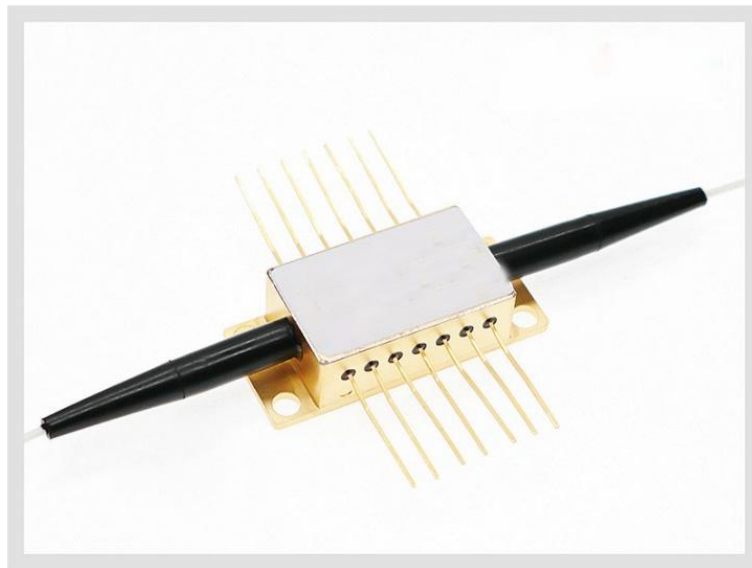


## 840nm Semiconductor Optical Amplifier(Nonlinear)



### ● Product Description

This is a polarization-insensitive optical amplifier. It uses advanced epitaxial growth and optoelectronic packaging technologies to achieve high output saturation power, low noise figure, and high gain over a broad spectral bandwidth.

### ● Product features

Wide optical bandwidth; High output power; Low polarization sensitivity;

Multi-quantum well (MQW) structure



## ● Part Number

MP-SOA-840-24db-25-SA

## ● Application area

Telecom and data communications | All-optical signal processing |

Communications | Sensing

## ● Core parameters

Center Wavelength	Spectral width
820-830nm	20-30nm

## ● General Parameters

Detailed parameters

Laser specifications

Electrical/optical characteristics (Tsub=25°C, CW bias, unless otherwise noted)

Item	symbol	Test conditions	Min. value	Typical values	Max. value	unit
Fiber optic gain	G	CW, IF = 300mA	20	24	28	dB
Forward current	IF			300	350	mA
Forward voltage	VF				2.5	V



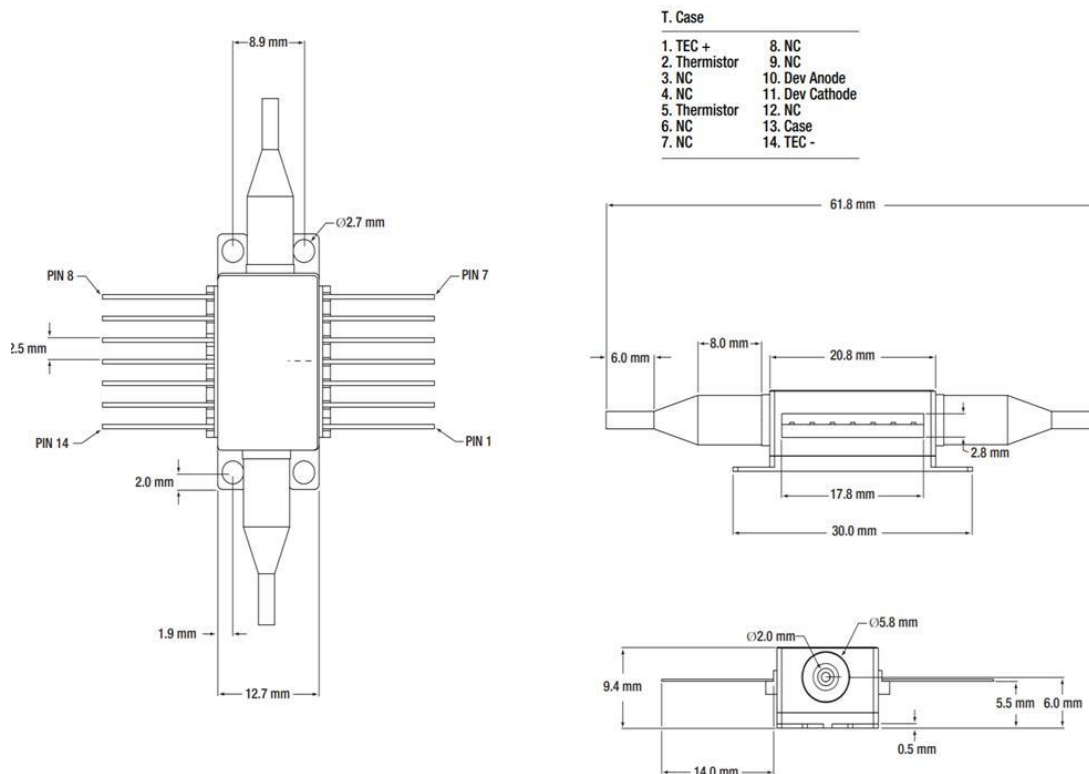
Center wavelength	$\lambda_c$	CW, IF = 300mA	820	825	830	nm
Spectral width	$\Delta\lambda$	CW, IF = 300mA	20	25	30	nm
Saturation power	PS	CW, IF = 300mA	8	9	10	dBm
Noise figure	NF	CW, IF = 300mA	7	8	9	dB
Gain ripple	$\delta G$	CW, IF = 300mA		1	2	dB
Polarization-related gain	PDG	CW, IF = 300mA		10		dB
Chiller voltage	VC	IF=EOL, TC=70°C			2.7	V
Cooler current	IC	IF=EOL, TC=70°C			1.4	A
Thermal resistance	Ro	TLD=25°C, B=3900 ± 100K	9.5	10.0	10.5	kΩ



## Absolute maximum rated parameters

Item	symbol	Rated value	unit
LD forward current	If	400	mA
LD reverse voltage	Vr	1.8	V
Operating temperature	TC	-20 to +70	°C
Storage temperature	Tstg	-20 to +85	°C
Cooling current	IC	1.4	A

## Dimensions and pin definitions





1	Thermoelectric Cooler (+)	8	N/C
2	Thermistor	9	N/C
3	NA	10	SOA Anode (+)
4	NA	11	SOA Cathode (-)
5	Thermistor	12	N/C
6	N/C	13	Case Ground
7	N/C	14	Thermoelectric Cooler (-)

## Ordering information

MP-SOA-W□□□□-☆-A8▽-XX

□□□□: Wavelength

680:680nm

910: 910nm

\* \* \* \* \*

1550:1550nm

1650:1650nm

☆ : Output Power

A: 5dbm

B: 10dbm

▽: Spectral Width

1: 60-70nm



**2: 30-40nm**

**XX: Fiber and Connector Type**

**SASA=(HI780+ FC/APC)+(HI780+ FC/APC)**

**SPSP=(HI780+ FC/PC)+(HI780+ FC/PC)**

**PPPP=(PM Fiber+ FC/PC)+(PM Fiber+ FC/PC)**

**PAPA=(PM Fiber+ FC/APC)+(PM Fiber+ FC/APC)**