EDFA Module For Digital System

Description

EDFA module for digital telecommunication system contain a Booster amplifier and a preamplifier. Compact and high reliable, with low noise and output power clamped, the module can be conveniently used in digital communication systems. Their design and manufacturing is compliant with Bellcore GR-1312-CORE requirements.

Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Operating Wavelength	λ	1530	-	1560	nm
Input Power	P_{in}	−30	-	-	dBm
Gain	G	-	-	35	dB
Output Power	P_{out}	-	-	17	dBm
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

Electrical Characteristics

Parameter	Min	Typ	Max	Unit
Operating Pump Forward Current	-	-	350	mA
Operating Pump Forward Voltage	-	-	2.5	V
Monitor Detector Responsivity	-	-	25	μA/mW
Monitor Dark Current	-	-	50	nA
Power Consumption	-	-	3	W
Electrical Interface	Pin16			-

Absolute Maximum Ratings

Parameter	Min	Max	Unit
Operating Temperature	−5	60	℃
Storage Temperature	−25	85	℃
Operating Humidity	0	90%	-

Features

- Single channel
- High output power or high gain
- Low noise figure
- Flexible monitoring interface
- Microprocessor-based
- Alarm & control small size, easily installation

Applications

- Long haul telecommunication systems
- LANs and WANs system
- Multimedia communication system

EDFA Module For Digital System

With Uncooled Pumped EDFA

Pin Description

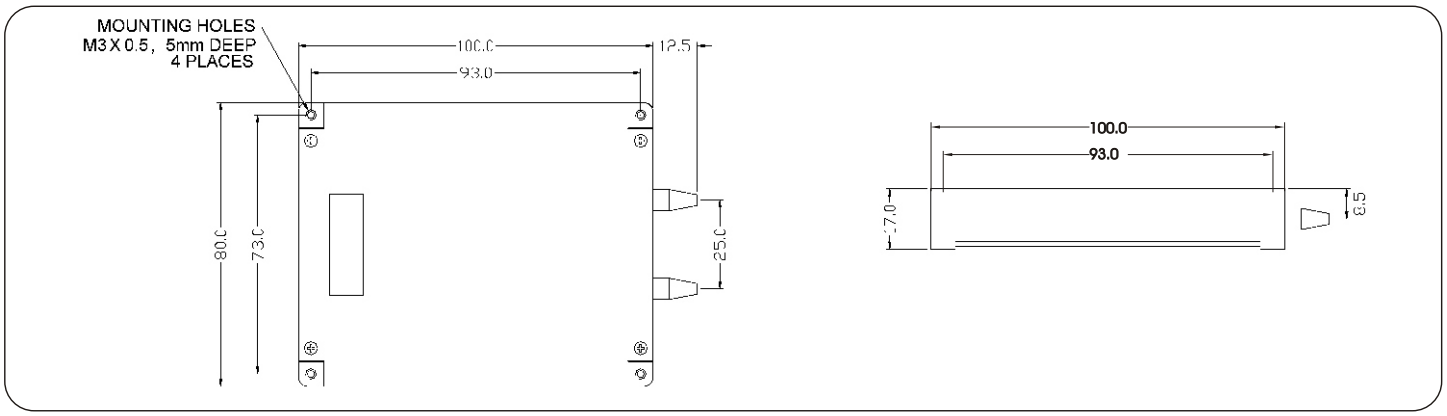
Pin #	Name	Function
1	GND	Ground monitor photodiode
2	PD1-	Input monitor photodiode cathode
3	PD1+	Input monitor photodiode anode
4	NC	Not connected
5	LD+	Pump laser diode anode
6	LD+	Pump laser diode anode
7	PD-	Pump laser diode back face monitor cathode
8	PD+	Pump laser diode back face monitor anode
9	NC	Not connected
10	NC	Not connected
11	GND	Ground monitor photodiode
12	PD2-	Output monitor photodiode anode
13	PD2+	Output monitor photodiode cathode
14	NC	Not connected
15	LD-	Pump laser diode cathode
16	LD-	Pump laser diode cathode

With Cooled Pumped EDFA

Pin Description

Pin #	Name	Function
1	PD1-	Input monitor photodiode cathode
2	PD1+	Input monitor photodiode anode
3	TEC+	Pump thermoelectric cooler anode
4	TEC+	Pump thermoelectric cooler anode
5	TH1	Pump thermistor
6	TH2	Pump thermistor
7	GND	Ground
8	PD+	Pump laser diode back face monitor anode
9	GND	Ground
10	PD-	Pump laser diode back face monitor cathode
11	PD2+	Output monitor photodiode cathode
12	PD2-	Output monitor photodiode anode
13	TEC-	Pump thermoelectric cooler cathode
14	TEC-	Pump thermoelectric cooler cathode
15	LD-	Pump laser diode cathode
16	LD+	Pump laser diode anode

Mechanical Outline



Ordering Information

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Erbium Doped Fiber Amplifer (EDFA)

AmpliferType
B:Booster amplifer
L:Line amplifer
P:Preamplifer

Package
1: 1U rack mounted
2: Electrical module
3: Pure gain module
4: Compact module

Application
1: Digital transmitting
2: CATV
3: 16-Channel C-Band DWDM
4: 32-Channel C-Band DWDM
5: 40-Channel C-Band DWDM
6: L-Band DWDM
7: User custom

Output Power (dBm)
01: 10~12.9
02: 13~14.9
03: 15~16.9
04: 17~18.9
05: 19~20.9
06: 21~23

Serial Number
2 Numbers

Pigtail Type
1: 3.0mm
2: 900 μm

Connector Type
1: FC/APC
2: FC/UPC
3: SC/APC
4: SC/UPC