Specification

of
1Ru 1550nm EDFA
EDF-1U1550xxxUM Series

Universal Microelectronics
Photonics Division
Catalog 2008~ 2009

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1Ru 1550nm EDFA

Features

- Provide 14/15/17/19/21/22dBm EDFA
- Single or dual 980nm pump amplifier design
- High reliability in high operating temperature
- 1550nm direct optical signal amplification for multiple wavelengths
- Alarm indicators in front panel
- Suitable for CATV and digital communication systems

Applications

- Cable TV
- Telecommunication
- Designed to meet the high performance of fiber network in CATV or digital systems applications

Product Characteristics

General Specifications	
Parameters	Specifications
AC Input Power	90 to 260 Vac
DC Input Power	-36 ~ -72 Vdc
Control Mode	APC , ACC (Normal APC Mode)
Number of Outputs	1
Operating Temperature, ℃	0 to +50 (Ambient Temperature)
Operating Humidity, %	20 to 80 (Non-condensing)
Storage Temperature, ℃	-40 to 80
Storage Humidity, %	20 to 80 (Non-condensing)
Physical Dimensions, mm	44H x 482.6W x 364.1D
Weight, kg, Max.	T.B.D
Power Consumption, W	< 25

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Optical Characteristics			
Parameters	Specifications		
UMEC PN	PD-1EDFA0001~0003	PD-1EDFA0004~0006	PD-1EDFA0007
Wavelength Range (nm)	1540 – 1560		
Input Power (dBm)	-5 ～ +8		
Output Power (dBm) *1	14、17、19	20、21、22	23
Output Power Stability (dB)*2	Variation ≦0.5dB	Variation ≦0.6dB	Variation ≦0.7dB
Polarization Dependent Gain (dB)	≦ 0.5		
Return Loss (dB)	≧ 45		
Connector Return Loss (dB)	≧ 55		
Noise Figure *3	≦ 6.0	≦ 6.5	≦ 7.5
Connector Type	SC/APC		

**1 Pin=+5dBm,all* λs.

**2 Measure at operating temperature and +5 dBm @1550nm input power.*

**3 Measured at Pin=+5dBm,all* λs*,@25* ℃

Front Panel LED Indicators	
LD-ON	Laser Diode Power Switch
Power LED	Indicates Power Normal.
Laser LED	Indicates Laser ON/OFF
Alarm LED	Indicates EDFA Alarm
Reset	System Reset
◀	Select backward
▶	Select forward
ENTER	Confirm the selection
RS-232	RS-232 Port
LCD Display	
LCD Display	122 X 32 Points
● Software version	Show software version
● Laser status	Show laser status is (ON or OFF)
● Optical input power status	Show optical input power value
● Optical output power	Show optical output power value

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	status	
●	LDI1 status	Show pumping 1 bias current value Set Limit
●	LDI2 status	Show pumping 2 bias current value Set Limit
●	TEC1 status	Show pumping 1 TEC current value
●	TEC2 status	Show pumping 2 TEC current value
●	LD1 Temp	Show pumping 1 temperature Set Limit
●	LD2 Temp	Show pumping 2 temperature Set Limit
●	DC 48V	Show DC 48V status
●	Module Temp.	Show module temperature
●	Alarm status	Show alarm status item 1. LD1 BIAS OVER 2. LD2 BIAS OVER 3. LD1 TEMP OVER 4. LD2 TEMP OVER 5. INPUT POWER LOW 6. OUTPUT POWER LOW 7. ENV. TEMP OVER LIMITS
	NMS Interface Function	
●	P/N	Show product number
●	S/N	Show serial number
●	Software version	Show software version
●	Laser status	Show laser status is (ON or OFF)
●	Optical input power status	1.Show optical input power value 2.Set input power low limit
●	Optical output power status	1.Show optical output power value 2.Set output power low limit 3. Set output power high limit
●	LDI1 status	1.Show pumping 1 bias current value 2.Set pumping 1 bias current high limit

