

Key Features

- Output power up to 20W
- Bandwidth 2049 to 2053nm
- Large dynamic range: >20dB
- 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 products

- ◆ MISTRAL-1W- 2051
- ◆ SCIROCCO-1W-1950
- ◆ MAESTRO-20W-2000
- ◆ VULCAN-10W –2000
- ◆ MAGNI-NL-10W-1950
- ◆ HELIOS-5W-2100
- ◆ ASTROLIGHT-5W-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 2060nm. The MISTRAL+2051 has been specifically designed for operation around the important CO₂ absorption near 2051nm and delivers up to 20W of saturated power with a 50dB OSNR over a 20dB 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	Value	Comment
Wavelength	nm	2049 to 2055	Other λ s available from 1950 to 2060nm
Minimum input signal power	dBm	0dBm or 20dBm	Min. Pin@2051nm depends on option
Input signal linewidth	MHz	<3	
Output power	W	5 to 20	High output power available
ASE output power	mW	50	@Pout=10W, Pin=3mW
Polarization ext. ratio (ER)	dB	≥ 20	PM version
Beam quality (M^2)	M^2	<1.1	
Output isolator		Optional	Isolation >20dB at 2051nm \pm 2nm
In/out fiber length	m	1	Armored cable, Optional
In/out Fiber		Single mode	low bend loss
Monitor fiber length	m	1, Optional	Armored cable, Optional
ELECTRICAL			
Voltage	V	110-220	19 ' benchtop unit
Warm-up time	min	20	
Supply power consumption	W	500	@Pout max=20W
Control interface		USB	
Control mode		ACC-APC	Automatic shut-off with LOS (loss of signal or low preset input power level)
GENERAL			
Dimensions	inch	19	2U Rack-Mount Benchtop-OEM Available
Storage temperature	$^{\circ}$ C	-20 to 65	
Operating temperature	$^{\circ}$ C	15 to 40	
Operating relative 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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