

1550nm butterfly SOA --HC-BT515G25

The semiconductor optical amplifier (SOA) series products are mainly used for optical signal amplification, which can significantly improve the output optical power. The product has the characteristics of high gain, low power consumption, low polarization correlation and so on, and the chip is self-owned, and the whole process is domestic and controllable. The series is available in a sealed standard butterfly package and can be customized.

Product application

It is used in distributed optical fiber sensing system to replace acousto-optic modulator as modulator/chopper.

The invention is applied to a wide-spectrum light source such as a wide-spectrum light source of a demodulation instrument

of a fiber Bragg grating.

Apply to an optical communication system to realize that amplification of 1550 wavelength optical signals and replace part of EDFA

Used in wind radar, space optical detection and space optical communication, and combined with narrow linewidth laser to form MOPA laser

Parameter	Symbol	Working conditions	Minimum value	Typical value	Maximum value	Unit
ASE center wavelength	λ_{ASE}	25℃, I _f =250mA		1515		nm
Operating wavelength	λ	25℃, P _{in} =0dBm		1550		nm
-3dB gain spectral width	Δλ	P _{in} =0dBm	100			nm
Maximum optical power	P _{max}	I _f =250mA, P _{in} =5dBm@1550nm	12		15	dBm
Small signal gain	SSG	I _f =250mA, P _{in} =-25dBm@1550nm		30		dB
Polarization dependent gain	PDG	25℃, I _f =250mA		1.0	2.0	dB
Noise figure	NF	25℃, I _f =250mA@1550nm		7	9	dB

Product specifications

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HC Optical Science and Tech Co., Ltd.

Operating current	lf			250	400	mA
Forward voltage	V _f			1.3	1.5	V
Turn-off extinction ratio 1	ER	I _f =250mA/I _f =0mA, P _{in} =0dBm		50		dB
Off Extinction Ratio2	ER	l _f =250mA/l _f =-5mA, P _{in} =0dBm		70		dB
TEC current	ITEC				1.8	А
TEC voltage	VTEC				3.4	V
Thermistor resistance	Rtherm	T=25 ℃	9.5	10	10.5	ΚΩ
Thermistor current	I _{therm}				5	mA
Tightness 1		T=25 ℃	1*10 ⁻¹²	1*10 ⁻¹¹	1*10 ⁻⁸	Pa.m³/s
Operating temperature	Tc	l=lop	-10		70	°C
Storage temperature	Tstg				85	°C
Total power consumption	Р				4	W

Note 1: The air tightness value is the package value of the package, which is obtained by eliminating the residual interference test outside the package.

Structure dimension and pin definition



Typical characteristic curve







Gain vs. Current (different temperature)

Gain vs. Current (different input power)



Order information:

- HC-BT515G25 with Connector (FC/APC or other type connector), Fibrlength 0.5m or 1m
- HC-BT515G25 without Connector