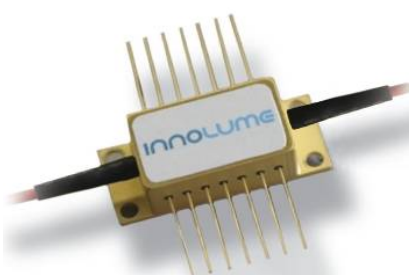


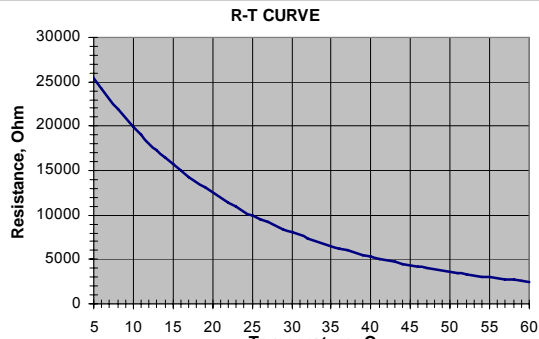
SOA-1060-100-PM-24dB	
High net gain Broad Band Semiconductor Optical Amplifier at 1060nm	
	<p>Features:</p> <ul style="list-style-type: none"> • Ultra broad band flat top gain spectrum > 100nm • High net gain • CW or pulse (down to 2ns pulse width) operation • High reliable epoxy free technology • Polarization maintaining Corning PM980 fiber (HI1060 fiber on request) <p>Applications:</p> <ul style="list-style-type: none"> • Swept Laser Source • Optical coherence tomography (OCT)
Specification	DATE: 12 th June 2009

SPECIFICATIONS				
Test conditions: thermistor temperature 25°C, CW operation mode at recommender operating current				
Parameters	Min.	Typ.	Max.	Unit
Optical bandwidth at -3dB from gain maximum (P _{IN} = -20dBm)	80	100		nm
Optical bandwidth at +20dB gain (P _{IN} = -20dBm)	100			nm
Small signal gain across bandwidth (P _{IN} = -20dBm)	21	24		dB
Central wavelength of ASE ¹	1010	1020	1030	nm
Recommended operating current		400	600	mA
Saturation output power @ -3dB	13	15		dBm
Average ASE ripple amplitude		0.05	0.15	dB
Forward voltage		1.7	2.0	V
Polarization Extinction Ratio (PER)	15	18		dB

¹ ASE - amplified spontaneous emission

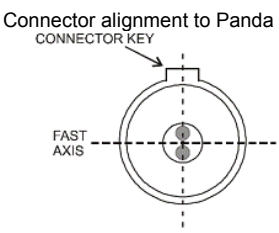
THERMISTOR SPECIFICATION		
Parameters	Value	Unit
Thermistor type	BC103J1K	
Resistance @25°C	10 ± 1	kOhm
Beta 0-50°C	3890	K

R-T CURVE



FIBER SPECIFICATION		
Parameters	PANDA PM980	Unit
Mode-field diameter	6.6±1.0	µm
Cladding diameter	125±1	µm
Coating diameter	245±15	µm
Core-to-cladding offset	≤0.5	µm
Length	1.0 ± 0.2	m
Connector	FC/APC	

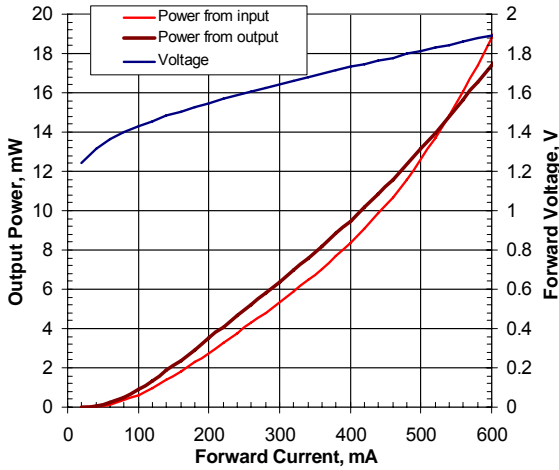
Connector alignment to Panda fiber:



