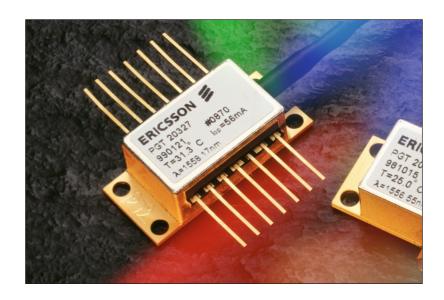
DFB/EA Laser Module for 2.5 Gb/s Applications

Key Features

- L-band DFB CW source monolithicly integrated with an Electro Absorptionmodulator (EA)
- Hermetic, 14 pin butterfly package
- Single-mode fiber pigtail
- 4 GHz typical bandwidth
- -3 dBm output power

Applications

- 2.5 Gb/s
- L-band



Description

The laser module, intended for L-band DWDM applications at OC-48/STM-16, consists of a DFB laser with integrated absorption modulator mounted in a high speed package including isolator. Laser wavelengths are available according to the ITU-T grid.



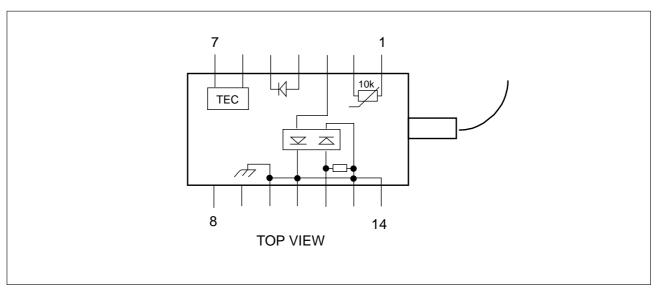


Figure 1. Block diagram

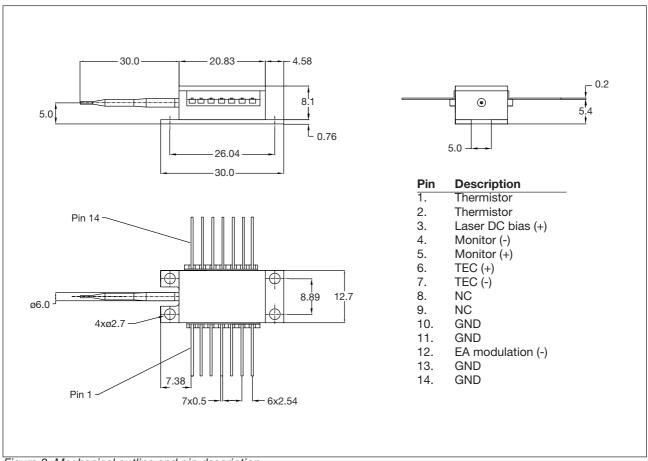


Figure 2. Mechanical outline and pin description

Optical Characteristics

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

Parameter	Conditions	Symbol	Min	Тур	Max	Unit
Wavelength		λ	1565		1615	nm
Output power	BOL	P _{out}	-3			dBm
Extinction ratio	2.5 V _{pp}	ER	10			dB
Dispersion penalty	@ 9000 ps/nm disp.				1.5	dB
Side mode suppr.ratio		SMSR	35			dB
Optical isolation			30			dB

Electrical Characteristics

Parameter	Conditions	Symbol	Min	Тур	Max	Unit
Operating Current		I _{op}	50		100	mA
Treshold Current		I _{th}			25	mA
Forward Voltage		V_{f}			2	V
Reflection E/E	0-3 GHz	S ₁₁			-10	dB
Small signal modulation bandwidth	-3 dB _e	f _c	3			GHz
Rise/Fall time	20/80%	t _r /t _f			125	ps
Monitor current			0.1		1	mA
Monitor dark current	-5 V			5	100	nA
Thermistor resistance	@ 25 °C		9.5		10.5	kΩ
TEC Voltage			-2.5		2.5	V
Current			-1.2		1.2	Α
Power					3	W

Operating Conditions

Parameter	Symbol	Min	Тур	Max	Unit
Operating Case Temperature	T _{Case}	0		70	°C
Operating Chip Temperature	Ton	20		35	°C

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature, maximum duration 12 months	T _{Stg}	-40	85	°C
Laser forward current	I _{LD}		150	mA
Modulator voltage	V_{mod}	-4	1	V

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

FC/PC

SC

(Other connectors available on request)



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Ericsson Microelectronics AB SE-164 81 Kista, Sweden Telephone: +46 8 757 50 00 www.ericsson.com/microelectronics

For local sales contacts, please refer to our website or call: Int + 46 8 757 47 00, Fax: +46 8 757 47 76