



Figure 1. Top View

FEATURES

- 1550 nm operating wavelength
- 35 dB typical small-signal gain
- Up to 20 dBm optical output power
- 6 dB typical noise figure
- 70 nm typical gain bandwidth
- Polarization-maintaining operation
- 20 dB typical polarization extinction ratio
- Integrated TEC and thermistor
- Hermetically sealed butterfly package
- Low power consumption

APPLICATIONS

- Distributed fiber-optic sensing
- Broadband optical sources
- Fiber Bragg grating interrogation
- 1550 nm optical communication
- Wind LiDAR
- Space-based optical detection
- Free-space optical communication
- MOPA laser systems



SPECIFICATIONS

Table 1.

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit/Note
ASE Central Wavelength	λ_{ASE}	$I_f = 1000\text{mA}$, $T_A = 25^\circ\text{C}$		1520		nm
Working Wavelength	λ	$I_f = 1000\text{mA}$, $T_A = 25^\circ\text{C}$		1550		nm
Gain Spectrum (-3dB)	$\Delta\lambda$	$P_{in} = -10\text{dBm}$, $I_f = 1000\text{mA}$		70		nm
Max Output Power	P_{max}	$I_f = 1000\text{mA}$, $P_{in} = 5\text{dBm}$ @1550nm	20			dBm
Small Signal Gain	SSG	$I_f = 1000\text{mA}$, $P_{in} = -25\text{dBm}$ @1550nm	30	35		dB
Polarization Extinction Ratio	Per	$I_f = 1000\text{mA}$, $T_A = 25^\circ\text{C}$		20		dB
Noise Figure	NF	$T_A = 25^\circ\text{C}$, $I_f = 1000\text{mA}$ @1550nm		6	8	dB
Operating Current	I_f			1000	1300	mA
Forward Voltage	V_f			1.5	2	V
Shutdown Extinction Ratio	ER	$I_f = 1000\text{mA}/I_f = 0\text{mA}$, $P_{in} = 0\text{dBm}$		60		dB
TEC Current	I_{TEC}				1.8	A
TEC Voltage	V_{TEC}				3.4	V
Thermistor Resistance	R_{th}	$T_A = 25^\circ\text{C}$	9.5	10	10.5	k Ω
Thermistor Current	I_{th}				5	mA
Leakage Rate		$T_A = 25^\circ\text{C}$	1×10^{-12}	1×10^{-11}	1×10^{-8}	Pa.m ³ /s
Operating Temperature	T_{opr}	$I = I_{opr}$	-10		70	$^\circ\text{C}$
Storage Temperature	T_{stg}				85	$^\circ\text{C}$
Total Power Consumption	P				5	W