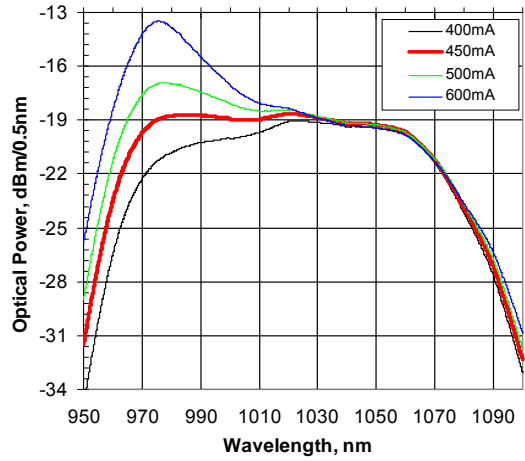
TYPICAL PERFORMANCE

Test condition: CW operation at 25°C thermistor temperature

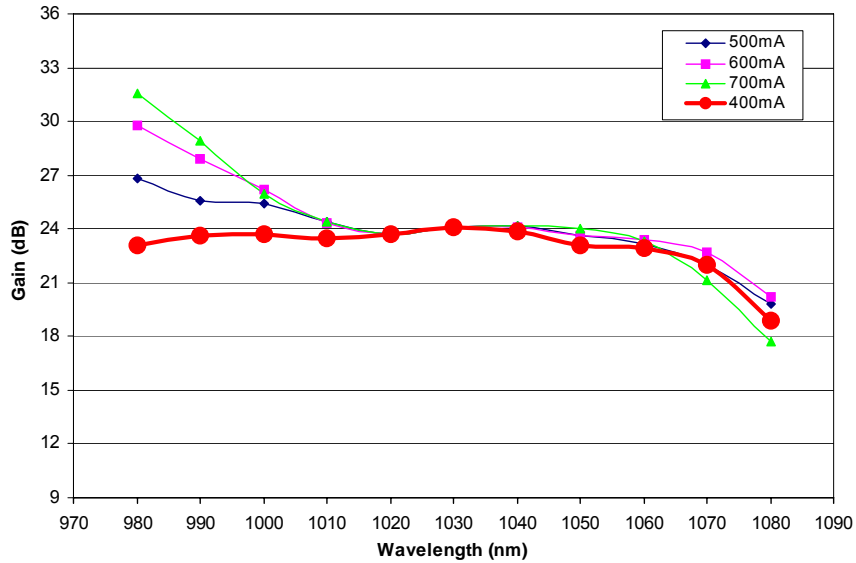
ASE Light-Current-Voltage Characteristics



Spectra Characteristics



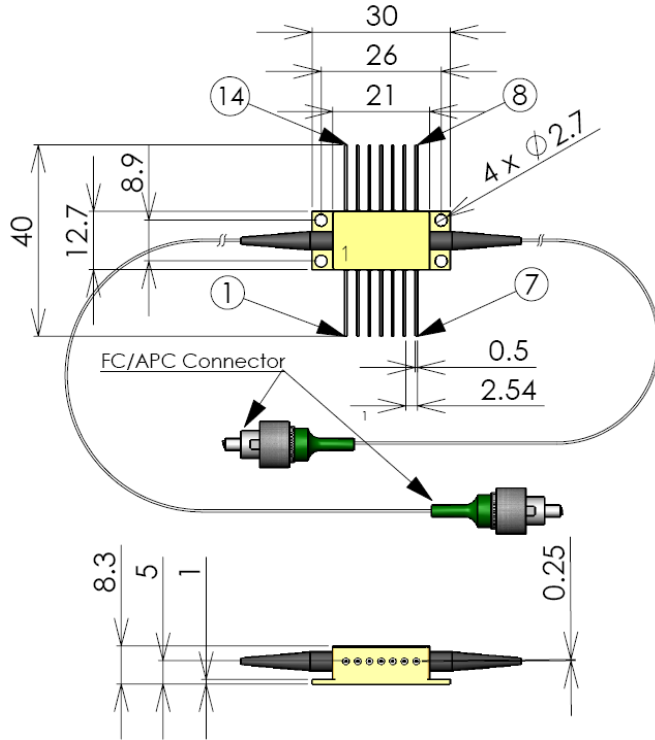
Small signal gain spectra



ABSOLUTE MAXIMUM RATINGS

Parameters	Min.	Max.	Unit
Laser Diode reverse voltage		2	V
Laser Diode CW forward current		$I_{op}+200$	mA
Thermo Electric Cooler current		3	A
Thermo Electric Cooler voltage		4	V
Case operating temperature range	10	50	°C

DIMENSIONS (All sizes in mm)



Pin identification:

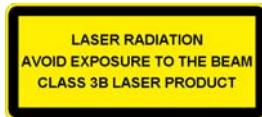
1. TEC "+"
- 2.
- 3.
4. Thermistor
5. Thermistor
- 6.
- 7.
- 8.
- 9.
10. Laser Diode anode "+"
11. Laser Diode cathode "-"
- 12.
13. Case
14. TEC "-"

SAFETY AND OPERATING INSTRUCTIONS

The laser light emitted from this device is invisible and will be harmful to the human eye. Avoid looking directly into the output fiber or into the collimated beam along its optical axis when the device is in operation. Proper laser safety eyewear must be worn during operation.

Operating the Laser Diode outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum peak optical power cannot be exceeded. A proper heatsink for the Laser Diode Module is required. Exposure to maximum ratings for extended period of time or exposure above one or more max ratings may cause damage or affect the reliability of the device.

ESD PROTECTION – Electrostatic discharge is the primary cause of unexpected Laser Diode failure. Take extreme precaution to prevent ESD. Use wrist straps, grounded work surfaces and rigorous antistatic techniques when handling laser diodes.



NOTE: Innolume product specifications are subject to change without notice.