

Features:

- High energy up to 100µJ
- PM version available up to 50µJ
- Wide range of fixed pulse duration available from 500ps to 1.25µs
- Excellent beam quality ($M^2 < 1.1$)
- Adjustable pulse duration on few ns
- Burst mode
- Monitor output
- Internal or external TTL or LVDS trigger
- Maintenance free operation
- Highly reliable laser diode pumps
- Compact & rugged design
- Very low power consumption
- Air cooled
- **Custom versions available**

Applications:

- LIDAR
- Target ID
- Mapping
- Telemetry
- 3D scanning
- Range finding
- Topography scanning
- Weather and pollutant detection
- **YOUR APPLICATION**

maintaining components (energy up to 50µJ in PM version). The MLT-PL-R-OEM20 is optimised for LIDAR, telemetry or range finding application. The design and configuration of this amplifier render it unique and reliable. Our patented "Injection Technology" allows the use of highly reliable broad area laser diode pumps, for a cost-effective and maintenance-free operation. As for the MENTAD, the MENTAD+ is an open platform for your specific requirements : internal or external LVDS or TTL trigger, monitor output for synchronization, burst mode for pulse monitoring, adjustable pulse width duration on few ns. The simple integration of the OEM system requires no after-installation service. Power consumption is reduced to the minimum with extended operation temperatures. Obviously, custom configurations are possible, such as 1.0µm operating wavelength and polarization maintaining device (MLT-PL-P-OEM20 series)

Manlight, based in Brittany, has chosen words in local Celt language, the Breton, to personalize its product portfolio. Each of the eight fiber laser and amplifier product lines starts with a letter of Manlight. **MENTAD** in Breton stands for *Measure* and also *Size, Dimensions*. It ideally suits to our 1.5µm miniaturized pulsed fiber laser transmitter used for measurement in LIDAR application.

MENTAD+ Product Line

1.5µm Compact Pulsed Fiber Laser Transmitter



MLT-PL-R-OEM20 Series

MLT-PL-P-OEM20 Series

The MENTAD+ serie is an extension of the MENTAD serie where average output power has been pushed from 1.2W to 2.5W in a very compact unit (108 x 70 x 20 mm³ only). The consequence of this change is in the energy per pulse (up to 100µJ) and this laser can support larger polarization

Ordering Information: MLT-PL-***-OEM20-xx-yy-zz
 xx = pulse duration in ns
 yy = pulse repetition frequency in kHz
 zz = energy in μ J
 *: R for Random and P for Polarized

Technical Specification:

Parameter	Value	Unit	
Operation mode	Pulsed	-	
Seed laser wavelength	1550 typ.	nm	Other wavelengths available
Average output power	up to 2500	mW	
Pulse duration	from 0.5 to 1250	ns	fixed duration in the range
Pulse repetition frequency	from 5 to 2000	kHz	in a limited range depending on pulse width and ASE
Output pulse energy	≤ 100	μ J	≤ 50 for PM version
Peak power	up to 17	kW	
Output power tunability	1 – 100	%	
Long term stability (RMS, over 1h@25°C)	± 1	%	
Polarization	Random	-	PM optional
Output fibre length	typ. 50	cm	
Output fibre termination	FC/APC or Collimated beam	-	
Laser linewidth (FWHM)	< 0.2	nm	0.15 nm typical
Typical beam diameter @1/e ²	2,4	mm	for collimator
Beam quality M ²	< 1.1	-	
Dimensions	108 x 70 x 20	mm ³	
Weight	200	g	
Operation Temperature	0 to +50	°C	-35 to +65 optional
Control mode	Continuous operation or burst	-	
Connector	SAMTEC SMM-115-02-SD	V	
Operating voltage DC	5	V	
Typ. power consumption (nom. power @ 25°C)	< 25	W	

Options:

- Adjustable pulse duration (few ns)
- Internal or external trigger
- TTL or LVDS trigger
- Collimated output
- Burst mode
- Monitor output
- Customised specs on request
- Extended warranty

Examples of possible configurations:

MLT-PL-R-OEM20-03-80-35:
 1550nm, 3ns, 80 to 600kHz, 35 μ J, 2.5W Average, 12kW peak, 25W consumption.

MLT-PL-R-OEM20-20-25-100:
 1550nm, 20ns, 20 to 100kHz, 100 μ J, 2.5W Average, 5kW peak, 25W consumption.

MLT-PL-R-OEM20-0.5-250-8:
 1550nm, 0.5ns, 250kHz to 1MHz, 8 μ J, 2W Average, 16kW peak, 25W consumption.

MLT-PL-P-OEM20-03-50-12 :
 1550nm **Polarization Maintaining version**, 10ns, 50 to 200kHz, 40 μ J, 4kW peak, 20W consumption.

YOUR CONFIGURATION



The Manlight Fibre Amplifiers emit both invisible Class IV and visible Class II radiations. Direct and scattered radiation can be harmful to the human eye. Proper laser safety eyewear must be worn during operation. Information in this document is subject to change without notice.

Operating and safety considerations
 Manlight Fibre Amplifiers comply with CE, FDA & RoHS. All Manlight Fibre Lasers are patent pending.

Mechanical drawings:

