

Prisma High Density 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.

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 both constant power and 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)
 - Remote monitoring via ROSA status monitoring and control element manager

High Density EDFA Modules

Table 1. High Density EDFA Specifications

Optical	Unit	EDFA			Gain-Flattened EDFA				Gain-Flattened EDFA, Variable Gain			Notes	
		17 dBm	20 dBm	22 dBm	17 dBm		20 dBm		17 dBm	20 dBm	21 dBm		
Output Power (maximum)	dBm	17	20	22	17		20		17	20	21	1	
Gain	dB	12	15	17	Low	High	Low	High	5 - 17	8 - 20	5 - 15		
					7	12	10	15					
Input Power	dBm	0 to +10			-5 to +10	-10 to +5	-5 to +10	-10 to +5	-14 to +12	-14 to +12	-10 to +16		
Input Wavelength	nm	1530 - 1565			1536 - 1562				1530 - 1562 1528 - 1562 for 17 dBm, 21 dBm				
Output Power Stability	dB	± 0.3			± 0.4				± 0.4				
Return Loss	dB	≥ 50 (exception for input port)			≥ 50				≥ 50				
Polarization Sensitivity	dB	0.3			0.3				0.3				
Noise Figure @ Input Power	dB	5.5 @ 0 dBm			6.5 @ 0 dBm				6.0 @ 0 dBm	6.0 @ 0 dBm	6.0 @ 5 dBm		
Output Power Variation with Wavelength	dB	±0.2			N/A				N/A				
Gain Flatness	dB	N/A			±0.75				±0.75 ±1.0, for 17 dBm and 21dBm over 1528 - 1562 nm			2	
Optical Interfaces	-	SC/APC (2)			SC/APC (2)				SC/APC (2)				
Electrical													
Power Consumption	W	7.5	7.5	9.0	7.5	7.5	7.5	7.5	7.5	9.0	9.0		
Environmental													
Operating Temp Range	°C					-20 to +65							
	°F					-4 to +149							
Full Specs Storage	°C					-40 to +85							
	°F					-40 to +185							
Humidity Range	%					0 to 95							3
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. Gain flatness measured under default gain conditions.
3. 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 EDFA Modules

Description	Ordering Code	PID
+17 dBm EDFA	P2-HD-EDFA-17-SA	4037220
+20 dBm EDFA	P2-HD-EDFA-20-SA	4037221
+22 dBm EDFA	P2-HD-EDFA-22-SA	4037222
+17 dBm EDFA Gain-Flattened, Low Gain	P2-HD-EDFA-GF-17L-SA	4037224
+17 dBm EDFA Gain-Flattened, High Gain	P2-HD-EDFA-GF-17H-SA	4037225
+20 dBm EDFA Gain-Flattened, Low Gain	P2-HD-EDFA-GF-20L-SA	4037226
+20 dBm EDFA Gain-Flattened, High Gain	P2-HD-EDFA-GF-20H-SA	4037227
+17 dBm EDFA Gain-Flattened, Variable Gain	P2-HD-EDFA-VGF-17-SA	4043499
+20 dBm EDFA Gain-Flattened, Variable Gain	P2-HD-EDFA-VGF-20-SA	4043500
+21 dBm EDFA Gain-Flattened, Variable Gain	P2-HD-EDFA-VGF-21-SA	4042697



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