

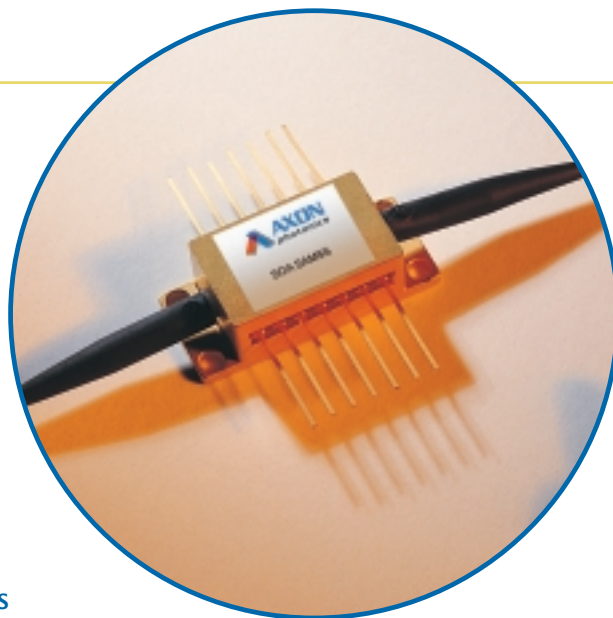
Optoelectronic Components

1550nm SEMICONDUCTOR OPTICAL AMPLIFIER MODULE

SAM5S Series

Based on Axon's proprietary MOCVD process, these semiconductor optical amplifiers (SOA) achieve a peak gain of up to 25dB and a 3dB passband of up to 60nm. A strain-compensated structure provides low polarization dependence. Hermetic packaging results in a robust and highly reliable module.

These SOA modules are well suited to all optical network applications providing functions such as optical amplification, switching and wavelength conversion/routing.



Features

- Up to 60nm wide 3dB bandwidth
- Bit-rate transparent
- Low polarization sensitivity
- Typical gain 22dB
- Up to 25dB gain available
- Fast <1ns switch time
- Reliable hermetic package

Applications

- Optical amplification or regeneration
- Optical switching
- Optical add/drop multiplexing
- Wavelength routing
- Wavelength conversion
- Broadband light source

Options

- 14 butterfly package shown
- 14-pin DIL package available
- 1310nm SOA available

PARAMETER	MIN	TYP	MAX	UNITS	COMMENTS
Peak Wavelength	1530		1610	nm	
Gain	18	22		dB	Pin = -25dBm
Polarization Dependent Gain		< 1.0	2.0	dB	
Noise Figure		8	12	dB	
Saturation Output Power	1	10		dBm	Drive current = 200mA
3dB Bandwidth	40			nm	Wider passband available Depends on application
Switching Time		< 1	2	ns	
Drive Current		100	200	mA	Absolute max = 250mA
TEC Drive Voltage			4	V	
TEC Drive Current			1.5	A	
Thermistor Resistance		10		kΩ	@ 25°C
Operating Temperature	-20		70	°C	

Corporate Office

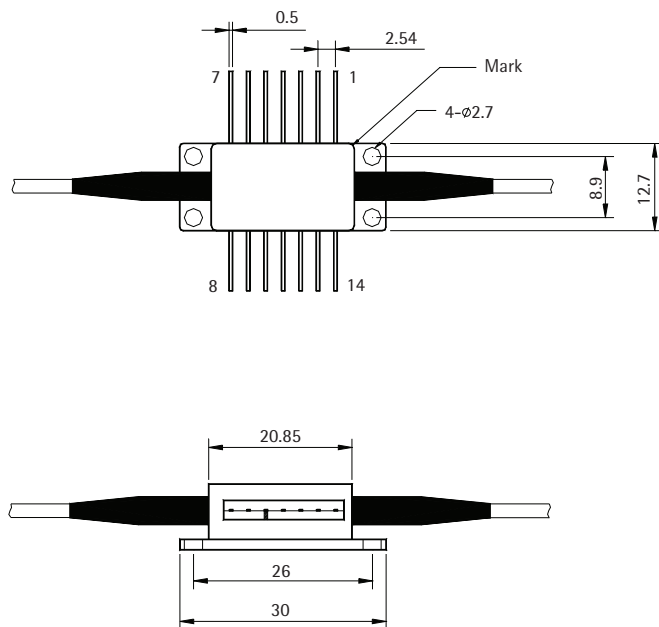
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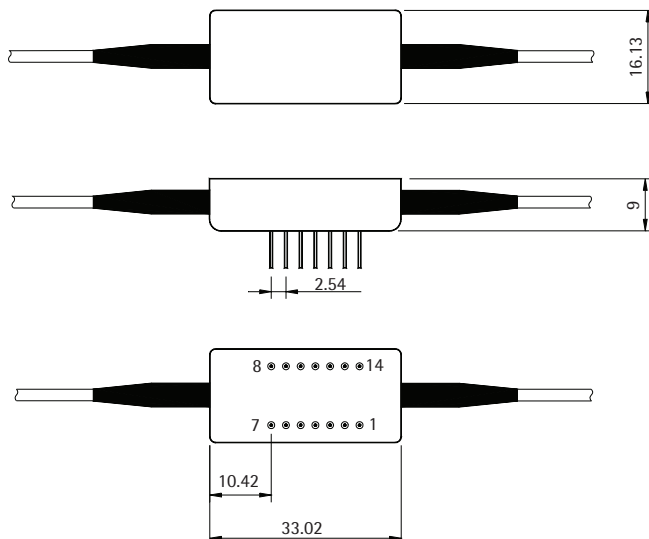
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Schematic of 14-Pin Butterfly Package (Units:mm)



PIN	DESCRIPTION
1	TEC +
2	NC
3	Thermistor
4	Thermistor
5	SOA +
6	NC
7	NC
8	NC
9	NC
10	SOA +
11	SOA -
12	NC
13	NC

Schematic of 14-Pin DIL Package (Units:mm)



PIN	DESCRIPTION
1	TEC +
2	NC
3	SOA + (GND.)
4	Thermistor
5	Thermistor
6	NC
7	NC
8	NC
9	NC
10	SOA + (GND.)
11	SOA -
12	NC
13	NC
14	TEC -