

EDFA Module For DWDM System

With Controlled Circuit

Description

This is a compact and highly reliable module with flattened and locked gain. The Bellcore GR-BR-CORE qualified module consisting of Booster amplifier, an in-line amplifier and a preamplifier can be applied to DWDM 16/40/80 channel system easily.



Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Operating Wavelength	λ	1529	-	1561	nm
Total Input Power	P_{in}	-30	-	-	dBm
Signal Gain	G	14	-	35	dB
Total Output Power	P_{out}	-	17	20	dBm
Gain Flatness	ΔG	-	1.0	1.5	dB
Noise Figure	NF	-	4.8	-	dB
Pump Leakage	-	-	-	-30	dBm
Isolation (Input/Output)	-	30	-	-	dB
Return Loss (Input/Output)	ORL	40	-	-	dB
Polarization Dependent Gain	PDG	-	-	0.5	dB
Polarization Mode Dispersion	PMD	-	-	0.5	ps

Features

- Flat gain across the C-Band
- High saturation output power, >17dBm
- Low power consumption
- Low noise
- Wide input signal bandwidth, 1529~1561nm
- Isolated input and output
- Single 5 V operation
- Standard serial communication channels
- Auto gain controll

Electrical Characteristics

Parameter	Min	Typ	Tax	Unit
Power Supply	+4.75	+5	+5.25	V
Power Consumption	-	15	-	W
Electrical Interface	RS232 protocol			

Applications

- Designed for DWDM applications
- Booster amplifier
- Preamplifier
- Line amplifier

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Absolute Maximum Ratings

Parameter	Min	Typ	Max	Unit
Operating Temperature	-5	25	60	°C
Storage Temperature	-25	25	85	°C
Operating Humidity	0	-	90%	-

Pin Descriptions

Pin #	Name	Function	Other
1	V _{cc}	+5VDC	-
2	V _{cc}	+5VDC	-
3	V _{cc}	+5VDC	-
4	V _{cc}	+5VDC	-
5	NC	Not connect	-
6	NC	Not connect	-
7	EDFA Temp A	EDFA temperature alarm	Option
8	LOP A	Out power low alarm	Normal: 0
9	Pumps bias A	Pumps bias low alarm	Normal: 0
10	Pumps temp A	Pumps temperature low alarm	Normal: 0
11	EDFA Shutdown	Close pumps at TTL	1: Off, 0: On
12	V _{cc}	+5VDC	-
13	GND	Ground	-
14	GND	Ground	-
15	GND	Ground	-
16	GND	Ground	-
17	GND	Ground	-
18	RS232 OUT	RS-232 Out at TTL levels	Normal: 0
19	LIP A	In power low alarm	-
20	NC	Not connect	-
21	AMP Disable	Eye safe Input at TTL	0: Disable, 1: Enable
22	RS232 IN	RS-232 in at TTL level	-
23	NC	Not connect	-
24	V _{cc}	+5VDC	-
25	GND	Ground	-

Mechanical Outline

