

# Alcatel 1911 OFA

## Erbium-Doped Fiber Amplifier

### Analog Module

#### Description

The Alcatel 1911 OFA Erbium-Doped Fiber Amplifier (EDFA) is a power booster designed for use in analog applications.

The Alcatel 1911 OFA has been optimized for low-noise figure and gain tilt to ensure minimal degradation of the CNR, CSO and CTB of your analog transmission system. The use of optical isolation at the output of the amplifier (optional at input) ensures that reflections from unmatched connectors in the system do not affect amplifier performance.

#### Features

- Direct signal amplification at 1550 nm

- Optimized for AM-VSB analog transmission
- High optical output power (+17 dBm) single pump design
- Low-noise figure for optimal CNR
- Minimal gain tilt for optimum CSO/CTB
- Output (optional at input) optical isolator minimizes system susceptibility to reflections
- Compact, rugged low profile package



#### Applications

- Power booster for CATV and Hybrid Fiber Coax (HFC) networks
- Low-noise post-amplifier for transport systems

### Optical characteristics

Parameter	Min	Typical	Max	Unit
Output power [1]	+ 16			dBm
Input power		+ 6	+ 10	dBm
Operating wavelength	1550	1555	1560	nm
Noise figure			6	dB
Polarization mode dispersion			0.5	ps
Gain tilt	- 0.25	0	+ 0.25	dB/nm
Input/output optical return loss		33		dB
CSO contribution			- 65	dBc
CTB contribution			- 70	dBc

Notes : Parameters are start of life.

[1] 16 dBm version

### Electrical characteristics

Parameter	Min	Typical	Max	Unit
Pump operating current			300	mA
Pump operating voltage			2.5	V
Pump photodiode current	200		1500	A
TEC current			1.5	μA
TEC voltage			4.0	V
Thermistor 25 °C	9.5		10.5	k
Input monitor	5		16	μA/mW
Output monitor	5		16	μA/mW

All parameters are specified within the overall temperature range.

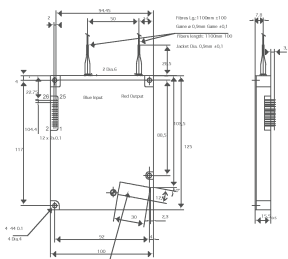
The typical values are referenced to + 25 °C.

## Absolute maximum ratings

Parameter	Condition	Min	Max	Unit
Operating temperature		0	+ 65	°C
Storage temperature		- 20	+ 70	°C
Laser drive current		0	350	mA
Pump laser forward voltage			2	V
Soldering temperature	3 s		+ 350	°C
Axial pull force on fiber	10 s		5	N
Fiber bend radius from package		40		mm

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only.

## Mechanical details



## Pin out

N°	Description
1	Gain block case
2	Gain block case
3	Not Connected
4	Not Connected
5	TEC anode
6	Thermistor
7	TEC cathode
8	Thermistor, case pump
9	Not Connected
10	Not Connected
11	Not Connected
12	Not Connected
13	Pump laser cathode
14	Pump laser anode, case pump
15	Pump photodiode cathode case
16	Pump photodiode anode
17	Not Connected
18	Not Connected
19	Not Connected
20	Not Connected
21	Input photodiode cathode
22	Input photodiode anode
23	Output photodiode cathode
24	Output photodiode anode
25	TEC cathode
26	TEC cathode

## Ordering information

Alcatel 1911 OFA

Part number	Description	Connector type
3CN 00175 AA	+ 16 dBm	SC/APC
3CN 00353 AA	+ 17 dBm	SC/APC

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Customized versions are available for large quantities.

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## Standards

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



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