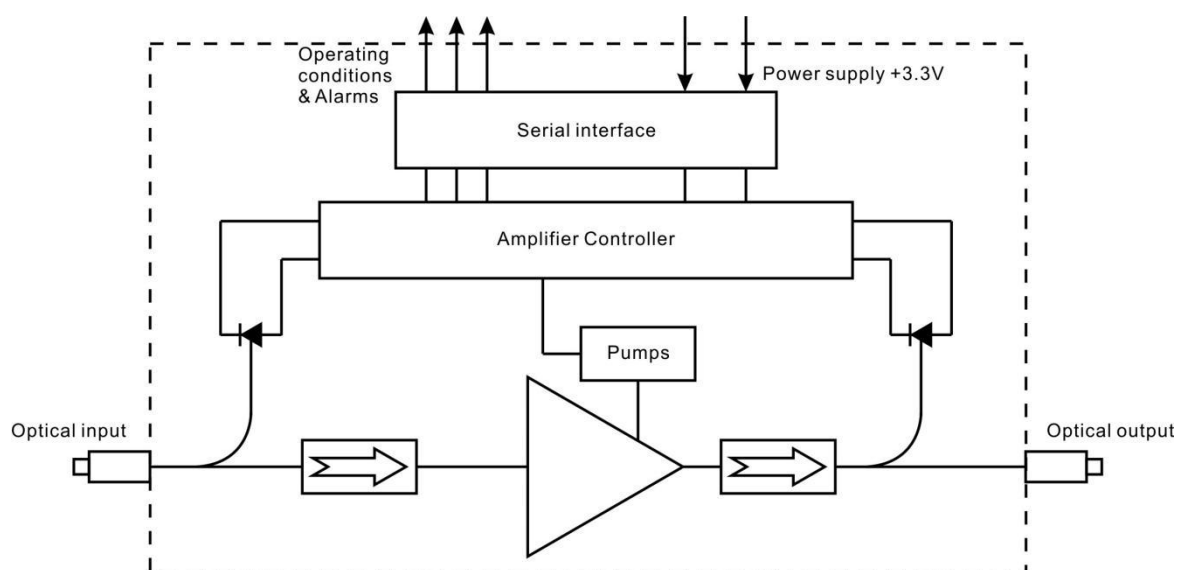
MAIN APPLICATION

- ▶ 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		
		SBA4127-FM02		27		
		SBA4130-FM02		30		
	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		
General feature	Fiber type			SMF-28, 900μm loose tube		
	Connector type			LC, SC, FC		
	Connector polish			UPC, APC		
	Communication interface			RS232		
	Power Supply Voltage ¹⁾		(V)	3.1	3.3	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) ²⁾		(mm)	70× 90 × 15 (22)		

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

2. The height of SBA4127-FM02 and SBA4130-FM02 is 22mm

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
SBA4127-FM02	-10~+4	27	<5.5
SBA4130-FM02	-10~+4	30	<5.5

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	125×150×22	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										
			21	21dBm										
			22	22dBm										
			23	23dBm										
			27	27dBm										
			30	30dBm										