



Specification

of
3Ru 1550nm EDFA
EDF-3U1550xxxUM Series



Universal Microelectronics
Photonics Division
Catalog 2008~ 2009



3Ru 1550nm EDFA

Features

- Provide 14/15/17/19/21/22dBm EDFAs
- 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

Performance

General Specifications	
Parameters	Specifications
DC Input Power	+24Vdc
Control Mode	APC
Number of Outputs	1
Operating Temperature, °C	0 to +50 (Ambient Temperature)
Operating Humidity, %	20 to 80 (Non-condensing)
Storage Temperature, °C	-40 to 80
Storage Humidity, %	20 to 80 (Non-condensing)
Physical Dimensions, mm	30.1mm W (x1 slot) x 129.7mm H x 411.05mm D
Power Consumption, W	< 35



Optical Characteristics		
Parameters	Specifications	
Wavelength Range (nm)	1540 – 1560	
Input Power (dBm) @14dBm	-5 ~ +10	
Input Power (dBm) @17~22dBm	-5 ~ +8	
Output Power (dBm) ^{*1*2}	14 / 17	22
Output Power Stability (dB) ^{*3}	Variation ≤ 0.5 dB	Variation ≤ 0.7 dB
Polarization Dependent Gain (dB)	≤ 0.5	
Return Loss (dB)	≥ 45 (By all module)	
Connector Return Loss (dB)	≥ 55	
Noise Figure ^{*4}	≤ 6	≤ 6.5
Connector Type	SC/APC with shutter	

*1 @14dBm Pin=+9dBm, all λ s.

*2 @17,22dBm Pin=+5dBm, all λ s.

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

*4 Measured at Pin=+5dBm, all λ s, @25°C

User Interface (Front Panel)	
STATUS LED	Green=Normal, Red=Alarm
LD ON LED	Green=Laser is ON No light=Laser is OFF
LD SET LED	Green= SET Laser ON/OFF
OPT IN LED	Green= LED display show optical input power (dBm)
OPT OUT LED	Green=LED display show optical output power (dBm)
ALARM LED	Green=LED display show alarm status number
▲, ▼, SET Push Button Switch	Select display and set function item
Front panel color	Black



Function		
	Matter	Description
Panel	● STATUS LED	Dual Color LED Green=Normal Red=Alarm Status
	● LD ON LED	Green LED Light= LD Turn ON No Light=LD Turn OFF
	● (8.)Numeral LED x3	Indicate any item number 1.Not glisten indicate display mode 2.Glisten indicate set mode
	● OPT IN LED	When green LED light, numeral LED indicate optical input power (dBm).
	● OPT OUT LED	When green LED light, numeral LED indicate optical output power (dBm).
	● ALARM LED	When green LED light, numeral LED indicate alarm status. ● (---Indicate no alarm, status normal) IF you want to see other alarm status that you can press SET key 3 seconds then use ▲,▼ key to see other status.
	● ▲,▼, SET Push Button Switch	Push Button Switch to set parameter.
	● Color	Black
Back Board	● Optical Input	SC/APC adapter
	● Optical Output	SC/APC adapter
	● FANx1 (3pin)	1. 12VDC input 2. Monitor
	● Socket : 48pin (male)	Power Bus, Data Bus
	● Color	Silver gray
Alarm Item	● Input power too low	1. Input power low 2. Alarm code:001
	● Output power too low	1. Output power low (Only APC Mode) 2. Alarm code:002
	● Output power too high	1. Output power high 2. Alarm code:003



	● LDI1 too high	1.Pumping 1 bias current high 2.Alarm code:004
	● LDI2 too high	1.Pumping 2 bias current high 2.Alarm code:005
	● LD1 temp. too high	1.LD1 temp.> 35°C 2.Alarm code:006
	● LD2 temp. too high	1.LD2 temp.> 35°C 2.Alarm code:007
	● Module temp. too high	1.Module temp.>70°C 2. Alarm code:008
	● Fan fault	1.Fan stop. 2.Alarm code:009
Data Bus Define	● P/N	Show product number
	● S/N	Show serial number
	● Software version	Show software version
	● Laser status	Show laser status is (Turn ON or OFF)
	● Optical input power status	Show optical input power value
	● Optical output power status	Show optical output power value
	● LDI1 status	Show pumping 1 bias current value
	● LDI2 status	Show pumping 2 bias current value
	● TEC1 status	Show pumping 1 TEC current value
	● TEC2 status	Show pumping 2 TEC current value
	● LD1 Temp	Show pumping 1 temperature
	● LD2 Temp	Show pumping 2 temperature
	● Module Temp.	Show module temperature
	● APC status	Show APC mode
	● ACC status	1.Set current 1 of ACC(Customer Option) 2.Set current 2 of ACC(Customer Option)
	● Operation mode	Set APC/ACC
● Fan status	Show fan status is (Running or fault)	
● Alarm status	Show alarm status item	
Size	● 30.1mm W (x1 slot) x 129.7mm H x 411.05mm D	
Features	● Hot Swap ● Short circuit protection	



