PGE 608 30

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.

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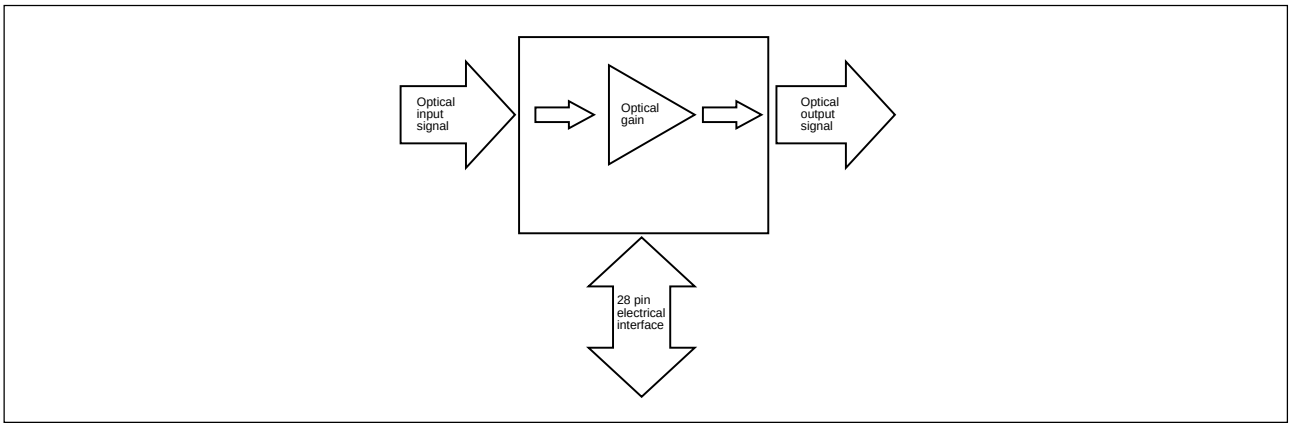
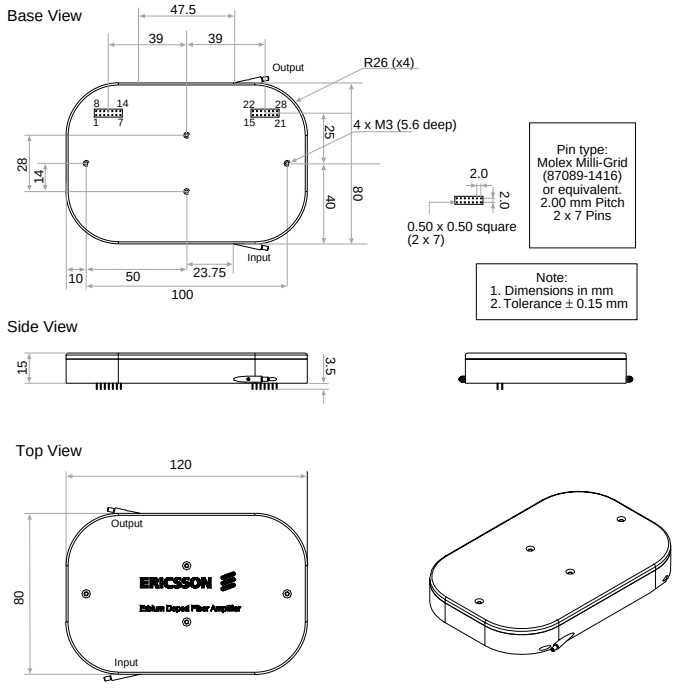


Figure 1. Block diagram



Pin	Function
1	Thermistor, Pump
2	Laser Anode, Pump
3	TEC Neg., Pump
4	GND
5	Pump Monitor Anode, Pump
6	NC
7	Input Monitor Cathode
8	Thermistor, Pump
9	Laser Cathode, Pump
10	TEC Pos., Pump
11	GND
12	Pump Monitor Cathode, Pump
13	NC
14	Input Monitor Anode
15-17	NC
18	GND
19-24	NC
25	GND
26-28	NC

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	1540		1560	nm
Measurement Wavelength		λ_M		1550		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	7	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 GMIN is the minimum gain for λ_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		VF			2.5	V
Power Dissipation		P_E			7	W
Thermistor Resistance		R_{TH}	9.5	10	10.5	kΩ
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	°C

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T_{stg}	-40	75	°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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