Alcatel 1992 SGP

980 nm Pump Laser Module for submerged amplifiers

Description

This 980 nm pump laser is designed for use in erbium doped fiber amplifiers, EDFAs, in submerged repeaters and active branching units. The module contains a heterojunction multi-quantum well Fabry-Perot laser. A low reflectivity Fiber Bragg Grating (FBG) is integrated in a Polarization Maintaining Fiber (PMF) pigtail to provide wavelength stabilization. The pump module is supplied in an uncooled 14-pin butterfly package with a backfacet monitor photodiode. Burn-in and ageing processes for the laser chip and module are compliant with submarine system requirements.

Features

- up to 200 mW output power
- High reliability
- Coolerless devices
- Selected wavelengths
- Wavelength stabilization with a FBG integrated in a PMF fiber pigtail
- Hermetically sealed 14-pin butterfly package
- Operating case temperature range from 0 to 45°C

Applications

980 nm high power pumping of submerged Erbium Doped Fiber Amplifiers for WDM repeaters and branching units.

Optical Characteristics

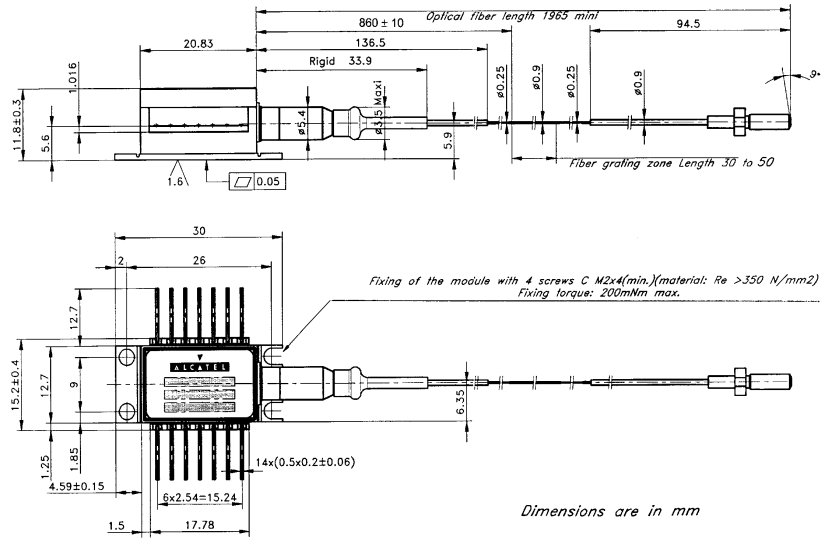
Parameter	Conditions	Min.	Typ.	Max.	Unit
Output power	0° - 45° C	130		200	mW
Forward current	Popt = 130 mW	210	240	280	mA
	Popt = 150 mW	240	275	320	mA
	Popt = 180 mW	290	330	390	mA
	Popt = 200 mW	330	370	430	mA
Thresold current				40	mA
Forward voltage				2.5	V
Wavelength		971.5	973, 976, 979, 982	984	nm
Monitor photodiode current	Wmr = - 5 V	0.075		2.5	mA
FIT (@ 0.95 % UCL)				100	

Absolute maximum ratings

Parameter	Min	Max	Unit
Operating case temperature	0	45	°C
Permanent storage temperature	- 10	+ 50	°C
Laser forward current		450	mA
Laser reverse voltage		2.5	V
Photodiode forward current		10	mA
Photodiode reverse voltage		20	V

ALCATEL

Mechanical details



Pin-out

Pin	Description	Pin	Description
1	**No connect**	8	No connect
2	No connect	9	No connect
3	Monitor photodiode anode	10	Laser anode
4	Monitor photodiode cathode	11	Laser cathode
5	No connect	12	No connect
6	No connect	13	Case ground
7	No connect	14	No connect

Pigtail fiber : single mode fiber with integrated, Bragg Grating, 0.9 mm jacket, Length 1965 mm minimum

Ordering information

Alcatel 1992 SGP

Min Power	λ	Code
130 mW	973 nm	3CN00520AM
	976 nm	3CN00520AN
	979 nm	3CN00520AR
	982 nm	3CN00520AU
150 mW	973 nm	3CN00437AM
	976 nm	3CN00437AN
	979 nm	3CN00437AR
	982 nm	3CN00437AU
180 mW	973 nm	3CN00506AM
	976 nm	3CN00506AN
	979 nm	3CN00506AR
	982 nm	3CN00506AU
200 mW	973 nm	3CN00507AM
	976 nm	3CN00507AN
	979 nm	3CN00507AR
	982 nm	3CN00507AU

Standards

ITU-T G.652 optical fiber
ITU-T G.653 shifted dispersion fiber
IEC 68-2 and MIL STD 883 environment

February 2001

Customized versions are available for large quantities.

EUROPE
Route de Ville just
F-91625 NOZAY CEDEX
Tel : (+33) 1 64 49 49 10
Fax : (+33) 1 64 49 49 61

USA
12030 Sunrise Valley Drive
RESTON - VA 22091-3495
Tel : (+1) 703 715 3921
Fax : (+1) 703 860 1183

CANADA
45, De Villebois, suite 200
Gatineau (PQ)
Canada, J8T 8J7
Tel : (+1) 819 243 3755
Fax : (+1) 819 243 3354

JAPAN
Yebisu Garden Place Tower
PO Box 5024
20-3, Ebisu 4 - Chome
Shibuya - ku TOKYO 150 - 6028
Tel : (+81) 3 5424 85 65
Fax : (+81) 3 5424 85 81

ALCATEL