Panel LED Operation Description

First push ▲ or ▼ button into LED display and function

SET

LD SET

IF do'nt touch any button over 30 sec
LED will not light and exit this function

If display **0FF** optical output = OFF

Push SET 3 sec then laser will turn on, then LD ON = light

If display **20.5** optical output = 20.5dBm

Push SET 3 sec then laser will turn off , then LD ON = not light



OPT IN

If display **- - -** optical input power < -10dBm or no input

If display **08.5** optical input power= 8.5dBm



OPT OUT

If display **- - -** no output power

If display **20.5** optical output power= 20.5dBm



ALARM

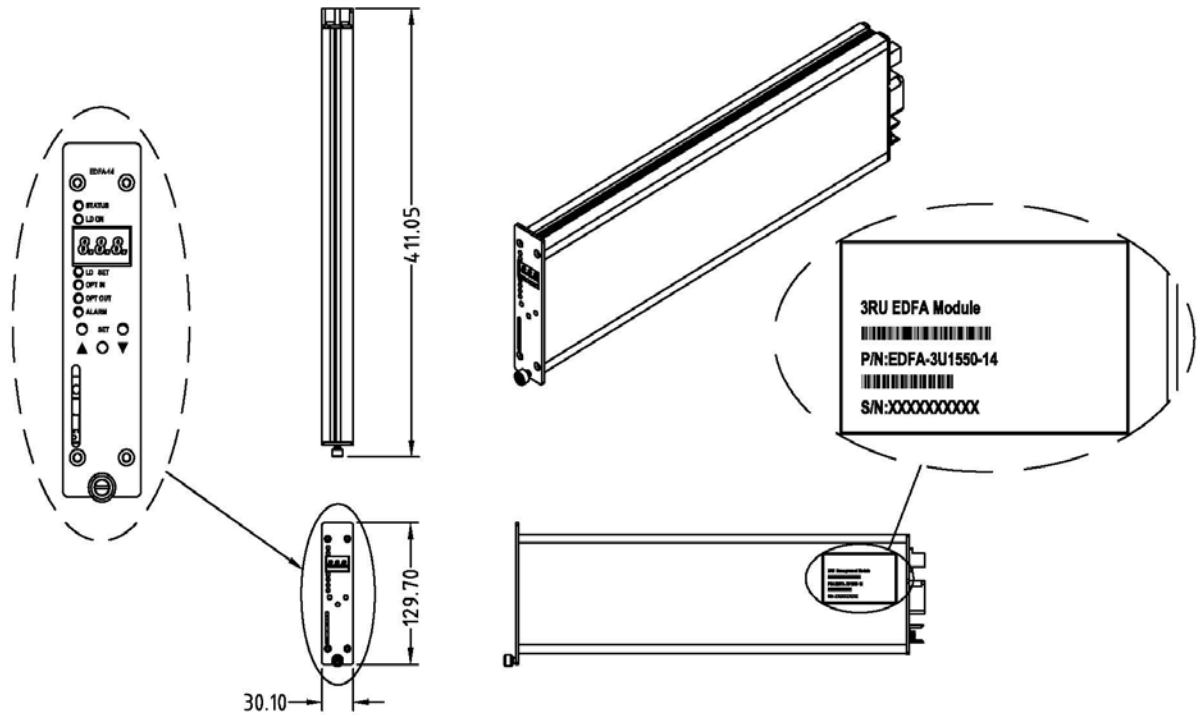
If display **- - -** = normal status

If display **005** = No. 005 alarm status

If you want to see other alarm cord, You
can push SET 3 sec then use ▲ ▼
step by step display alarm cord, then
push SET exit set mode



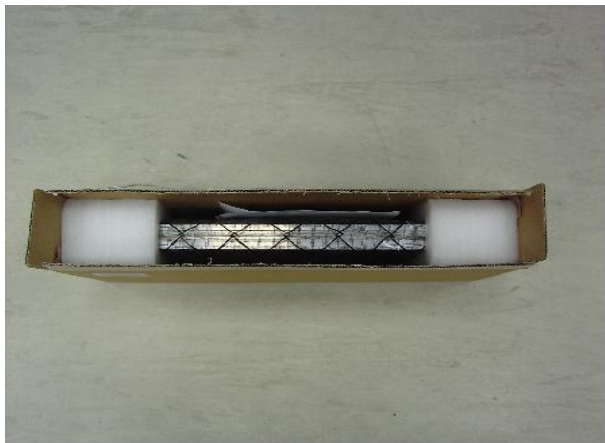
Mechanical outline



Packing List

Item	Name	QTY
1	3RU EDFA Module	1
2	Antistatic Bag	1
3	Test report	1

Packing Picture



3RU EDFA Module

P/N:PD-3EDFA0001

S/N:XXXXXXXXXX

Package Dimensions, mm.	L:504 x W:84 x H:184
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Ordering Information

EDF-3U1550-XX-X-UM

