

## EDFA Gain Block for DWDM Applications

### Key Features

- Operating wavelength window:  
1540-1560 nm
- Operating temperature range:  
-5 °C to 70 °C (with cooled pump)
- Small size (120x80x15 mm)

### Applications

- Ideal for Metro DWDM networks up to  
8 channels



### Description

A cost effective, small sized EDFA gain block for Metro applications. Booster, line-, and pre-amplifier configurations are available.

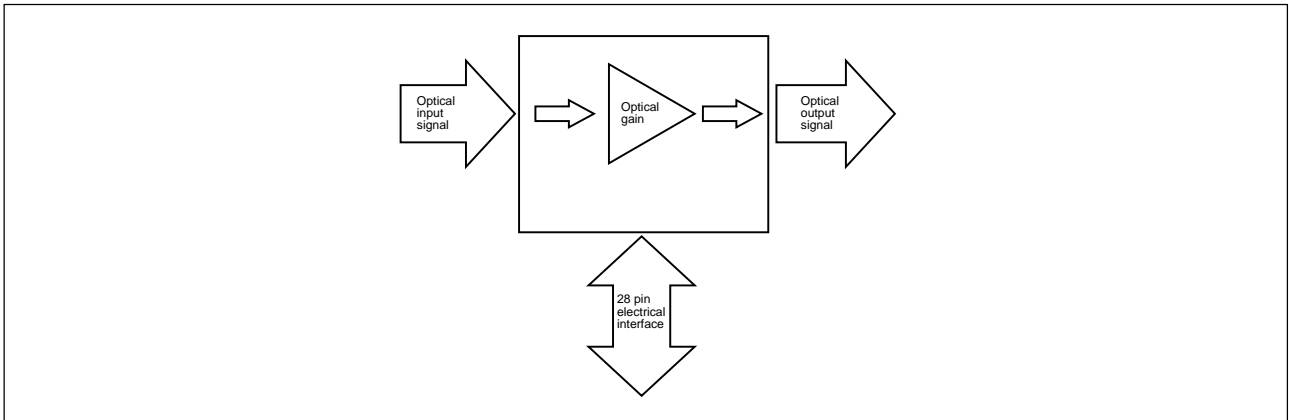


Figure 1. Block diagram

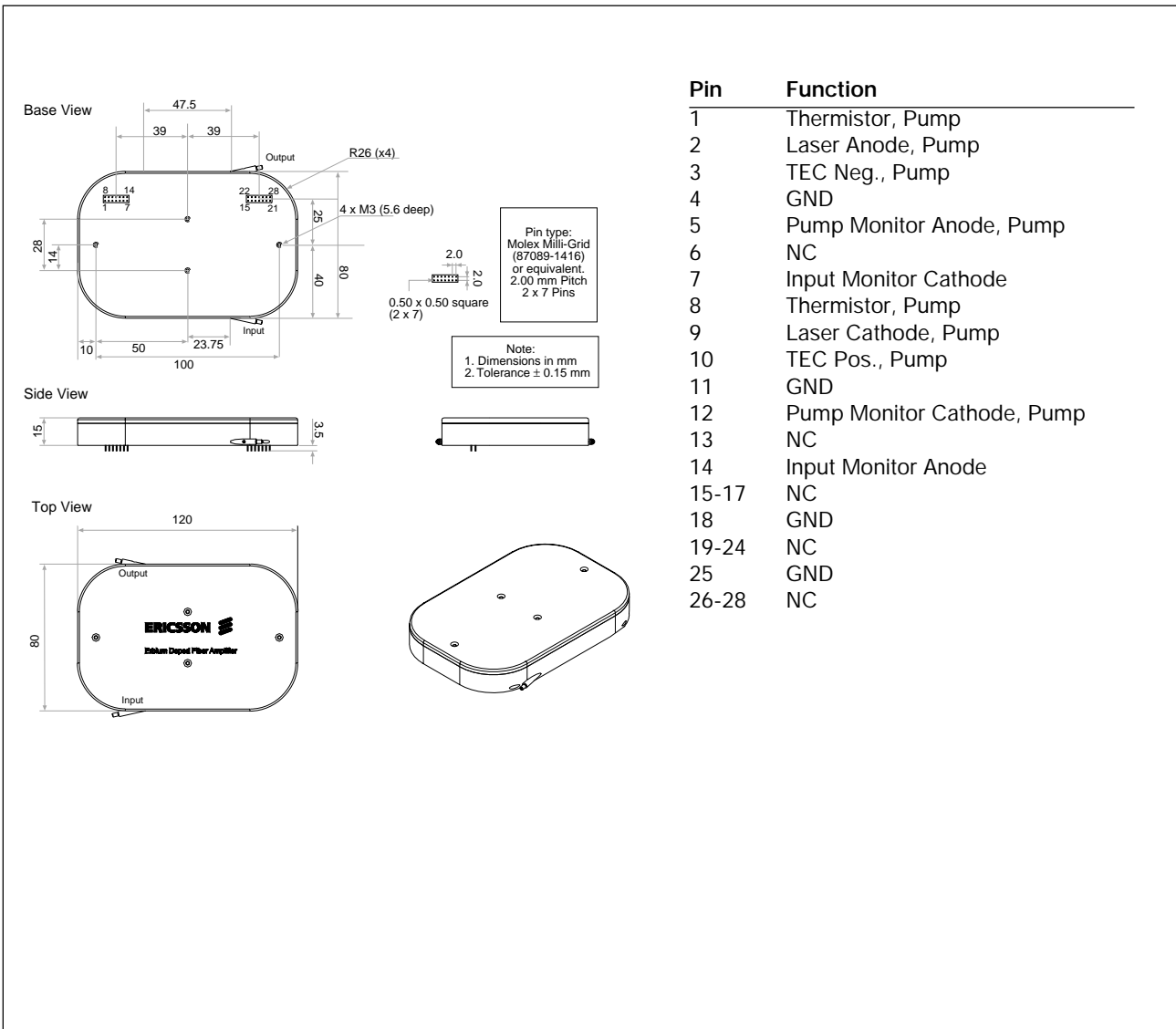


Figure 2. Mechanical Outline Drawing and Pin Connection

## Optical Characteristics

Electrical and optical characteristics over recommended operating conditions, unless otherwise noted.

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Operating Wavelength		$\lambda_L$	1540		1560	nm
Measurement Wavelength		$\lambda_M$		1550		nm
Input Power		$P_{IL}$	-9	-6	0	
Output Power		$P_{out}$	12	13		dBm
Noise Figure	@ $P_{IL} = -6$ dBm @ $\lambda_L$	NF		6	7	dB
Gain Flatness	@ $P_{IL} = -6$ dBm @ $\lambda_L$ (Note1)	$G_{FLAT}$	-1		1	dB

Note 1.  $G_{FLAT} = (G_{MAX} - G_{MIN})/2$ , where  $G_{MAX}$  is the maximum gain for  $\lambda_L$  and  $G_{MIN}$  is the minimum gain for  $\lambda_L$ .  
The gain is measured as dynamic gain under constant saturation.

## Electrical Characteristics

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Operating Current		$I_{DRIVE}$			720	mA
