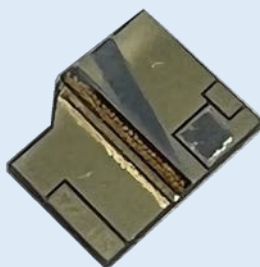


Product Brief

FEATURES

- High power & high efficiency
- Diffraction-limited output
- Efficient coupling to SMF
- Operates both continuous wave and pulsed (ns to ms)



APPLICATIONS

- LIDAR systems for remote sensing and autonomous vehicles
- Free-space optical communication
- Replacement for Erbium-doped fiber amplifier

NOTES

1. Class 4 high power laser output. Appropriate precautions should be taken by user.
2. Devices are sensitive to electrostatic discharge (ESD). Appropriate precautions should be taken by user.

OVERVIEW

The 1500 to 1600 nm *aura*™ semiconductor optical amplifier (SOA) is the world's first c-band diffraction-limited watt-class amplifier. This product is intended to replace bulky, inefficient, and expensive erbium-doped fiber amplifiers (EDFAs). The chip architecture is based on a single-mode tapered waveguide amplifier which can be easily coupled into from a single mode fiber (SMF). The nearly diffraction-limited output enables efficient coupling to single-mode fiber and maximizes far-field irradiance when collimated in free space. Various packaging configurations are offered including: 1) hard-soldered junction-down on C-mount, 2) hard-soldered junction-down on ceramic submount, and 3) unsoldered bare chip.

The *aura*™ product line is intended to address applications such as free space optical communication, sensing, and LIDAR.

SPECIFICATIONS

General Parameter	Typical Value	Unit
Optical		
Center Wavelength	1500 to 1600	nm
Typical Input Power	17	dBm
Rated Output Power	2.5	W
Rated Output Power	34	dBm
Gain Bandwidth, 3 dB	60	nm
Gain	17	dB
RMS Gain Ripple	0.1	dB
Maximum Noise Figure	6	dB
Slow Axis M ² (ISO 11146-3)	1.3	-
Fraction of Power Diffraction-Limited	90%	%
Output Slow-Axis Divergence, 4D σ	6	deg
Output Fast-Axis Divergence, 4D σ	55	deg
Output Astigmatism	1.7	mm
Electrical		
Operating Current	12	A
Operating Voltage	1.2	V
Electrical to Optical Efficiency	22%	%
Series Resistance	25	m Ω
Thermal		
Operating Temperature	20	°C
Wavelength-Temperature Coefficient	0.5	nm/°C
Thermal Resistance	3.2	W/A