

EDFA Gain Block for DWDM Applications

Key Features

- Operating wavelength window:
1530-1560 nm
- Operating temperature range:
-5 °C to +70 °C (with cooled pump)
- Compact size (88 x 70 x 12 mm)

Applications

- Ideal for Metro DWDM networks,
providing up to 13 dBm output power



Description

This EDFA gain block provides cost effective amplification over the C-band wavelength range. With its simple configuration and very small size it is optimized as a booster for Metro DWDM applications.

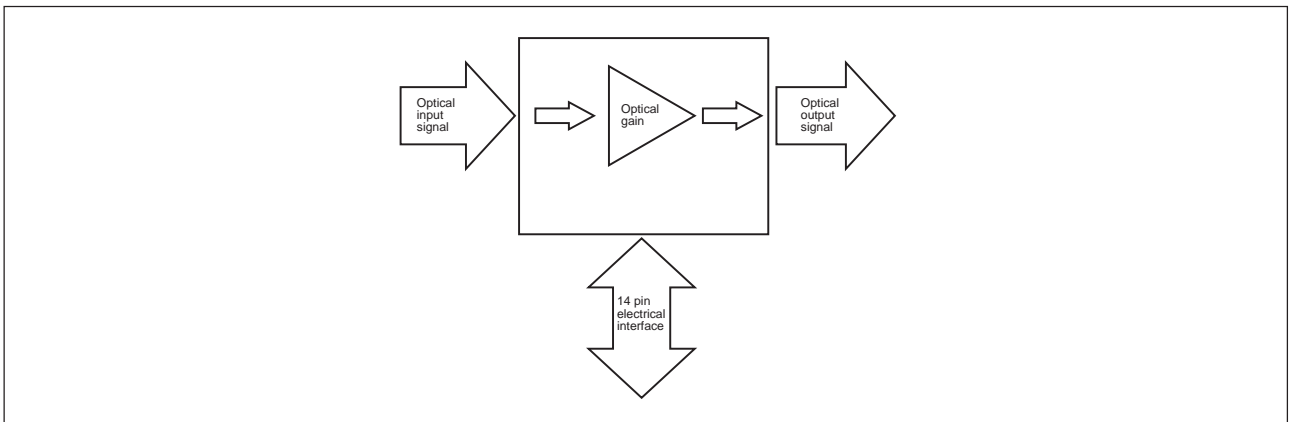


Figure 1. Block diagram

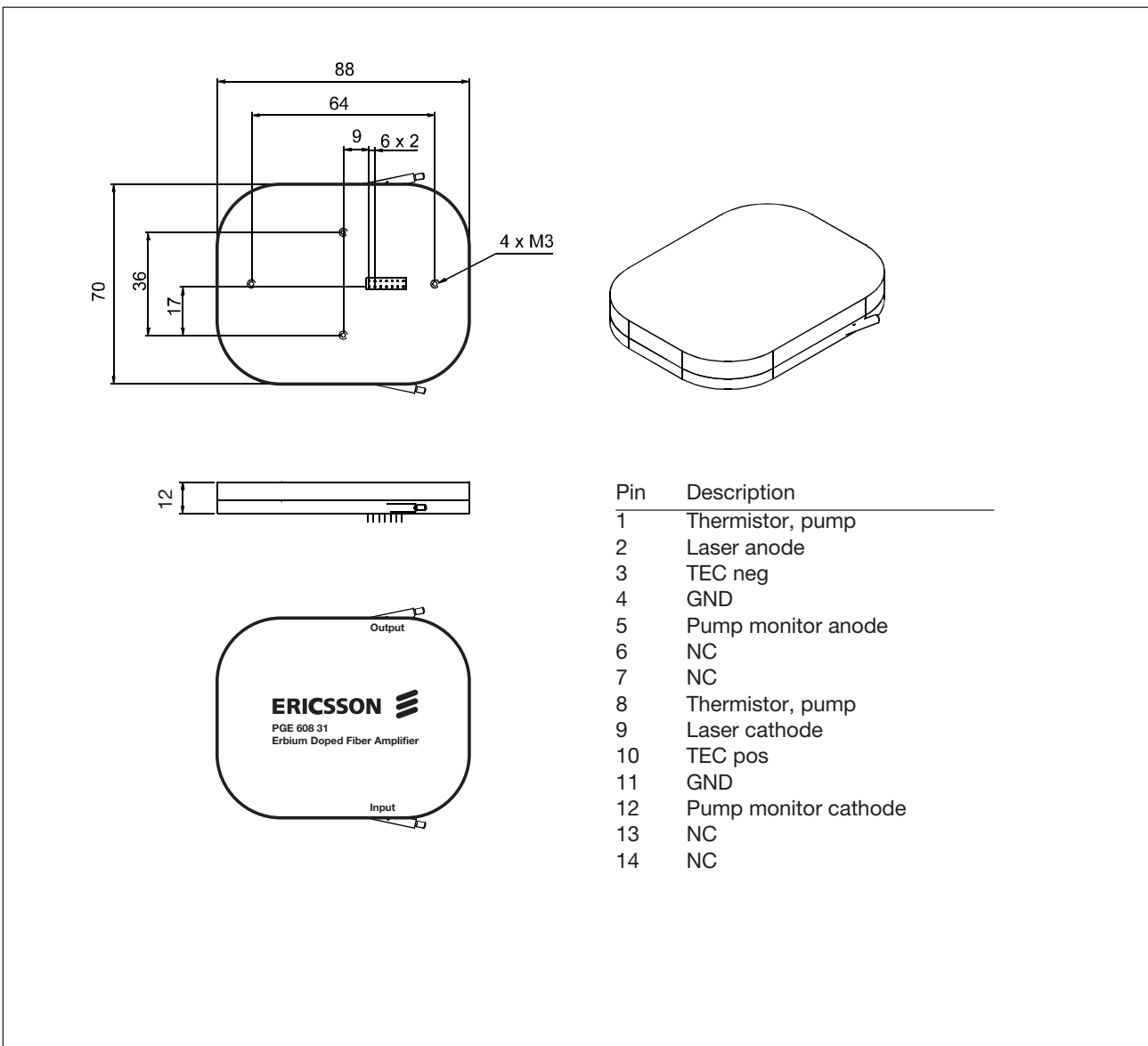


Figure 2. Mechanical Outline Drawing and Pin Connection

Optical Characteristics

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Operating Wavelength		λ_L	1530		1560	nm
Input Power		P_{IL}	-9	-6	0	
Output Power		P_{out}	12	13		dBm
Noise Figure	@ $P_{IL} = -6$ dBm @ λ_L	NF		6	8	dB
Gain Flatness	@ $P_{IL} = -6$ dBm @ λ_L (Note1)	G_{FLAT}	-1		1	dB

Note 1. $G_{FLAT} = (G_{MAX} - G_{MIN}) / 2$, where G_{MAX} is the maximum gain for λ_L and G_{MIN} is the minimum gain for λ_L .
The gain is measured as dynamic gain under constant saturation between 1540 and 1560 nm.

Electrical Characteristics

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Operating Current		I_{DRIVE}			720	mA
Operating Voltage		VF			2.5	V
Power Dissipation		P_E			7	W
Thermistor Resistance		R_{TH}	9.5	10	10.5	k Ω
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/PC

(Other connectors available on request)



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