

Cybel

Lighting the Way

www.cybel-llc.com

MAKO-1550

Compact Dual Mode 1550nm
Fiber Laser, Pulsed and CW

Key Features

- Dual mode: pulsed or CW
- CW: >1.5W power, low speckle
- High pulse energy: >20 μ J
- High peak power: >1.5kW
- Adjustable repetition rate
- Adjustable pulse width
- Gaussian beam profile: $M^2 < 1.1$
- Compact & rugged design
- Operation: -10 to 50 °C
- PM version

Applications

- LIDAR-LADAR
- Range finding
- Target illumination
- Remote sensing

MAKO SERIES

Also available at different Standard Wavelengths and with same high performance and compact footprint:

- MAKO-1550+
- ♦ MAKO-1064
- ♦ MAKO-1030

The **CYBEL MAKO** – 1550 series is a compact 1550nm eye safe dual mode (Pulsed and CW) fiber laser that can deliver either 1.5kW pulses or speckle free CW power greater than 1.5W. The laser output has a near Gaussian profile ($M^2 < 1.1$).

The **MAKO** pulse width (4 to 50ns) and repetition rate (10 to 2,000kHz) are continuously adjustable through an analog input control. Output power is adjustable through a separate digital control.

The **MAKO** is an efficient, ultra-compact (60x94x15 mm³) and ultra-light, all-fiber OEM unit specifically designed for sensing applications requiring small footprint.



MAKO-1550: 60x94x15 mm³

CYBEL, LLC 1195 Pennsylvania Avenue Bethlehem, PA18018 USA

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Website: www.cybel-llc.com

MAKO-1550 Specifications

OPTICAL			
Parameter	Unit	Value	Comment
Center wavelength	nm	1545	
Optical bandwidth, CW	nm	7	>95% of power in band
Optical bandwidth, pulsed	nm	100	>95% pow. in band, 1.5kW peak pow.
Average output power, CW	W	1.5	
Average output power, pulsed	W	1.5	50kHz, 20ns
Pulse repetition rate	kHz	10 to 2000	
Power tunability	%	0 to 100	
Pulse width	ns	4 to 50	
Peak power	kW	1.5	
Energy-per-pulse	μJ	30	50kHz, 20ns, 1.5W avg. power
ASE level, pulsed	%	2	%power, 50kHz, 20ns, 1.5W avg. pow.
Output power variation, CW	% RMS	2	2.0W out
Pulse energy variation	% RMS	5	50kHz, 10ns, 1.5W avg. power
Output mode M ²	-	1.1	
Output mode MFD	μm	11.5	
Output fiber length	cm	20	Other lengths available
Output fiber description		3mm SS, FC/APC	3mm PVC available on request
ELECTRICAL/MECHANICAL			
Mechanical package		60x94x15mm ³	Volume=84.6cm ³
Supply power consumption	W	15	25 °C, 1.5W output power
Control interface		Analog inputs	
ENVIRONMENTAL			
Operating temperature	°C	-10 to 50	
Operating relative humidity	%	0 to 95	Non-condensing

CUSTOMIZATION

The **MAKO** is a laser platform that can be customized to match Customer's 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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