SBA4100-GM01 (40×70×12mm)

Small Form Factor CATV EDFA Module (Gain Block)

PRODUCT DESCRIPTION

SBA4100-GM01 is a single-channel gain block booster EDFA module, adopts subminiature 40×70×12mm compact package. The module uses high performance non-cooling pump laser, combined with artistic package and best optic performance, creating the best 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-GM01 gain block booster EDFA module adopts the standard version of single channel and narrow bandwidth. A standard 6-Pin (optional 14-PIN) electric connector allows the simple electric connection.

SBA4100-GM01 gain block booster EDFA module, main installed behind the optical transmitter to increase the output power of the transmitter and extend the signal transmission distance.

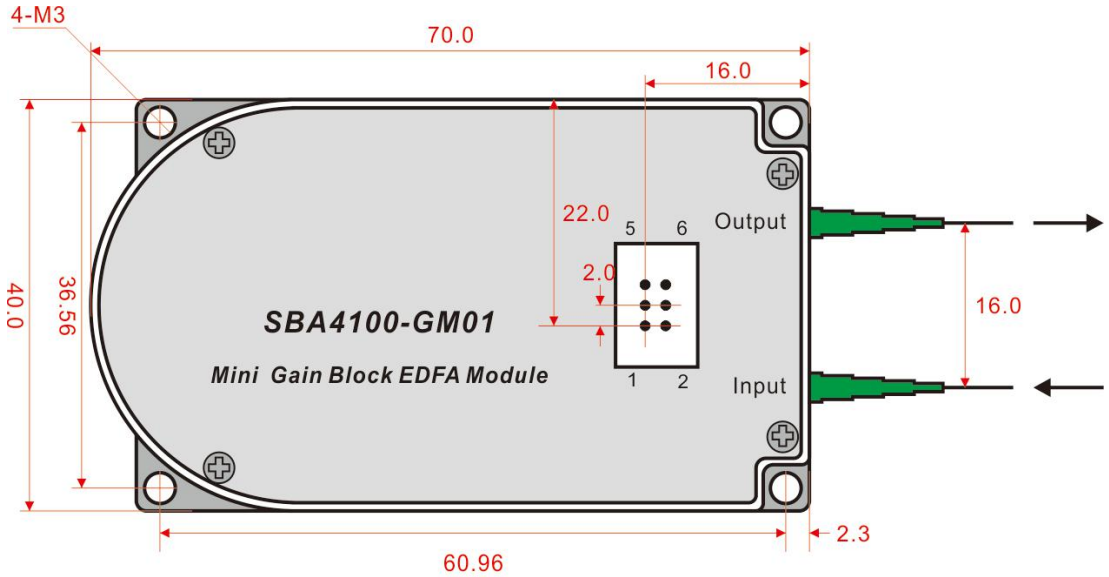
PRODUCT FEATURES

- ▶Gain block
- ▶Wide operating temperature range
- ▶Output power 13~19dBm optional
- ▶Small form factor package (40×70×12mm)
- ▶Low power consumption
- ▶Low cost

