

# Variable Gain EDFA

## Features / Benefits

- Wide gain setting range
- Compact package size
- Low noise figure
- Firmware field upgradable
- Multiple control modes (AGC, APC, and ACC)
- Digital interface with RS-232

## Applications

- Single-channel or DWDM system application
- Metro, regional, and long-haul WDM network
- Signal loss compensation
- Optical cross-connect
- Switch matrix
- Optical add/drop module
- Digital CATV



In December, 2009, Lightwaves2020 released one compact variable gain EDFA module with low noise figure. With Lightwaves2020's proprietary Liquid-crystal Variable Optical Attenuator and Thin-film based Gain Flattening Filter, the variable gain ranges from 15dB to 25dB within wide input power range. This makes the module suitable for pre-amplifier, inline, and booster applications. Our products achieve gain deviation  $< \pm 2\text{dB}$  & noise figure  $< 7\text{dB}$  over all operating conditions.

This compact full-function EDFA module covers all automatic control modes for constant gain, power, and current. Monitoring of input, output, and reflected signal levels as well as temperature and signal levels alarms are provided. We also provide custom made products.



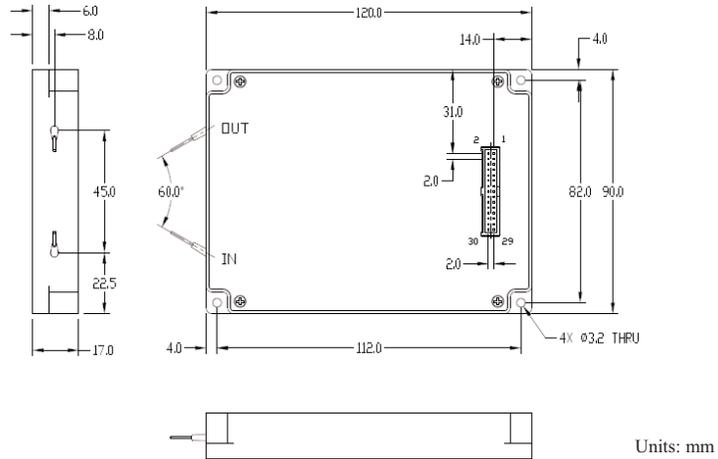
# Variable Gain EDFA

## Specifications

Parameters	Units	Min.	Typ.	Max.
EDFA Module Operation Mode	-	AGC, APC, and ACC		
DWDM Signal Channel Number	-	-	-	40
Operating Wavelength	nm	1530	-	1562
Optical Input Power	dBm/ch	-	-	-10
Total Optical Input Power	dBm	-30	-	-10
Signal Gain	dB	15	-	25
Noise Figure @ Pin=-30dBm & Gain=15dB	dB	-	-	7.0
Saturation Total Output Power @ Pin=-10dBm	dBm	15,17 or19	-	-
Gain Flatness @ Gain=23dB	dB	-1	-	+1
Gain Flatness @ Gain=15~25dB	dB	-2	-	+2
Polarization Dependent Gain	dB	-	-	0.5
Polarization Mode Dispersion	ps	-	-	0.5
Input/Output Return Loss (pump LD off)	dB	35	-	-

Unless otherwise noted, specifications listed in this section are guaranteed for operating temperature range

## Dimensions



## Ordering Information

V	G	A	B	F			R	C	5	1			1		
						<b>Output Power @ Pin= -10dBm</b> 15= 15dBm 17= 17dBm 19= 19dBm		<b>Default Mode</b> 1= APC 2= ACC 3= AGC			<b>Fiber Length</b> 1= 1.0m 5= 1.5m		<b>Connector</b> 0= None 1= FC/UPC 2= FC/APC 3= SC/UPC 4= SC/APC 5= LC/UPC 6= MU/UPC		

This product information is subject to change without notice.