Pocket Size Optical Amplifier

Narrowband / Single Channel

Product Description

Features

- Ultra compact size (90mm x 70mm x 15mm)
- Intelligent electronics integrated
- Input and output monitor
- Automatic gain control
- Transient suppression
- Low power consumption
- Wide dynamic range
- Output power up to +17 dBm

Applications

- Narrowband or single channel amplification
- Access, metropolitan and long-haul networks
- Wavelength add/drop module sites
- Pre amplifiers and boosters

Oplink Fiber Optic Product Lines

- Amplifier Components
- Amplifier Modules
- DWDMs
- Switching/Routing/ Signal Conditioning

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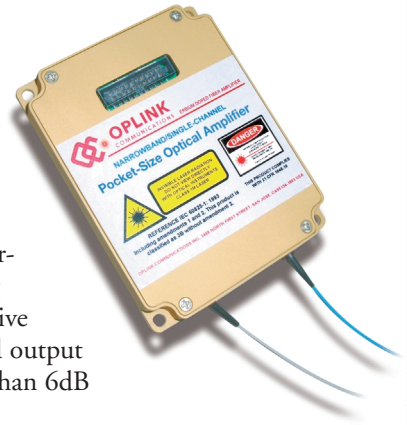


The Narrowband/Single Channel pocket-size amplifier's compact, mountable package is designed for economical pre or booster applications in C band. It can be used in multiple positions within access, metropolitan and long-haul networks. The unit offers accurate gain control and fast transient performance with low power consumption. By utilizing Oplink's Telcordia-compliant, high-performance passive component, the amplifier can provide 30dB gain and output power up to +17 dBm, while the noise figure is less than 6dB across the entire C band.

Pre-amplifier

Parameter	Symbol	Min	Typical	Max.	Units
Wavelength Range	λ	1529		1562	nm
Channel Number		1		16	
Total Input Power	P_{in}	-30		-8	dBm
Total Output Power	P_{out}	0			dBm
Typical Gain	G		30		dB
Noise Figure	NF		5.0	-	dB
Polarization Sensitivity	PDL			0.2	dB
Polarization Mode Dispersion	PMD			0.5	ps
Optical Return Loss	RL	30			dB
Gain Transient Suppression Time				0.5	ms

Booster-amplifier

Parameter	Symbol	Min	Typical	Max.	Units
Wavelength Range	λ	1529		1562	nm
Channel Number		1		16	
Total Input Power	P_{in}	-6		+4	dBm
Total Output Power	P_{out}	0		17	dBm
Typical Gain	G			23	dB
Noise Figure	NF		6.0	-	dB
Polarization Sensitivity	PDL			0.2	dB
Polarization Mode Dispersion	PMD			0.5	ps
Optical Return Loss	RL	30			dB
Gain Transient Suppression Time				0.5	ms

Environmental Specifications

Parameter	Symbol	Min	Max.	Units
Operational Temperature Range	T_{op}	-5	70	°C
Storage Temperature Range	T_{st}	-40	70	°C
Operating Humidity (non-condensing)		5	95	%RH

OPLINK COMMUNICATIONS

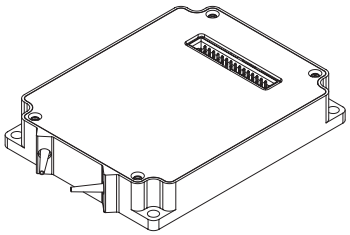
Pocket Size Optical Amplifier

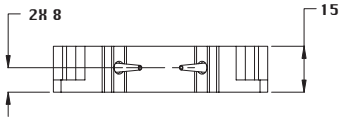
Narrowband / Single Channel

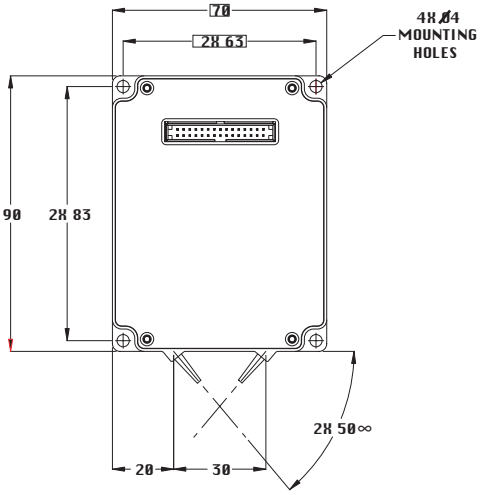
Pin Information

Pin	Description	Functioinality
1	N/C	No Connection
2	N/C	No Connection
3	Power Supply	+5.0 V
4	Power Supply	+5.0 V
5	Ground	Ground
6	Ground	Ground
7	Serial Communication Input, RX	RS-232 (Default) or TTL, Configurable
8	Serial Communication Output, RX	RS-232 (Default) or TTL, Configurable
9	Ground	Serial Communication Ground
10	Ground	Ground
11	N/C	No Connection
12	Reset	Reset
13	Amplifier Disable	TTL Input, Active Low
14	Output Power Mute	Eye-Safe Power Control Input, TTL Input, Active Low
15	Module Temperature Alarm	TTL Output, Active High
16	Common Alarm	All Internal Alarm
17	Pump Temperature Alarm	TTL Output, Active High, if pump temperature exceeds 25±3°C
18	Pump Drive Current Alarm	TTL Output, Active High, if pump bias exceeds 10% of its end-of-life value
19	Loss of Input Alarm	TTL Output, Active High
20	Loss of Output Power Alarm	TTL Output, Active High
21	Ground	Input Power Monitor Ground
22	Ground	Output Power Monitor Ground
23	Input Optical Power Monitor	Analog, Pin = (15xVout – 50) (dBm) V = 0 ~ 4.0V, Output Impedance ≤120Ω
24	Output Optical Power Monitor	Analog, Pout = (15xVout – 10) (dBm) V = 0 ~ 4.0V, Output Impedance ≤120Ω
25	Ground	Ground
26	Ground	Ground
27	Power Supply	+5.0 V
28	Power Supply	+5.0 V
29	N/C	No Connection
30	N/C	No Connection

Mechanical Footprint







Ordering Information

NBOA □ 0 0 □ □ □□ □ □ □ □

Band Type
Single Channel = 1
Narrow Band = 2

Operation Band
C Band = C

Channel Number
1 channel = 1
-
-
8 channels = 8

Output Power
-5 dBm = M5
0 dBm = 00
15 dBm = 15
17 dBm = 17

Package
P2=2

Fiber Type
900 µm loose tube =2

Fiber Length
1 Meter=1
1.5 Meters=5
2 Meters=2

Connector Type
None=1
FC/PC=2
FC/SPC=3
FC/APC=4
SC/PC=5
SC/SPC=6
SC/APC=7

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Custom specs and configurations available. Please contact Oplink for more information.

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