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Find the *Ericsson PGE 608 16* at our website: ***Click HERE***

PGE 608 16

EDFA Gain Block for DWDM Applications

Key Features

- Operating wavelength window: 1543-1558 nm
- Gain flatness < ±0.5dB
- Low noise figure, typ. <5 dB
- +11 dBm output power
- Input and output monitor diodes
- Optical output monitor
- Operating temperature range: -5 °C to 70 °C
- Multisourced footprint
- Small size (120x80x15) mm

Applications

- Pre-amplifier in single-channel or DWDM networks



Description

The DWDM gain block is intended to be used as a pre-amplifier in WDM / DWDM networks. The gain block has input and output power monitoring. The input and output ports have isolators to attenuate spurious reflections in the system.

External electronic circutry is needed for biasing the pump laser and for controlling the pump laser temperature. Heat sink is provided via the bottom surface.

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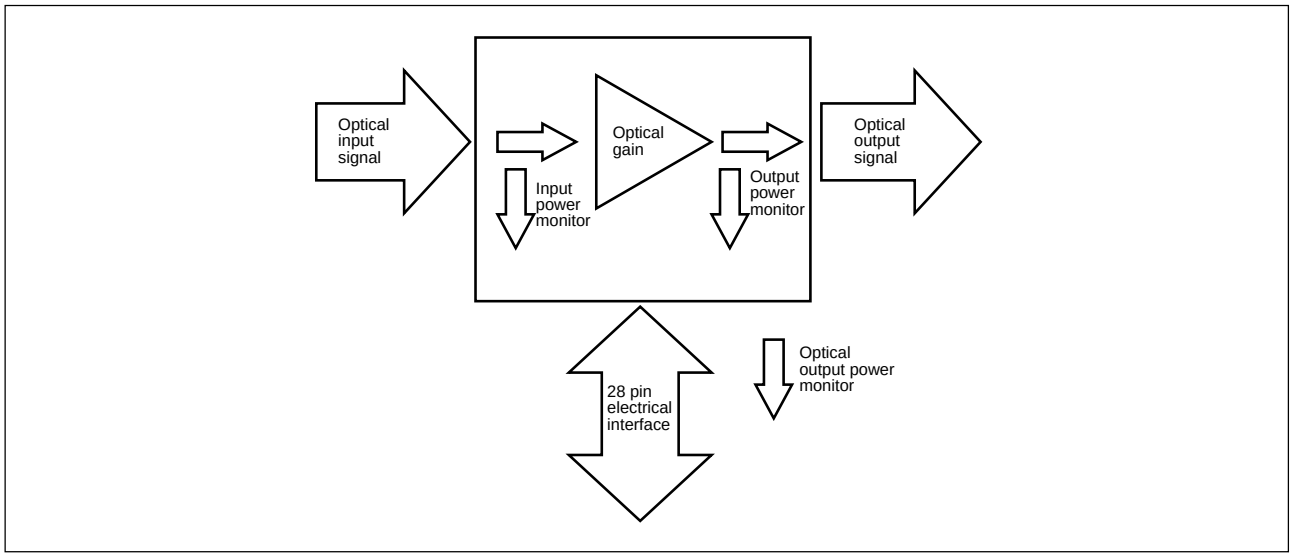
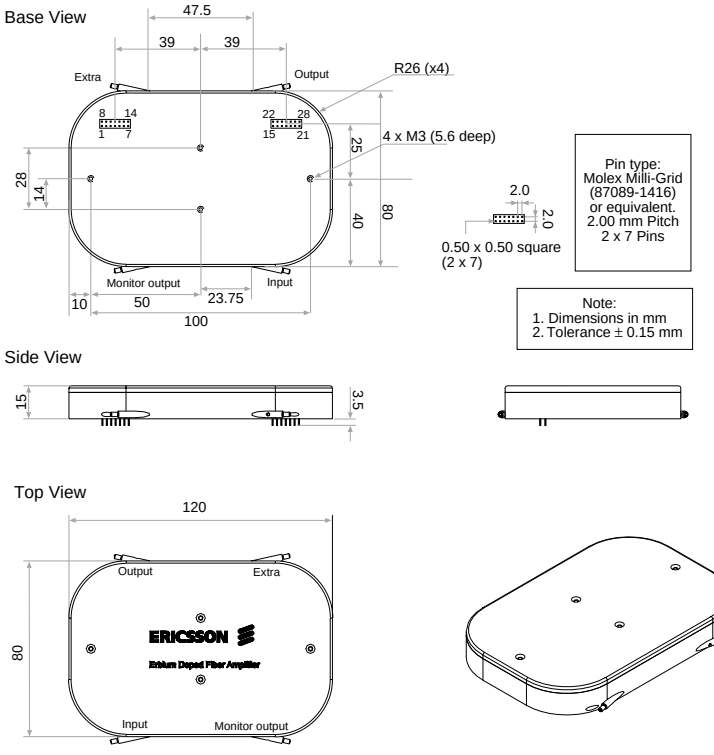


Figure 1. Block diagram



Pin	Function
1	Thermistor, Pump (GND)
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	Output Monitor Anode
16-17	NC
18	GND
19-21	NC
22	Output Monitor Cathode
23-24	NC
25	GND
26-28	NC

Figure 2. Mechanical Outline Drawing and Pin Connection

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Optical Characteristics

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Operating Wavelength		λ_L	1543		1558	nm
Measurement Wavelength		λ_M		1550		nm
Input Power		P_{IL}			-6.5	dBm
Output Power	@ P_{IL}= -12.5 dBm and @ λ_L	P_{o1}	11			dBm
Output Power	@ P_{IL}= -18.5 dBm and @ λ_L	P_{o2}	7.5			dBm
Input/Output Return Loss	With EDFA not activated @ λ_L	IRL/ORL	40			dB
Noise Figure	Over P_{IL} and λ_L	NF			5.5	dB
Gain Flatness	Over λ_L for G(λ_M) =15.5 dB	G_{FLAT}	-0.4		0.4	dB

Electrical Characteristics

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Operating Current		I_{DRIVE}			270	mA
Operating Voltage		VF			2.4	V
Power Dissipation		P_E			3.5	W
Thermistor Resistance	@ 25 °C	R_{TH}	9.5	10.0	10.5	kΩ
TEC Current	@ ΔT = 50 K	I_{TEC}			1.1	A
TEC Voltage	@ ΔT = 50 K	V_{TEC}			2.6	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	$I_{LD\ MAX}$		300	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.*

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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

FC/PC

SC

(Other connectors available on request)



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1522-PGE 608 16 Rev. C
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