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● LDI2 status	1.Show pumping 2 bias current value 2.Set pumping 2 bias current high limit
● TEC1 status	1.Show pumping 1 TEC current value 2.Set pumping 1 TEC high limit
● TEC2 status	1.Show pumping 2 TEC current value 2.Set pumping 2 TEC high limit
● LD1 Temp	1.Show pumping 1 temperature 2.Set pumping 1 temperature high limit
● LD2 Temp	1.Show pumping 2 temperature 2.Set pumping 2 temperature high limit
● Module Temp.	1.Show module temperature 2.Set module temperature high limit
● APC status	Set power of APC(Customer Option)
● ACC status	1.Set current 1 of ACC(Customer Option) 2.Set current 2 of ACC(Customer Option)
● Operation mode	Set APC/ACC
● Alarm status	Show alarm status item
● CONSOLE	Update console program

RS-232 Communication Interface

PIN	Assignment	Description
2	RS232-TX	9600 baud, Output
3	RS232-RX	9600 baud, Input
5	GND	Ground

RS232 Pin Assignment:

1. This module uses RS232 as the communication interface. In the 13-pin electric connector, pin 2 is assigned for RS232-Tx (to computer Rx) and pin 3 is assigned for RS232-Rx (to computer Tx).
2. Make sure the module and the computer have a common grounding.
3. Transmission parameters:

   Baud Rate: **9600**
   Data Bits: **8**
   Parity: **None**
   Stop bit: **1**
   Flow Control: **None**

4. The communication interface is active as long as the module is powered.

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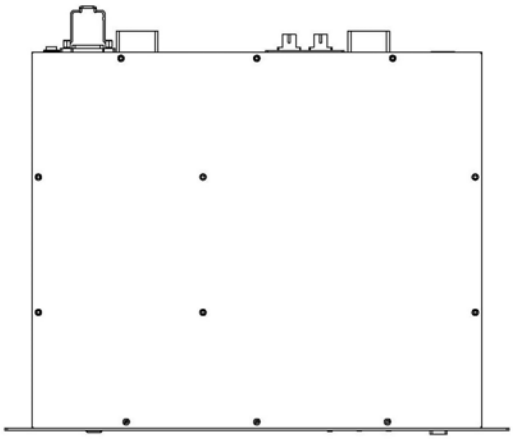
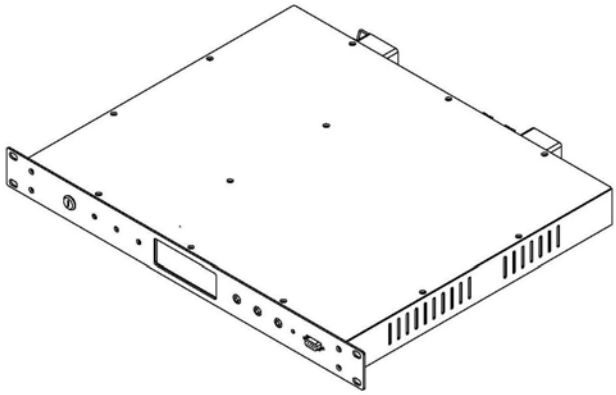
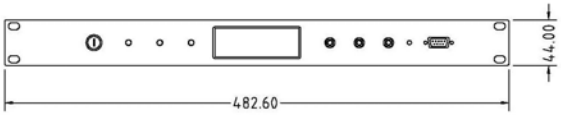
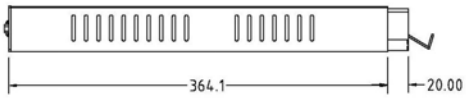
Mechanical outline









Packing Picture

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Ordering Information

EDF-1U1550-XX-X- UM

- Connector:
  - 1= FC/ APC
  - 2= SC/ APC
- Output Power:
  - 14 = 14dBm
  - 15 = 15dBm
  - 17 = 17dBm
  - 19 = 19dBm
  - 21= 21dBm
  - 22= 22dBm
  - 23= 23dBm
- 19” standard 1U rack design
  - Wavelength: 1550nm
- EDFA

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