# **PGR 603 10 Optical Receiver Module** STM-16 LH / OC-48 LR

The receiver module is intended for use at SDH and SONET bit rates. The receiver meets all present requirements in the ITU-T (G.957) and Bellcore (GR-253-CORE) recommendations. The receiver consists of an InGaAs APD, silicon bipolar IC preamplifier, and silicon IC's. A high level of integration is employed which results in small size, low power consumption and high reliability. Alarm output for loss of signal is provided according to SDH/SONET requirements.

## **FIBER** DATA DATA NOISE **DECISION** LIMITER PREAMP CLOCK FILTER CIRCUIT PHASE CLOCK CLOCK RECOVERY LOSS OF SIGNAL

## **Key Features**

- Complete long haul module without need for external high voltage bias
- Low power dissipation
- Wide operating case temperature range:  $0^{\circ}\text{C}$  to  $70^{\circ}\text{C}$
- Small size (59x36x10 mm) 24-pin DIP
- Dynamic range >25 dB (typical)
- Operating wavelength 1.3µm or 1.5µm
- SDH/SONET compatible for STM-16/ OC-48 data rate
- Diffential ac-coupled data and clock outputs

Pin	Function	Description	
3	LOS Flag	Loss Of Signal Flag, CMOS high level when activated	
5	<u>CLOCK</u>	Inverted Clock output	
6	CLOCK	<u> </u>	
10	DATA	Data output	
11	$\overline{\mathrm{DATA}}$	Inverted Data output	
18	$V_{EE}$	Negative power supply voltage: -5.2 V	
22	$V_{cc}$	Positve power supply voltage: +5.0 V	
4,7-9,12-17,19,20	Ground	-	
1,2,21,23,24	No Connect	-	
10	36	Pin 13 Pin 24 Pin 12 Pin 1	
	3.3	2.54 23.11	



## **Optical and Electrical Specification**

Item	PGR 603 10	Unit
Bit rate	2488.32	Mbit/s
Operating wavelength	1280-1335/1500-1580	nm
Minimum sensitivity	-30 (-32 typical)	dBm
Minimum overload	-8 (-6 typical)	dBm
Optical path penalty	1.0	dB
Output clock jitter	0.01	UI rms
Jitter transfer function	G. 958	ITU-T
Jitter tolerance	G. 958	ITU-T
Supply voltage	+5.0 and -5.2	V
Power consumption	3	W
Operating case temperature	-5 to +70	°C

Note 1. Values in brackets guaranteed at beginning-of-life.

#### **Electrical Interface**

Output signals Differential A.C. coupled outputs, ECL compatible.

Loss of signal CMOS, active high output, less than 2 dBm of hysteresis.

### **Quality Assurance**

Ericsson Components commitment to quality has been proved through a decade of semiconductor device production and has been confirmed to ISO 9001. These products are qualified according to the intention of applicable Bellcore standards and Ericsson internal quality specifications, and supplied with final test data.

#### **Connector Options**

FC/PC SC

(Other connectors available on request)

#### **Ericsson Components**

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