# BOA 1017: O-band Booster Optical Amplifier

7.1.2.SP.1017 Rev C

Description

The BOA 1017 is a high saturation output power high bandwidth polarization maintaining Booster Optical Amplifier (BOA). It incorporates a highly efficient InP/InGaAsP Quantum Well (QW) layer structure and a reliable ridge waveguide design.

It is housed in a standard 14 pin butterfly package with integrated thermoelectric cooler and thermistor. Packaging options include isolator(s) and choice of single mode fiber and polarization maintaining fiber tails.
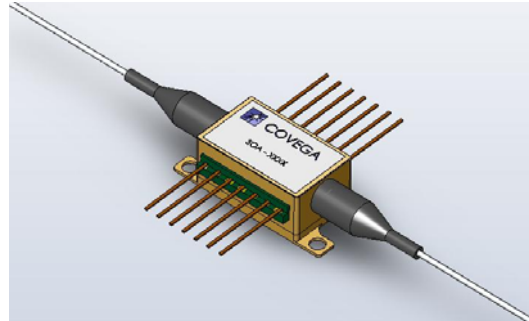
Features

→   High Saturation Output Power
→   Broad Spectral Bandwidth
→   High Fiber-to-Fiber Gain
→   High Polarization Extinction Ratio

Applications

✓   Telecom & Datacom
✓   Booster Amplifier of Fixed and Tunable ITU Lasers and Transmitters
✓   Research & Non-Linear Applications

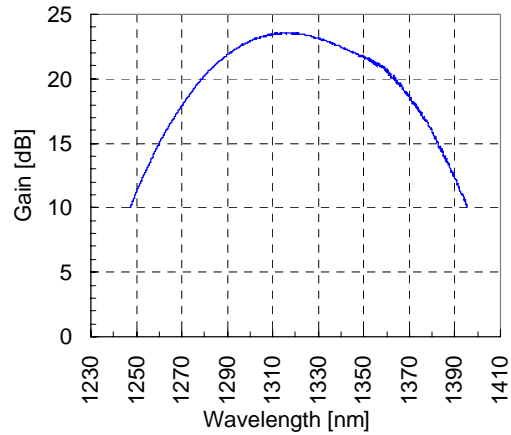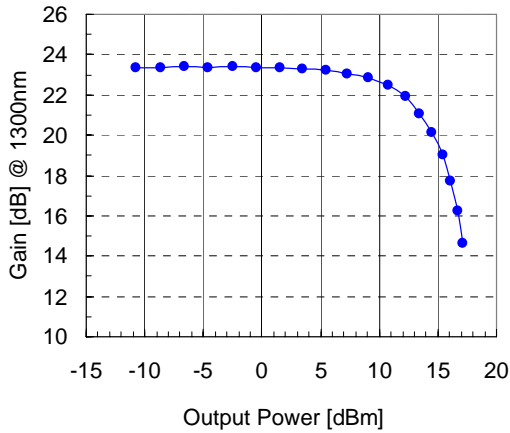## Specifications

CW; T (Chip) = 25°C, T (Case) = 0 - 70°C

| Parameter		Min	Typ	Max	
Operating Current	I_{OP}		500	600	mA
Central Wavelength	λ_C	1290	1310	1330	nm
Optical 3 dB Bandwidth	BW	60	70		nm
Saturation Output Power @ -3 dB	P_{SAT}	13	15		dBm
Small Signal Gain across BW @ Pin = -20 dBm	G	17	23		dB
Gain Ripple (p-p) @ I_{OP}	δG		0.3	0.8	dB
Polarization Extinction Ratio	PER		16		dB
Noise Figure	NF		7.0	9.0	dB
Forward Voltage	V_F		1.4	1.6	V
TEC Operation (typ / max @ T_{CASE} = 25°C / 70°C)					
- TEC Current	I_{TEC}		0.15	1.5	A
- TEC Voltage	V_{TEC}		0.35	3.5	V
- Thermistor Resistance	R_{TH}		10K		Ω
SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE					

The picture is a representation. The actual part may vary from the one shown.
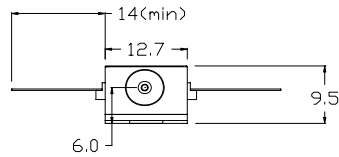
BOA 1017

Performance

Packaging
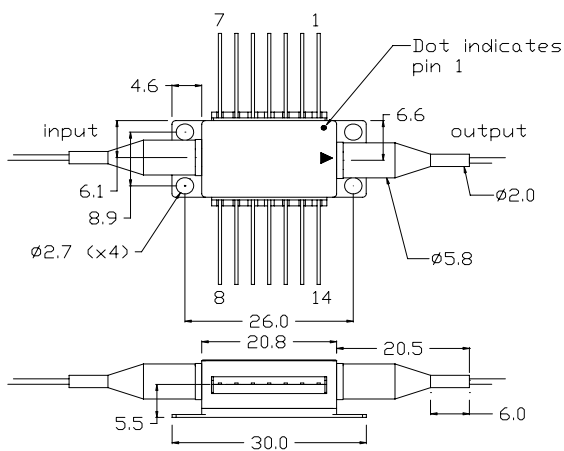

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PIN IDENTIFICATION

1.  TEC +          14.  TEC −
2.  Thermistor     13.  Case
3.  NC             12.  NC
4.  NC             11.  SOA Cathode
5.  Thermistor     10.  SOA Anode
6.  NC             9.   NC
7.  NC             8.   NC

Recommended mounting torque is
10−20oz.in ( 0.07−0.14N.m ).
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all dimensions in mm

Ordering Information

BOA 1017 - X - 0 - X - X - X - X - X

X	0	X	X	X	X	X	
Isolator	**Reserved**	**Fiber jacket configuration***	**Input Fiber**	**Output Fiber**	**Input Connecter**	**Output Connector**	**Reserved**
0 = none		U = SMF-28, loose tube	S = SMF	S = SMF	A = FC/APC	A = FC/APC	
1 = input only		T = SMF-28, tight jacket	P = PMF	P = PMF			
2 = output only		W = PMF 1300 nm, loose tube					
3 = input & output							

* See fibertail options details in catalog