TYPICAL CHARACTERISTICS

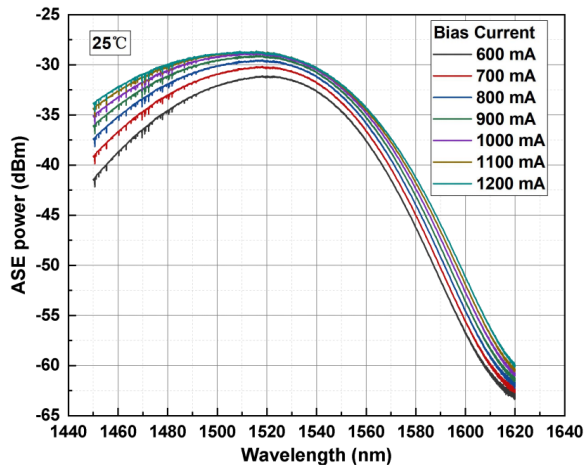


Figure 2. ASE Spectra

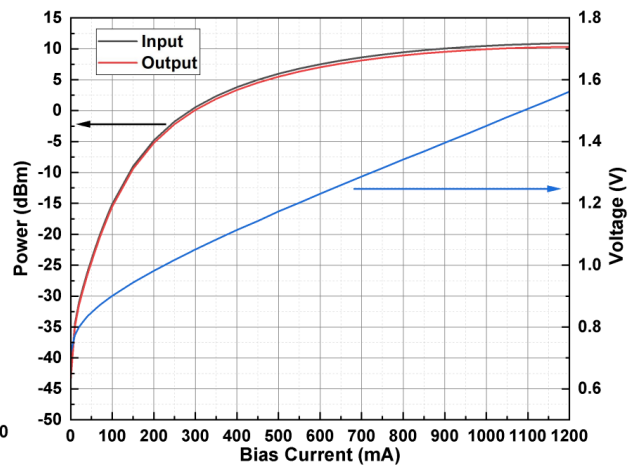


Figure 5. ASE LIV Characteristics

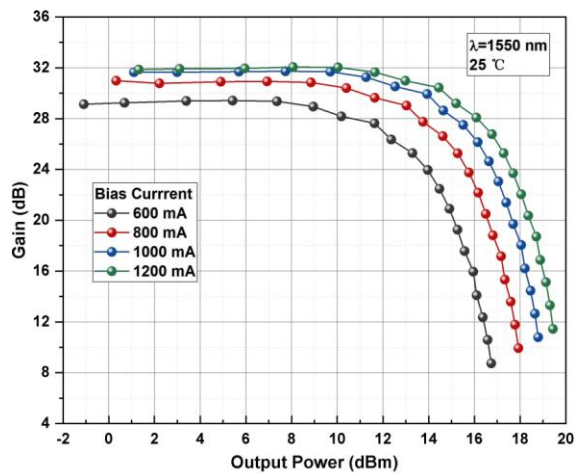


Figure 3. Gain vs. Output Power

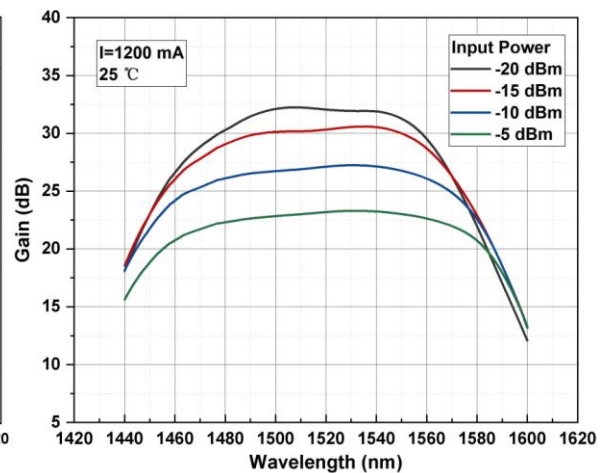


Figure 6. Gain Spectra

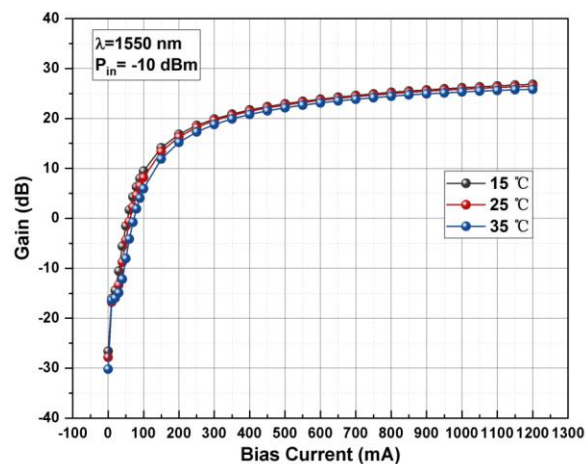


Figure 4. Gain vs. Current (different temperature)

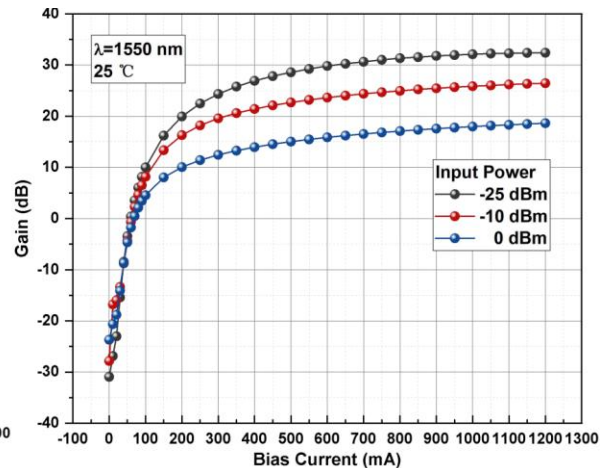


Figure 7. Gain vs. Current (different input power)



