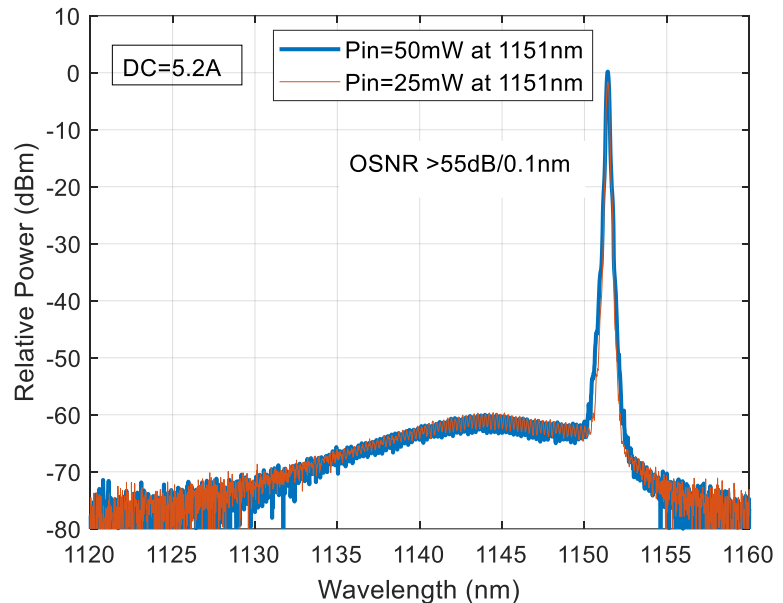


# NEXUS 1145nm PM Fiber Amplifier

## Key Features

- Output power up to 2 W
- $\lambda$  range: 1130 nm up to 1155 nm
- Single mode, single frequency
- PM fiber
- High polarization extinction ratio
- Control Modes: ACC and APC
- High beam quality:  $M^2 \approx 1.1$
- Compact & rugged design
- RS 232 or USB interface



## Description

### Output Spectra for 25mW and 50mW Input Powers @1151nm

CYBEL **NEXUS-AMP-1145** is a 1145nm high power, single mode, single frequency fiber amplifier that delivers up to 2 W of output power with near diffraction limited output beam (i.e.  $M^2 \approx 1.1$ ).

This compact OEM unit comes in a standard or polarization-maintaining fiber configuration, that provides stable and high performance over time. It is also available in 19-inch 2U benchtop.

Optimized for longer wavelengths within the Ytterbium gain band, the **NEXUS-AMP-1145** offers unmatched performance, making it an excellent choice for quantum applications when combined with ultra-narrow linewidth seed sources, among other precision-demanding uses. This unit includes an integrated LOS (Loss of Signal) feature to ensure amplifier safety in the event of seed failure

## Applications

- Quantum Applications
- Nonlinear frequency conversion
- LIDAR and Sensing
- Test and Measurement



NEXUS OEM Size 300x255x75 mm<sup>3</sup>

# NEXUS-1145 Specifications

OPTICAL	Unit	Min	Max	Comments
Optical Bandwidth	nm	1135	1155	Single Mode Operation Wavelength
Input Signal Power	mW	10	50	Other input power acceptable
Output Signal Power	W	2		With Narrow Linewidth Seed Source
Output Power Tunability	%	5 - 100		At Pout =2 W
Polarization Ext. Ratio (PER)	dB	≥ 20		PM Version
Output Beam Quality (M <sup>2</sup> )	M <sup>2</sup>	1.1		
Signal to Noise Ratio (OSNR)	dB	≥ 45		OSA Res. = 1 nm
Output Power Variation (RMS)	%	≤ 3		After 20 Min. Warm-up
Output Fiber Length	m	> 0.7		Longer Fiber at Request
Input Fiber Length	m	> 0.7		Longer Fiber at Request
Output Isolation	dB	20		Optional, External to the OEM
Connectors		FC/APC		Other Connectors and Collimators Available
ELECTRICAL				
Voltage	V	18 to 30		24 V nominal
Warm up Time	min	20		
Power Consumption	W	<100		25 °C, @Pout max=2 W
Control Interface		RS-232 & USB		
Mode of Operation		ACC		APC as Option
GENERAL				
Dimensions	mm	300x255x75		W/O heat sink - External Optical Isolator
Storage Temperature	°C	-10 to 65		
Operating Case Temp.	°C	10 to 50		
Humidity	%	5 to 95		Non condensing

## CUSTOMIZATION

The **NEXUS** is an amplifier platform that can be customized to match Customers' specific requirements. Please contact Cybel.

**COMPLIANCE with Regulatory Requirements:** These OEM products are Class 4 lasers as designated by the Center for Device and Radiology Health (CDRH). As such they are intended only in integration into other equipment and do not comply with CDRH requirement. It is the customer responsibility for CDRH certification of the full system that incorporates this industrial laser.



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