

HED Product Line

1.0 μ m and 1.5 μ m CW SLM PM Fiber Amplifiers

Features:

- Linear Polarization
- For SLM laser amplification
- Excellent beam quality ($M^2 < 1.1$)
- Up to 20W CW of output power in 1.0 μ m
- Up to 15W CW of output power in 1.5 μ m
- All optical isolated
- Highly reliable laser diode pumps
- Convenient front panel control
- Maintenance free operation
- Compact & rugged design
- Including heat sink & fan
- Cables including
- Safety interlock
- Air cooled
- USB

Applications:

- Atom cooling and atom trapping
- Spectroscopy
- Frequency doubling
- Micromachining
- Measurement
- Telecom
- Component testing
- Coherent detection
- Medical
- R&D



ML-YFA-CW-SLM-P-TKS Series ML-EYFA-CW-SLM-P-TKS Series

The ML-YFA/EYFA-CW-SLM-P-TKS, “Turn Key System” is a compact CW Fibre Amplifier delivering up to 20W of output power at 1.0 μ m and 15W at 1.5 μ m, through a near diffraction limited linearly polarized beam ($M^2 < 1.3$). The ML-YFA/EYFA-CW-SLM-P-TKS is optimised for the amplification of Single Longitudinal Mode (SLM) laser sources of down to 10kHz instantaneous Full Width at Half Maximum (FWHM). The design and configuration of this amplifier render it unique and reliable. The power is delivered through a polarized beam and with excellent power stability. Our patented “Injection Technology” allows the use of highly reliable broad area laser diode pumps, for a cost-effective and maintenance-free operation. The all-fibre design guarantees the robustness of the amplifier, without any optical parts to align or to stabilise. The simple integration of the Bench Top system requires no after-installation service.

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. **HED** in Breton stands for *Wavelength*. Thus perfectly adapted to our 1.5 μ m and 1.0 μ m high power CW PM SLM fiber amplifiers.

www.manlight.com

Technical Specification:

Parameter	Value	Unit
Operation mode	CW	-
Nominal Seed Laser Wavelength	1064 typ.	nm
Seed Laser Wavelength Range	1060-1090 (others on request)	nm
Seed Laser Instantaneous Linewidth	> 1	kHz
Nominal input power	25	mW
Input power range	10-50 25-50	mW
Nominal output power (@ 25mW input)	1 3 5 10 15 20	W
Output power tunability	30 – 100	%
Long term stability (RMS, over 1h@25°C)	<+/- 2	%
Polarization	Linear	-
PER (Polarization Extinction Ratio)	>15 >15 >15 >15 >13 >13	dB
Input fiber type	Panda 980	
Input fiber length	1	m
Input fiber connector	FC/APC	
Output fibre length	typ. 50	cm
Output fibre termination	Collimated beam	-
Typical beam diameter @1/e ²	<2.2 <1	mm
Optical isolation	Input, inter-stages and output	-
Beam quality M ²	<1.3	-
Dimensions	3U 19" (448 x 451 x 132)	mm ³
Weight	< 13	kg
Storage / Operation Temperature	- 0 to + 50 / + 15 to + 35	°C
Control mode	ACC	-
Control interface	Front panel or USB	V
Operating voltage AC	88 to 264	V
Typ. power consumption (@ 25°C)	<150 <150 <250 <320 <350 <480	W

Options:

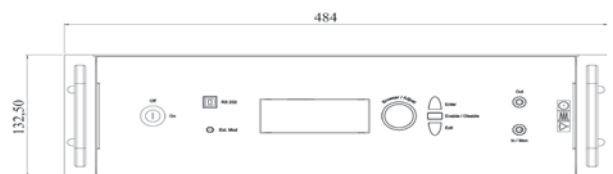
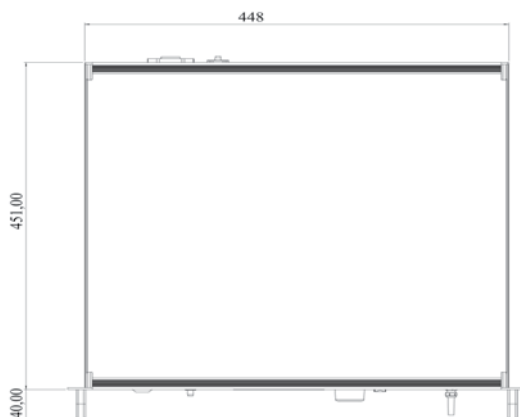
- 10x beam expander
- Customised specs on request
- Extended warranty.

Operating and safety considerations

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

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.

Mechanical drawings:



Ordering Information: MLxx-EYFA-CW-SLM-P-TKS

xx = Average output power in Watts

Technical Specification:

Parameter	Value	Unit
Operation mode	CW	-
Nominal Seed Laser Wavelength	1550 typ.	nm
Seed Laser Wavelength Range	1540-1560 (others on request)	nm
Seed Laser Instantaneous Linewidth	> 1	kHz
Nominal input power	25	mW
Input power range	10-50 25-50	mW
Nominal output power (@ 25mW input)	1 3 5 10 15	W
Output power tunability	30 – 100	%
Long term stability (RMS, over 1h@25°C)	<+/- 2	%
Polarization	Linear	-
PER (Polarization Extinction Ratio)	>15 >15 >13 >13 >13	dB
Input fiber type	Panda 1550	
Input fiber length	1	m
Input fiber connector	FC/APC	
Output fibre length	typ. 50	cm
Output fibre termination	Collimated beam	-
Typical beam diameter @1/e ²	<2.2 <1	mm
Optical isolation	Input, inter-stages and output	-
Beam quality M ²	<1.3	-
Dimensions	3U 19" (448 x 451 x 132)	mm ³
Weight	< 13	kg
Storage / Operation Temperature	- 0 to + 50 / + 15 to + 35	°C
Control mode	ACC	-
Control interface	Front panel or USB	V
Operating voltage AC	88 to 264	V
Typ. power consumption (@ 25°C)	<150 <150 <250 <320 <450	W

Options:

- 10x beam expander
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