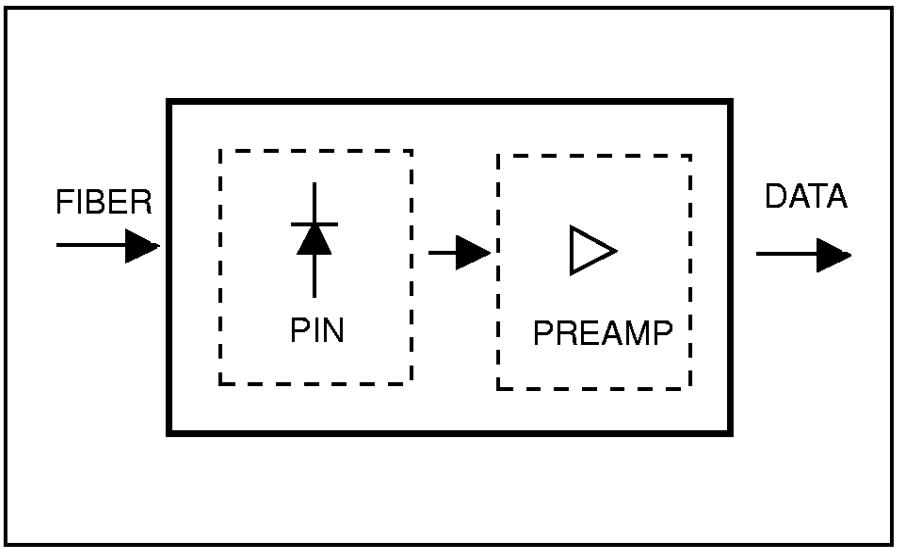
PGR 201 03
Optical Receiver Submodule for 2.5 Gbps



Features

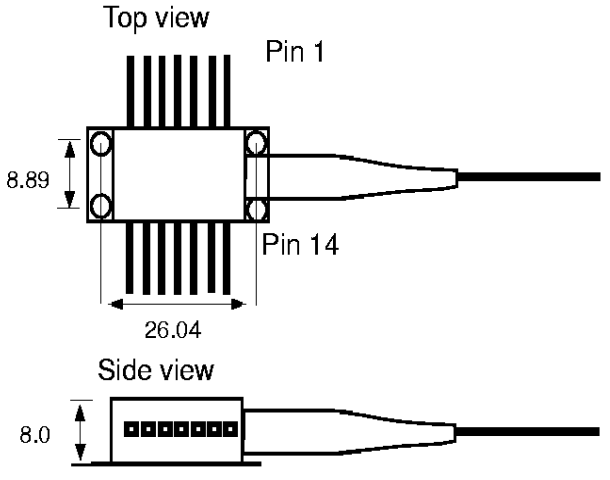
- Hermetic, 14 pin butterfly package
- Single-mode fiber pigtail
- FC/PC, SC or ST connector
- InGaAs PIN photo diode with low noise GaAs MMIC preamplifier
- DC-coupled output
- Light "ON" = logic "LOW"
- Operates in the 1.3 µm and 1.55 µm optical window
- DC to 1.7 GHz typical bandwidth
- -24 dBm typical sensitivity
- +0.5 dBm typical overload

Applications

- SDH STM-16 SH
- SONET OC-48 IR
- Digital receivers to 2.5 Gbps
- Analog receivers to 1.7 GHz

Pin connection

1.	GND
2.	GND
3.	GND
4.	Vpin (+5V)
5.	GND
6.	Vss (-5.2V)
7.	NC
8.	GND
9.	Data Out
10.	GND
11.	Vdd (+5V)
12.	GND
13.	GND
14.	GND
Case	RF (and DC) GND



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Electrical Characteristics

Ta=25C

Item	Symbol	Min	Nom	Max	Unit
DC Power Supply Voltage Range	Vdd	4.7	5.0	5.3	V
	Vss	-5.5	-5.2	-3.0	V
PIN Bias	Vpin	4.7	5	12	V

Ta=25C, nominal power supplies

Item	Symbol	Min	Nom	Max	Unit
DC Power Supply Current Range	Idd		90		mA
	Iss		70		mA
Power Consumption	Pcon		0.8		W
Operating Case Temperature	Tc	0		70	°C
Output Signal Swing; Pf=-24 to +0.5 dBm, RL=50Ω	Vout	7		1500	mVp-p
Output Offset Voltage	Vout, offs		-1		V
Logic Sense: Light "ON" =Logic "LOW"					
AC Transimpedance; RL = 50Ω; TZ = dVout/dIphoto	Tz		0.9		kΩ

Optical Characteristics

Ta=25C, nominal power supplies

Item	Symbol	Min	Nom	Max	Unit
Optical Wavelenght	λ	1.2		1.6	µm
Sensitivity @ BER=1e-10 (2.5 Gbps NRZ, PRBS 2^{23}-1, λ=1.55µm)	Pr	-21	-24		dBm
Optical Overload @ BER=1e-10 (2.5 Gbps NRZ, PRBS 2^{23} -1, λ=1.55µm)	Pol	0	+0.5		dBm
Opto/Electrical Transfer Function:					
Cut-off Frequency	fc(-3dB)		1.7		GHz
Gain Flatness	ΔG			±1.0	dB

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 Bellcore (TA-TSY-000983) and supplied with final test data.

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Specifications subject to change without notice.
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