

## Erbium-Doped Fiber Amplifier for Digital Applications

### Key Features

- Operating wavelength window: 1530-1560 nm
- Saturation output power: +16 dBm
- Noise figure, typ. <7.0 dB
- Serial (RS-232) interface with parallel alarms

### Applications

- Single channel digital applications (SDH/SONET)



### Description

The PGE 608 03 is an integrated, output power-locked amplifier. It has optically isolated input and output ports as well as input and output power monitoring. The serial and parallel interface is provided through a DB-25 electrical connector. The modules are based on industry standard platforms and are optimized for single channel SDH/SONET applications.

## PGE 608 03

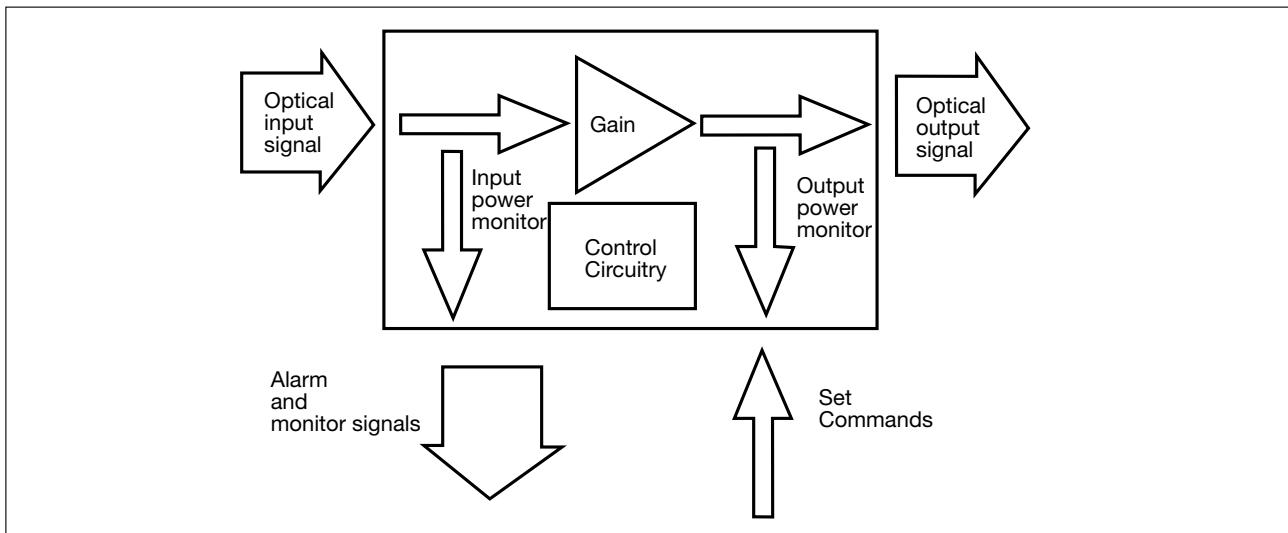


Figure 1. Block diagram

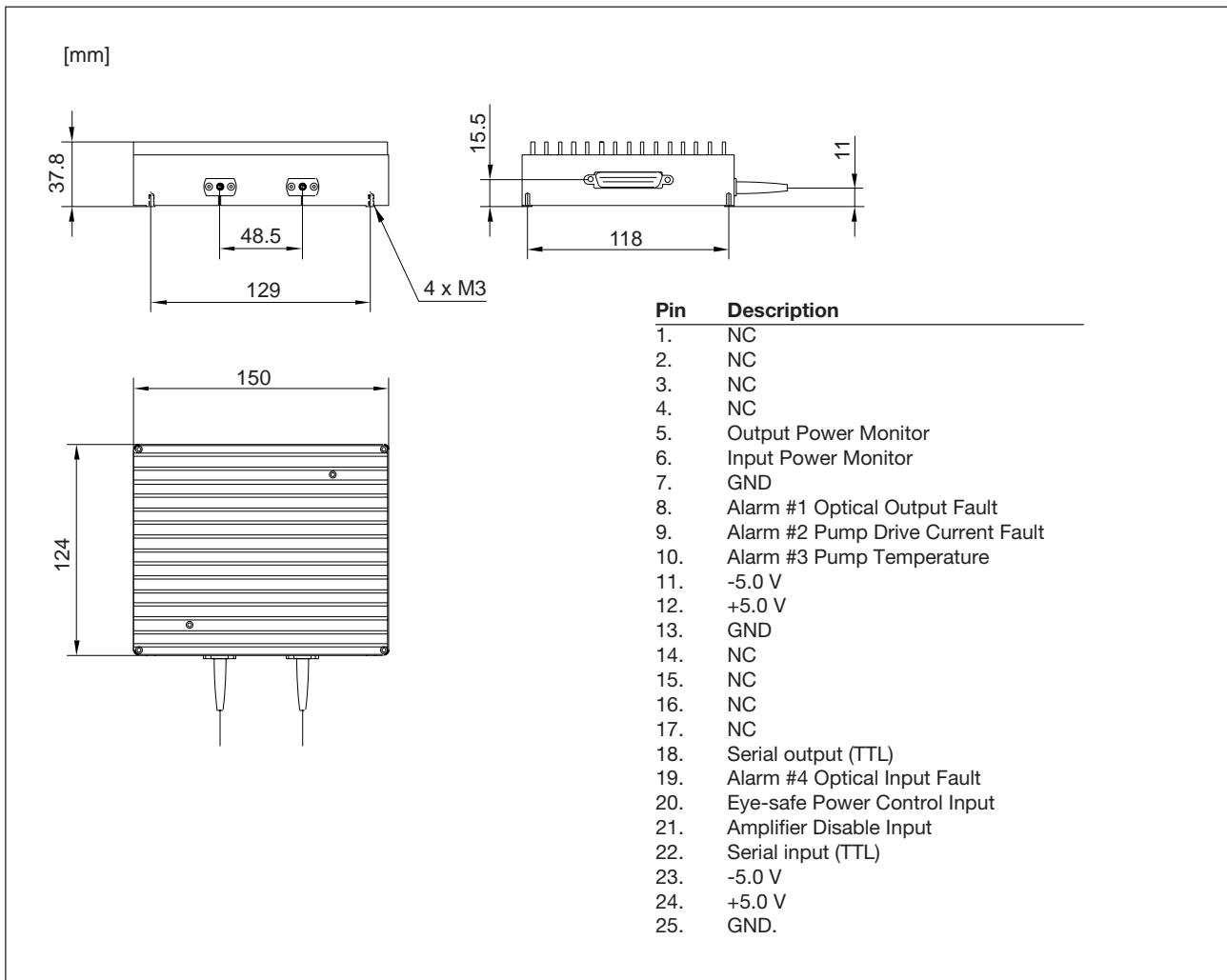


Figure 2. Mechanical outline and pin description

## Optical Characteristics

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

| Parameter                | Conditions  | Symbol      | Min  | Typ       | Max  | Unit |
|--------------------------|---|-------------|------|-----------|------|------|
| Operating Wavelength     |   | $\lambda_L$ | 1530 |           | 1560 | nm   |
| Input Power              |   | $P_{in}$    |      | -6        |      | dBm  |
| Output Power             | At 1550 nm, $P_{in} = -6$ dBm, at RT                              | $P_{out}$   | 15.5 | 16.0      | 16.5 | dBm  |
| Input/Output Return Loss | Over $T_c$ and $\lambda_L$ . EDFA turned on.<br>$P_{in} = -6$ dBm | IRL/ORL     |      | $\geq 28$ |      | dB   |
| Noise Figure             | < -6 dBm Input, at RT   | NF          |      | < 7.0     |      | dB   |
| Small Signal Gain        |   |             |      | 30        |      | dB   |

## Electrical Characteristics

| Parameter               | Conditions                            | Symbol | Min   | Typ   | Max   | Unit |
|-------------------------|---------------------------------------|--------|-------|-------|-------|------|
