

ACTIVE OPTICAL COMPONENTS

OPTICAL SYSTEM TECHNOLOGY | Amplifiers, switches and receiver



FTTH NETWORKS

DATASHEET

INTRODUCTION

Each device from our active optical components has its own special features. The optical amplifiers have an extremely high power and a low noise figure on every single port, whereas the optical switch has a very short switching time.

PRODUCTS

- 3 **OPTICAL AMPLIFIERS**
 - “EDFA-1550-1x17”**
 - “EDFA-1550-4x17”**
 - “EDFA-1550-8x17-HP”**

- 5 **OPTICAL SWITCH**
 - “OSW-2”**

- 6 **OPTICAL RECEIVER**
 - “ORC-01”**

EDFA-1550-XXX OPTICAL AMPLIFIER

PRODUCT OVERVIEW

“EDFA-1550-xx17 series”

Parameter	EDFA-1550-1x17	EDFA-1550-4x17
Operating wavelength [nm]	1545 - 1565	
Optical input power range [dBm]	-3 ... +10	
Output power stability [dBm]	± 0.5	
Return loss optical output [dB]	≥ 45	
Return loss optical input [dB]	≥ 45	
Noise figure [dB μ V]	≤ 5	
Optical connectors	SC/APC	
Power consumption [W]	30	
Operating temperature range [°C]	-5 ... +55	
Storage temperature range [°C]	-30 ... +70	
Max. relative humidity (operation and storage)	max. 95 %, not condensing	
Dimensions (L x W x H) [mm]	483 x 420 x 44	
Weight [kg]	3.7	
Rack unit	19"/1 RU	
Output ports	1	4
Output power per port [dBm]	17	
Item No.	64656	64657

ADDITIONAL INFORMATION

- Connector types:
SC/APC (optical) - E2000/APC alternative available upon request
- High-performance erbium doped fiber amplifier with low noise pump laser
- Network management interface, in line with standard SNMP network management
- Intelligent temperature control system for lowering the power consumption
- System parameter setting by front panel keypad, serial interface (RS 232) or user-friendly web interface
- 2 power supplies with each 50 % load sharing, 160 ... 250 VAC or 48 VDC, hot-pluggable, hot swappable
- 1 - 4 output ports
- high optical output power per port
- Adjustable attenuation at the output -3 - 0 dB
- Low noise figure
- RS 232 and RJ 45 control interface



EDFA-1550-XXX-HP-1U

HIGH POWER OPTICAL AMPLIFIERS

PRODUCT OVERVIEW

“EDFA-1550-8x17-HP”

Parameter	EDFA-1550-8x17-HP-1U
Operating wavelength [nm]	1545 - 1565
Optical input power range [dBm]	-3 ... +10
Output power stability [dBm]	± 0.5
Return loss optical output [dB]	≥ 45
Return loss optical input [dB]	≥ 45
Noise figure [dB _μ V]	≤ 5
Optical connectors	SC/APC
Power consumption [W]	30
Operating temperature range [°C]	-10 ... +45
Storage temperature range [°C]	-30 ... +70
Max. relative humidity (operation and storage)	max. 95 %, not condensing
Dimensions (L x W x H) [mm]	483 x 420 x 44
Weight [kg]	3.7
Rack unit	19"/1 RU
Output ports	8
Output power per port [dBm]	17
Item No.	64658

ADDITIONAL INFORMATION

- Connector types:
SC/APC (optical) - E2000/APC alternative available upon request
- Network management interface, in line with standard SNMP network management
- Intelligent temperature control system for lowering the power consumption
- System parameter setting by front panel keypad, serial interface (RS 232) or user-friendly web interface
- 2 power supplies with each 50 % load sharing, 160 ... 250 VAC or 48 VDC, hot-pluggable, hot swappable
- Adopts erbium ytterbium co-doped double-clad fiber technology
- 4 - 16 output ports
- Extremely high optical output power per port
- Adjustable attenuation at the output -3 - 0 dB
- Low noise figure
- RS 232 and RJ 45 control interface



1 X 2 OPTICAL SWITCH FOR REDUNDANT OPTICAL FIBER TRANSMISSIONS

PRODUCT OVERVIEW

“OSW-2”

Parameter	OSW-2
Operating wavelength [nm]	1200 ... 1620
Max. optical input power [dBm]	27
Insertion loss [dB]	≤ 1.3 (tested at 1310, 1490, 1550 nm)
Return loss output [dB]	> 55
Optical return loss [dB]	> 55
Optical input power ranges [dBm]	-15 ... +24
Max. switching life (switching amounts)	≥ 10.000.000
Optical connectors	SC/APC
Supply voltage	2 x 160 - 250 VAC/50 Hz (each 50 % load sharing)
Power consumption [W]	≤ 2
Operating temperature range [°C]	-5 ... +55
Storage temperature range [°C]	30 ... +70
Item No.	65400



ADDITIONAL INFORMATION

- Very low switching time
- Transmission of very high optical powers
- Advanced 32 bit processor for punctual and accurate monitoring of input power, reliable control of switch status and setup of automatic or manual switch mode
- Switches automatically when optical signal has a fault
- System parameters setting by front panel keypad or serial interface (RS 232)
- SNMP network management functionality via RJ 45 interface
- 2 power supplies with each 50 % load sharing, in case one power supply fails the second takes over
- Built-in LCD monitor
- SC/APC connectors at the front side
- Dimensions: 19"/1 RU (483 x 285 x 44 mm (W x D x H))
- Weight: approx. 2.0 kg

OPTICAL BROADBAND RECEIVERS WITH HIGH POWER OUTPUT FOR CATV APPLICATIONS

PRODUCT OVERVIEW

“BTV-ORC-01”

Parameter	BTV-ORC-01
Max. optical input power [dBm]	-9 - +2
Responsivity [A/W]	0.85
Switching time [ms]	≤ 10
Optical return loss [dB]	45
Optical connectors input	SC/APC
Operation bandwidth [MHz]	45 - 1006
Output level [dBμV]	110 (-9 - +2 dBm i) 112 (-8 - +2 dBm i)
Flatness [dB]	-0.75 - +0.75
Return loss [dB]	14
Test point [dB typ.]	-20
Composite Second Order (CSO) [dB]	60 ¹⁾
Composite Triple Beat (CTB) [dB]	60 ¹⁾
Carrier-to Noise (C/N) [dB]	51 ¹⁾
Supply voltage [VAC]	150 ... 265
Operating temperature range [°C]	-20 - +55
Storage temperature range [°C]	-40 - +60
Power consumption [W]	8
Operating wavelength [nm]	1100 - 1600
Item No.	65905

¹⁾ At P IN = -1 dBm, P OUT = 106 dBμV, 42 CH CENELEC, OMI = 3.5 %

ADDITIONAL INFORMATION

- Optical status indication by LEDs
- Integrated test point for the RF output
- Very high and constant RF output level within the whole optical input power range by an integrated automatic gain control (AGC)
- Connector types: SC/APC (optical) and F-females
- Dimensions: approx. 190 x 110 x 52 mm (W x H x D)
- Weight: approx. 0.4 kg

