

Koheras BASIK MIKRO

Compact low noise 1.5 μm OEM fiber laser

- Compact OEM footprint
- Low phase noise and narrow linewidth
- Robust single frequency operation
- High wavelength stability
- PM and fast frequency tuning option
- Ideal for OEM integration in Sensing



The Koheras BASIK MIKRO is the smallest industrial single frequency fiber laser on the market and it is designed for OEM integration in industrial sensing systems. The module includes fully integrated laser control electronics, as well as continuous monitoring of the laser performance.

The module is available in two different laser versions, C15 and E15. The standard wavelength is 1550 nm and the MIKRO is available with output wavelength anywhere in the 1535 to 1580 nm range. Moreover, the laser offers a wide thermal wavelength tuning range and can be combined with fast wavelength modulation e.g. for external stabilization. The lasers are available with PM (Polarisation Maintaining) or non-PM output.

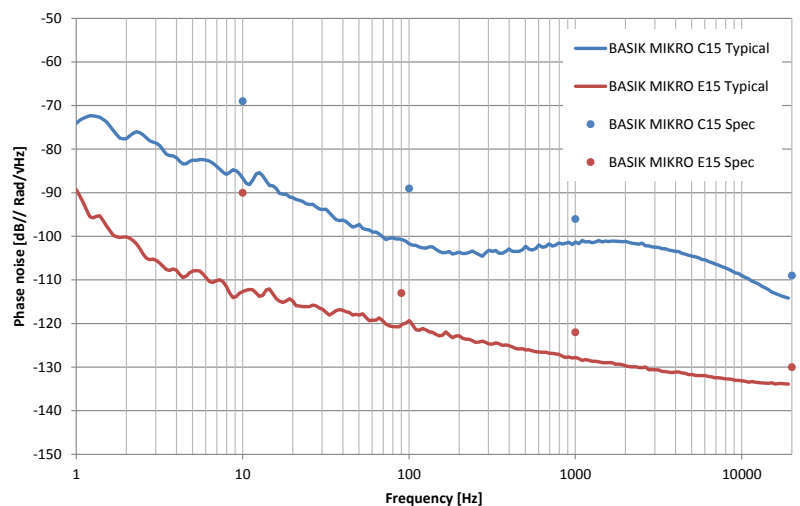
For easy control, the MIKRO is available with an optional USB interface kit and can be controlled via NKTP CONTROL graphical user interface.

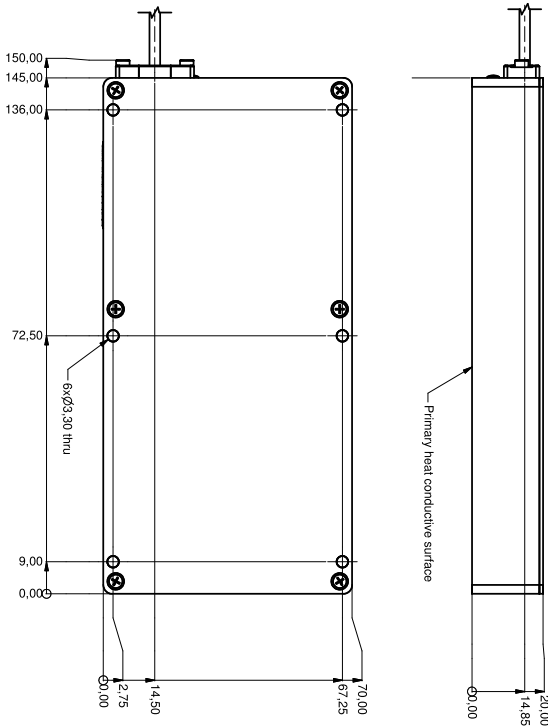
Applications

- Distributed optical sensing
- Pipeline integrity monitoring
- Perimeter security and surveillance
- Laser vibrometry

Model	Standard Wavelength	Other wave-lengths	Output power	PM	Fast modulation
C15	1550.12 nm	1535 - 1580 nm	>10 mW*	Optional	Optional
E15	1550.12 nm	1535 - 1580 nm	40 mW	Optional	Optional

*) Fixed output power (non adjustable).





Specifications

Optical

	E15	C15
Laser emission	CW - inherently single frequency	
Beam quality [M ²]	< 1.05	
Linewidth [kHz] ¹	< 0.1	< 15
Max phase noise [dB(Rad/vHz/m)]	-90@10Hz -110@100Hz -130@20kHz	-69@10Hz -89@100Hz -109@20kHz
Max phase-noise [μrad/vHz/m]	32@10Hz 3.2@100Hz 0.3@20kHz	355@10Hz 36@100Hz 3.5@20kHz
RIN peak [MHz]	app. 0.3	app. 1
RIN level @ peak / 10 MHz [dBc/Hz]	<-100 / <-135	<-120 / <-140
Optical S/N (50 pm res.) [dB]	> 50 (typ. > 55)	> 65 (typ > 70)
Min thermal wavelength tuning range [pm] ²	+/- 350	+/- 350
Total thermal tuning range [pm]	1000	
Options:		
Fast wavelength modulation range [GHz]	> 8	
Fast wavelength modulation [kHz]	Up to 20	
PM output - PER [dB]	> 23	

1. 120 μs integration time.
2. At room temperature. If the laser is operated in very cold or hot environments, this wavelength range is truncated on either the upper or lower side.

Mechanical/Electrical/Environmental

Power supply requirements [VDC]	12
Power consumption [W]	Typical 4, max 12
Communication interface	RS-485
Optical output	FC/APC (0.5 m pigtail)
Dimensions (HxWxD) [mm]	20x70x150
Weight [kg]	0.35
Operating temperature range [°C]	10 - 60 (module case temperature)
Humidity non condensing [%RH]	0-70

All NKT Photonics products are produced under our quality management system certified in accordance with the ISO 9001:2008 standard.



Koheras_BasiK_MIKRO_160614

Koheras Care

Service and warranty extensions

The Koheras Care warranty and service package ensures trouble free operation of your Koheras laser.

The Standard Package gives you a two year warranty extension plus remote diagnostics of key laser parameters through an internet connection to the system. Our Premium Package adds a guarantee that we always stock a laser with your specifications - ready to ship should you need it.

Standard package

- Extension of warranty period to 2 years
- Remote diagnostics
- Preventive laser health checks

Premium package

- All the benefits of the standard package
- Pre-produced laser with specific customer specifications in stock

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