

Key Features

- Output power up to 20 W
- Bandwidth 2049 to 2053 nm
- Large dynamic range: >20 dB
- Single mode beam quality : $M^2 \approx 1$
- Turnkey Benchtop
- Standard or All-PM design
- High polarization extinction ratio
- USB remote interface
- Operation Temp: 15 to 40°C
- Option of output collimator

Applications

- CO₂ monitoring, DIAL
- LIDAR
- Test and Measurement
- Mid IR generation
- Spectroscopy

Cybel Thulium & Holmium Amplifiers & Laser

- ♦ MISTRAL-1W- 2051
- ♦ SCIROCCO-1W-1950
- ♦ MAESTRO-20W-2000
- ♦ VULCAN-10W –2000
- ♦ MAGNI-NL-10W-1950

The **Cybel MISTRAL+2051** is a line of high power Thulium-doped fiber benchtop amplifiers (TDFA) designed for the eye safe amplification bandwidth from 1950 to 2060 nm. The **MISTRAL+2051** has been specifically designed for operation around the important CO₂ absorption near 2051 nm and delivers up to 30 W of saturated power with a 50dB OSNR over a 20 dB input dynamic range. This amplifier can be customized for specific wavelength and a large range of applications.

The **MISTRAL+2051** provides the user with stable and high performance over a bandwidth from 2049nm to 2053nm. This TDFA comes as a turn key benchtop instrument in either a standard or an all polarization maintaining (PM) fiber. Output power and monitoring of key operating parameters such as, automatic current/power control (ACC/APC) modes are controlled either from the user friendly front panel or USB port. An OEM package is available.



Turn-Key Rack Mount Benchtop

MISTRAL+2051 Specifications

OPTICAL	Unit	Min	Max	Comments
Optical Bandwidth	nm	2049	2055	Single Mode Operation Wavelength
Input Signal Linewidth	MHz	< 2		
Input Signal Power	mW	1	20	
Output Signal Power	W	5	30	With Pin=0 dBm(1 mW)
Output Power Tunability	%	5 - 100		At Pout = 30 W
Output mode, MFD	µm	10-11		
Polarization Ext. Ratio (PER)	dB	≥ 20		PM Version
Output Beam Quality (M ²)	M ²	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	110-220		@ 60-50 Hz
Warm up Time	min	20		
Power Consumption	W	<500		25 °C, @Pout max = 30 W
Control Interface		RS-232		
Mode of Operation		ACC		
GENERAL				
Dimensions	inch	19		2U Rackmount Benchtop
Storage Temperature	°C	-10 to 65		
Operating Case Temp.	°C	0 to 60		
Humidity	%	5 to 95		Non condensing

CUSTOMIZATION

The **MISTRAL+2051** is an amplifier platform that can be customized to match Customers' specific requirements. Please contact Cybel.

COMPLIANCE with Regulatory Requirements: These BENCHTOP-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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