Operating Voltage		V <sub>F</sub>			2.5	V
Power Dissipation		$P_E$			7	W
Thermistor Resistance		$R_{TH}$	9.5	10	10.5	k $\Omega$
TEC Current		$I_{TEC}$			1.2	A
TEC Voltage		$V_{TEC}$			3.3	V

## Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	$T_{Case}$	-5		70	$^{\circ}C$

## Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	$T_{stg}$	-40	75	$^{\circ}C$
Drive Current	$I_{LD\_MAX}$		800	mA

**CAUTION:** Stresses outside those listed in "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress only rating and operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied.

## Handling Precautions

This device may be damaged as a result of electrostatic discharge (ESD). Take proper precautions during both handling and testing. This typically includes grounded wrist wraps, workbenches and floor mats in ESD controlled areas. Semiconductor devices may be damaged by current surges, use appropriate transient protection.

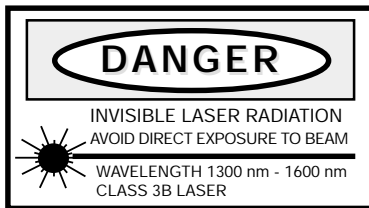
## Quality Assurance

Ericsson Microelectronics commitment to quality has been proven through a decade of semiconductor device production and has been confirmed to ISO 9001. Opto product qualification is made according to the intention of applicable Telcordia standards.

## Connector Options

SC/SPC

(Other connectors available on request)



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