



Single Channel EDFA Module Product Description

MP31 Series

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Single Channel EDFA Product Description

Version	Date	Author	Approver	Remarks
V1.0	02/05/2020			1) Not open to the third party
				2)

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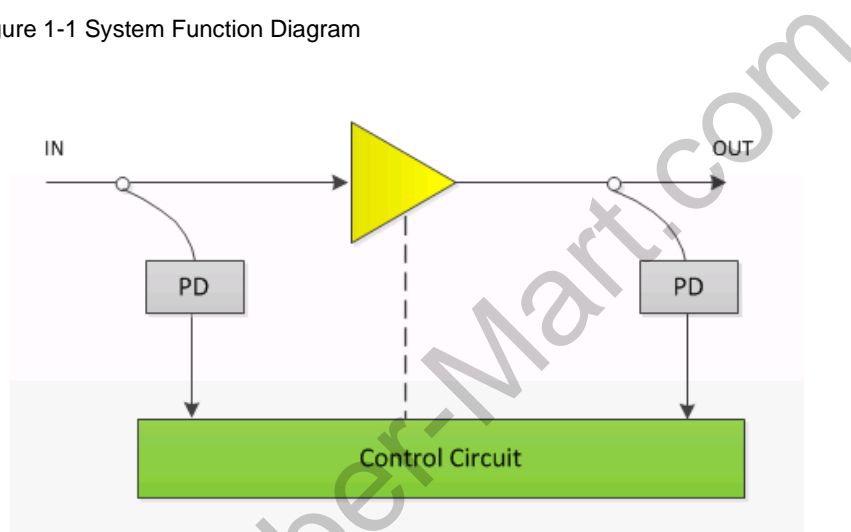
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1 Product Introduction

This optical amplifier is high stability output EDFA. The key components of the product is the high reliability multimode PUMP laser. A unique APC (Automatic Power Control) and ATC (Automatic Temperature Control) circuit ensure the high stability and reliability output power, and the unique optical circuit design ensures the excellent optical performance.

The high stability and high precision MPU system ensure that the control, adjustment and monitor are intelligent and user-friendly.

Figure 1-1 System Function Diagram



This DWDM EDFA module supports the following features:

- Low noise figure
- High stability and reliability
- High saturation output power
- High Precise APC, AGC, ACC Circuit
- Compact mechanical and circuit structure
- Intelligent temperature control system: power consumption and hot radiation reduce 30% less than common products
- OEM is available

2 Technical Specifications

2.1 Environmental Requirements

Table 2-1 Environmental Characteristics

Parameters	Min.	Max.	Unit
Working Temperature	-5	+65	°C
Working Humidity	10	85	%
Storage Temperature	-40	+85	°C
Storage Relative Humidity	5	95	%
Voltage	3.0/4.5	3.5/5.5	V
Power Consumption		10	W

2.2 Optical Specifications

Table 2-2 Optical Characteristics

Parameter		Min	Typ	Max	Units	Remark
Wavelength Range		1530	-----	1565	nm	
Saturated Output Power		-----	-----	23	dBm	
Input Power	Booster	0		+10	dBm	
Gain		-----	20	-----	dB	
Noise Figure		-----	5.0	-----	dB	
Output Power Stability		-----	±0.05	±0.1	dB	
RL (Optical Return Loss)		45	-----	-----	dB	
PMD (Polarization Mode Dispersion)		-----	-----	0.5	ps	
PDG(Polarization Dependent Gain)		-----	-----	0.3	dB	
Fiber Length		0.5			m	

Interface	LC/UPC		
Module Size	(W*L*H)90*70*15	mm	

3 Electric Interface Definition

Table 3-1 PIN Definition

PIN	Description	PIN	Description
1	VCC	2	VCC
3	VCC	4	VCC
5	GND	6	GND
7	Reserved	8	Reserved
9	GND	10	GND
11	Reserved	12	Reserved
13	Reserved	14	Reserved
15	Reserved	16	Reserved
17	Reserved	18	Reserved
19	Reserved	20	Reserved
21	GND	22	GND
23	Serial Input ⁽¹⁾	24	Serial Output ⁽²⁾
25	GND	26	GND
27	VCC	28	VCC
29	VCC	30	VCC

Remark:

(1) Serial Input: LVTTTL-RX, 9600baud, Input.

(2) Serial Output: LVTTTL-TX, 9600baud, Output.3

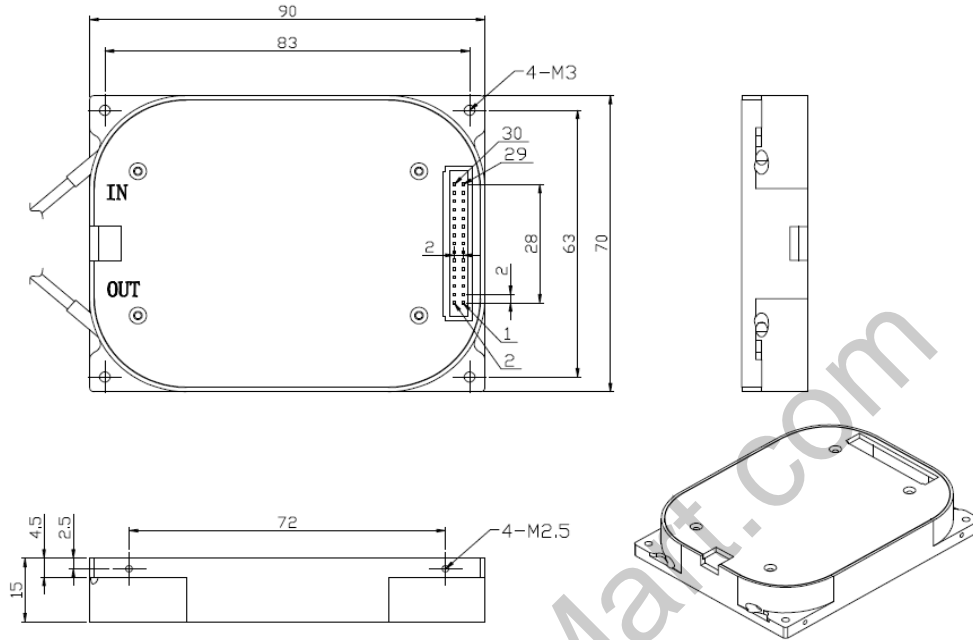
Reserved PINS: NC

Electrical Interface: SAMTEC TCSD-15-01-F-N, 2.0mm span, 15PIN×2, male

4 Mechanical Dimensions

Size: 90*70*15mm

Figure 4-1 Structure Diagram



5 Order Information

Model	Application	-	Type	-	Output	Voltage	Interface
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MP31: Module EDFA	3: C band single channel		1:BA 2:LA 3:PA		010: -10dBm 000: 0dBm ... 23: 23dBm	7:5VDC 8:3.3VDC	1: SC/UPC 2: SC/APC 3: FC/UPC 4: FC/APC 5: LC/UPC 6: LC/APC
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