NAMING PRINCIPLE

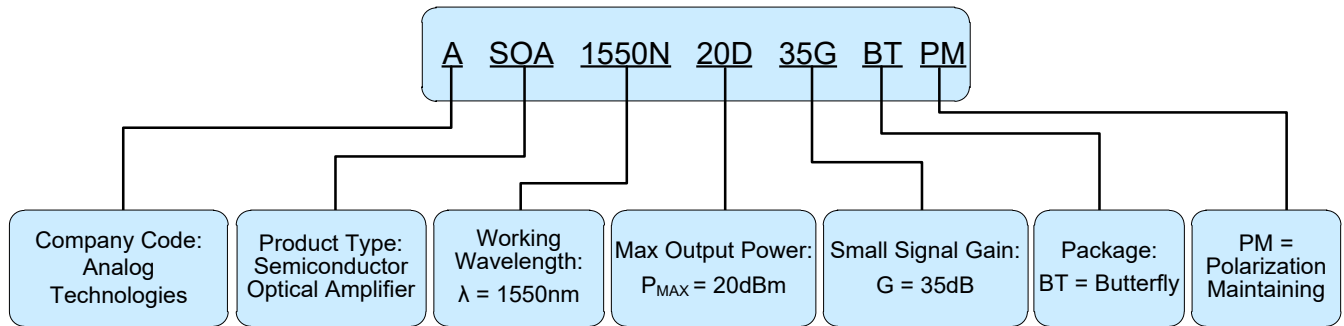


Figure 8. Naming Convention of ASOA1550N20D35GBTPM

OUTLINE DIMENSIONS

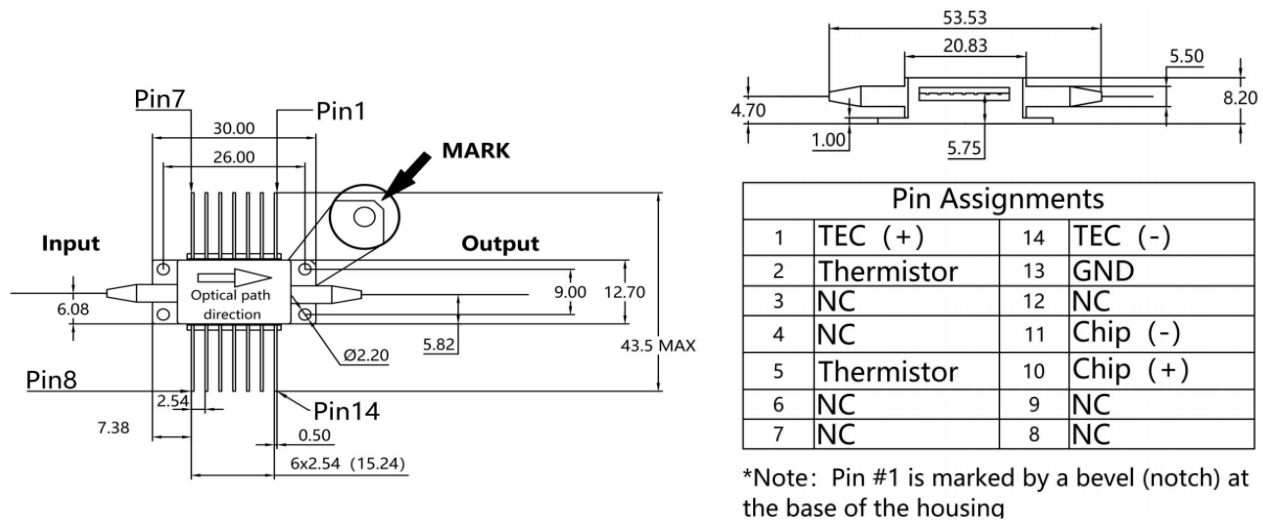


Figure 9. Outline Dimensions

ORDERING INFORMATION

Part Number	Buy Now
ASOA1550N21D35GBTPM	*

*: both and are our online store icons. Our products can be ordered from either one of them with the same pricing and delivery time.

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