

Alcatel 1948 PLO

High power 1480 nm Pump Laser module

Description

The Alcatel 1948 PLO module contains a SLMQW 1480 nm high power laser directly coupled to the pigtail.

It incorporates a thermo-electric cooler, precision NTC thermistor, and a monitor photodiode. The

Alcatel 1948 PLO can be pigtailed with a standard Single Mode Fiber (SMF) or a Polarization Maintaining Fiber (PMF).

The Alcatel 1948 PLO is dedicated to 1480 nm pumped Erbium-Doped Fiber Amplifiers (EDFA).

Features

- From 140 to 200 mW output power versions
- Low drive current
- SMF or PMF
- InGaAsP SLMQW laser
- Internal TEC and monitor photodiode
- Hermetic 14-pin butterfly package
- Full performance in operating case temperature from 0 to + 70 °C

Applications

- High power EDFA
- Instrumentation



Optical characteristics

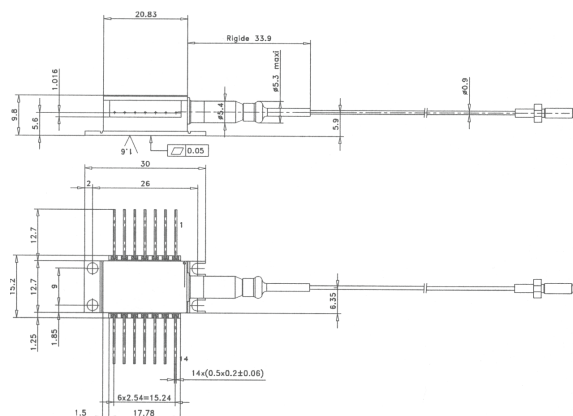
Parameter	Condition	Min	Typical	Max	Unit
Threshold current (I _{th})			35	65	mA
Output power (P _f)	I _f = 700 or 600 mA	140	155		mW
	I _f = 700 or 600 mA	160	175		mW
	I _f = 700 or 600 mA	180	200		mW
	I _f = 700 or 800 mA	190	210		mW
	I _f = 800 mA	200	220		mW
Forward voltage (V _f)	@ I _f		2.1	2.5	V
Monitoring current	@ I _f	300			μA
Wavelength range		1460		1490	nm
Spectral width (RMS)	- 10 dB			15	nm
Photodiode dark current	V = - 5V			50	nA
Photodiode capacitance	V = - 5V, 1 MHz			15	pF
Thermistor resistance		9.5		10.5	k
TEC current (I _{tec})	T = 45°C; T _{chip} = 25°C; T _{case} = 70°C			1.3	A
TEC voltage (V _{tec})	T = 45°C; T _{chip} = 25°C; T _{case} = 70°C			4.2	V

Absolute maximum ratings

Parameter	Min	Max	Unit
Operating case temperature	- 5	75	°C
Storage temperature	- 40	85	°C
Laser forward current		1000	mA
Laser reverse voltage		2	V
Photodiode forward current		1	mA
Photodiode reverse voltage		20	V
TEC voltage		4.6	V
TEC current		1.7	A
ESD applied to PIN detector (pin 3&4) [1]		100	V
ESD applied on all others pins [1]		2000	V
Lead soldering time (at 350 °C)		3	s
Package mounting screw torque		0.2	Nm

[1] Human body model

Mechanical details

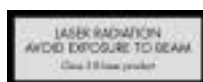


Pin out

N°	Description
1	Peltier Cooler (+)
2	Thermistor
3	Photodetector Anode
4	Photodetector Cathode
5	Thermistor
6	Not Connected
7	Not Connected
8	Not Connected
9	Not Connected
10	Laser Anode
11	Laser Cathode
12	Not Connected
13	Case
14	Peltier Cooler (-)

Laser pigtail : 0.9mm jacket
 Length : 0.9m minimum
 SMF : SMF 28 (or equivalent), or
 PMF : Fujikura SM15-P-8/125/UV/UV-400
 slow axis (or equivalent)

Tighten the 4 screws (C M2x4) up to 200 mN/m -
 Do not exceed this mounting torque.



Ordering information

Alcatel 1948 PLO

Pigtail	Code
SMF	3CN 00350 XY
PMF	3CN 00351 XY

XY defined by power and drive current on request

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Customized versions are available for large quantities.

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