| Operating Current       | Positive Voltage                      |        |       | 2     |       | A    |
|                         | Negative Voltage                      |        |       | 1     |       | A    |
| Operating Voltage       | Pins # 12 and 24                      |        | 4.75  | 5.00  | 5.50  | V    |
|                         | Pins #11 and 23                       |        | -5.50 | -5.00 | -4.75 | V    |
| Ripple and Noise        | On both Positive and Negative Voltage |        |       |       | 2%    | PP   |
| Transients – Positive V | Max. Duration 75 ms                   |        | 4.5   |       | 6.0   | V    |
| Transients – Negative   | Max. Duration 75 ms                   |        | -6.0  |       | -4.5  | V    |
| Power Dissipation       | Over operating temperature and time   |        |       |       | 10    | W    |

## Operating Conditions

| Parameter                  | Symbol     | Min | Typ | Max | Unit |
|----------------------------|------------|-----|-----|-----|------|
| Operating Case Temperature | $T_{Case}$ | 0   |     | 65  | °C   |

## Absolute Maximum Ratings

| Parameter           | Symbol | Min | Max | Unit |
|---------------------|--------|-----|-----|------|
| Storage Temperature |        | -40 | 75  | °C   |

**CAUTION:** Stresses outside those listed in "Absolute Maximum Ratings" may cause permanent damage to the device.

## 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

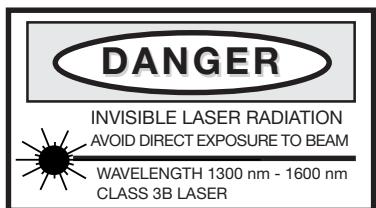
Ericsson Microelectronics commitment to quality has been proven through a decade of semiconductor device production and has been confirmed to ISO 9001. Opto product qualification is made according to the intention of applicable Telcordia standards.

## Connector Options

SC/SPC

SC/APC

(Other connectors available on request)



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1522-PGE 608 03 Rev. E

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