

Prisma High-Density Gain-Flattened EDFA

Description

The Prisma II optical network allows for best in class architectures with increased reliability, scalability, and cost-effectiveness. The High Density (HD) Erbium Doped Fiber Amplifier (EDFA) is designed to fit into a Prisma XD chassis or a standard full height Prisma II chassis (with the use of a host module). Up to two HD EDFA modules can be populated into a host module which requires a single service slot in the Prisma II chassis. The gain-flattened EDFA incorporates an optical filter to eliminate variations in gain across the C-band.

Figure 1. High Density EDFA



Features

- EDFA modules for optical amplification
- High density design allowing up to 16 EDFAs in a Prisma II XD chassis or up to 24 in a full height Prisma II chassis with redundant power supplies
- Energy-efficient design with low power consumption
- EDFA modules have constant power or constant gain modes of operation
- Master/Slave redundancy using Controller Area Network with no external wiring needed
- Multiple setup and control options
 - Local Control via Local Craft Interface (LCI)
 - Local monitoring via Intelligent Communications Interface Module (ICIM)

High Density EDFA Modules

Table 1. High Density EDFA Specifications

Optical	Unit	Gain-Flattened EDFA		Notes
		P2-EDFA-17L=	P2-EDFA-21L=	
Output power (maximum)	dBm	17	21	1
Output power range	dBm	14--17	18--21	
Output incremental power step	dB	0.5	0.5	
Nominal (design) gain	dB	8	12	2
Adjustable gain (range)	dB	4--12	8--16	
Specified input power range	dBm	5--13	5--13	
Operational minimum power input	dBm	-5	-5	
Input wavelength	nm	1528 – 1562		
Output power stability	dB	± 0.1		3
Return loss	dB	≥ 50		
Polarization sensitivity	dB	0.3		
Noise figure @ input power	dB	5.0 @ 0 dBm		
Gain flatness	dB	±0.75 ±1.0		1530-1562 nm 1528-1562 nm
Optical interfaces		SC/APC		
Electrical				
Maximum power consumption	W	7.5	9.0	
Environmental				
Operating temperature range	°C	0 to +50		
Storage temperature range	°C	-40 to + 85		
Humidity range	%	5 to 95		4
Mechanical				
Length x Height x Width	in	8.8 x 3.48 x 1.03		
	cm	22.35 x 8.84 x 2.62		

Notes:

1. The output power is measured after a typical jumper loss of 0.2 dB.
2. Nominal (Design) Gain used for specification compliance.
3. For output power range from 3dB below nominal maximum power to maximum power.
4. Non-condensing external to the Prisma II or XD chassis.

Ordering Information

The part numbers for the High Density EDFAs are shown below. Please consult with your Account Representative, Customer Service Representative, or Systems Engineer to determine the best configuration for your particular application.

Table 2. High Density Gain Flattened EDFA Modules Part Numbers

Description	PID
+17 dBm Gain Flattened Fixed Gain EDFA	P2-EDFA-17L=
+21 dBm Gain Flattened Fixed Gain EDFA	P2-EDFA-21L=

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