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

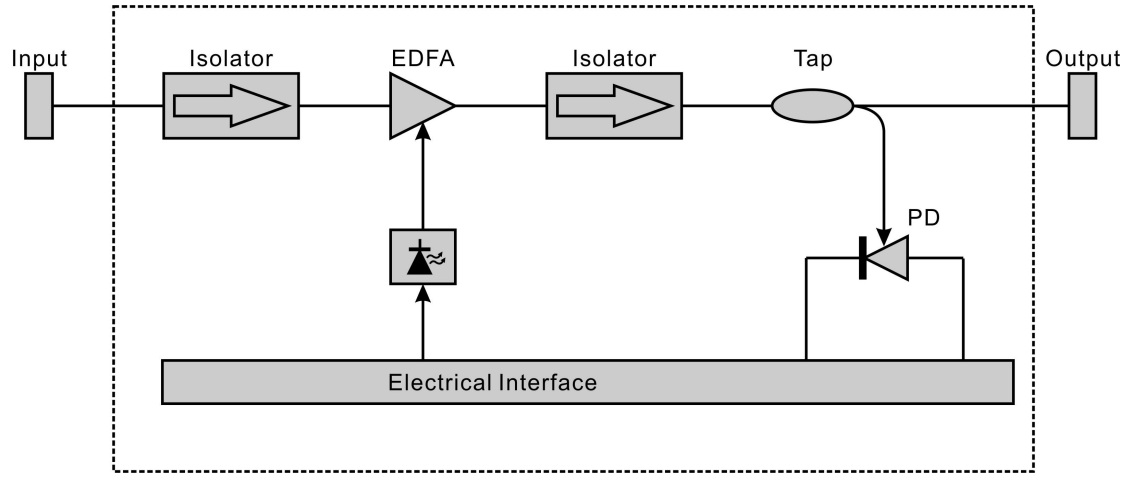


Unit:mm

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-GM01	(dBm)	13		
		SBA4114-GM01		14		
		SBA4115-GM01		15		
		SBA4116-GM01		16		
		SBA4117-GM01		17		
		SBA4118-GM01		18		
		SBA4119-GM01		19		
	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		
Electrical feature	Pump laser threshold current (70℃)		(mA)		50	70
	Pump laser operating current (BOL)		(mA)			600
	Pump laser operating voltage		(V)		1.75	2.2*
	Output monitor PD responsivity (70℃)		(μA/mW)	1.0		25
	Output monitor PD reverse voltage		(V)		5	20
	Output monitor PD forward current		(mA)			10
	Dark current (-5V, 25℃)		(nA)			5
General feature	Fiber type			SMF-28, 900μm loose tube		
	Connector type			LC, SC, FC		
	Connector polish			UPC, APC		
	Operating temp.		(°C)	-5		70
	Storage temp.		(°C)	-40		+85
	Relatice humidity		(%RH)	+5		+95
	Size (W) × (L) × (H)		(mm)	40× 70 × 12		

6-PIN FUNCTIONAL DIAGRAM

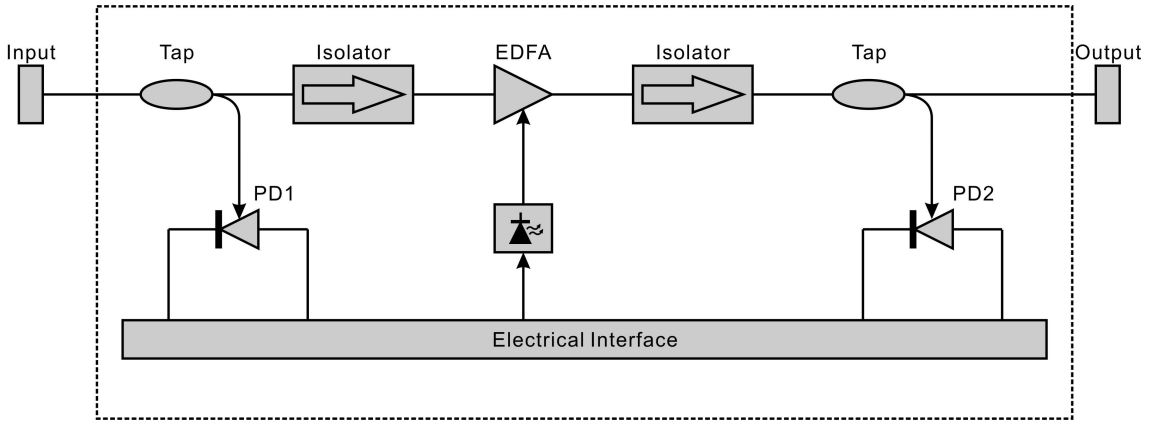


ELECTRICAL 6-PIN ASSIGNMENTS

Pin	Definition	Pin	Definition
1	Pump laser diode anode (+)	2	Pump laser diode cathode (-)
3	Output monitor PD anode (+)	4	Pump laser PD anode (+)
5	GND	6	Output monitor PD cathode (-)

Note: 6-Pin type: HIROSE DF11-6DP-2DSA

14-PIN FUNCTIONAL DIAGRAM



ELECTRICAL 14-PIN ASSIGNMENTS

Pin	Definition	Pin	Definition
1	Ground	2	Input monitor photodiode cathode(-)
3	Input monitor photodiode anode(+)	4	Output monitor photodiode cathode(-)
5	Output monitor photodiode anode(+)	6	NC
7	Laser diode anode(+)	8	Laser diode anode(+)
9	Laser diode monitor cathode(-)	10	Laser diode monitor anode(+)
11	Laser diode cathode(-)	12	NC
13	Ground	14	Laser diode cathode(-)

MODEL EXPLANATION

SBA 4 1 □□ – GM 01 – P□□ / □□ – □□

Product series	Optical bandwidth		Product Type		Output power		Module Type		Exterior		Number of Pin		Connector		Fiber length	
Single-channel BA EDFA Module	4	C-Band (1528~1564)	1	BA	13	13dBm	GM	Gain block module	01	40×70×12	P06	6-Pin	LA	LC/APC	05	0.5M
					14	14dBm			02	70×90×12	P14	14-Pin	LP	LC/UPC	08	0.8M
					15	15dBm	FM	Full function module	05	125×150×20			SA	SC/APC	10	1.0M
					16	16dBm							SP	SC/UPC		
					17	17dBm							FA	FC/APC		
					18	18dBm							FP	FC/UPC		
					19	19dBm										