Koheras BoostiK™ System

Ultra narrow linewidth fiber laser in 1 µm or 1.5 µm range

- Inherently single frequency fiber laser
- Ultra narrow linewith and low phasenoise
- Turn-key 19" 2U benchtop box system
- Available with KHz frequency modulation (option)

Koheras BoostiK™ is a high power, narrow linewidth single frequency DFB fiber laser system in a compact turn-key design. This fiber laser features a unique narrow linewidth combined with high output power.

The product is supplied as a stand-alone unit packed in a 19" rack system including controller electronics. The Koheras BoostiK™ is delivered with a suitable power supply unit ready for operation. It is ideal for laboratory work and experimental research.

Key features

- Stable single mode and single frequency operation
- Burst noise and mode hop free operation
- Ultra narrow linewidth
- High wavelength selectability
- PM output (optional)
- Compact and reliable stand-alone unit in 19" rack system
- High power output
- Unprecedented low phase and intensity noise
- $M^2 < 1{,}05$ (single mode fiber output)
- Digital control interface

Examples of applications

- Aerosol backscattering
- LIDAR
- Oil and gas exploration
- Harmonic generation
- Atom trapping
- Scientific applications

Technical specifications	
KOHERAS BoostiK™ System	**E15/C15/Y10**
Power supply requirements [VDC]	90-240 VAC; 50-60Hz
Fiber pigtail length [m]	› 1
Connectors	FC/APC or collimated
Dimensions (HxWxD) [mm]	104x449x383 (19" 2U)
Operating temperature range [°C]	15 - 40
Storage temperature range [°C]	-20 - 50

1. The center wavelength is selectable within the specified range.
2. Depends on the center wavelength.
3. Shot-noise limited › 5 MHz.
4. External piezo driver required.
5. All optical specifications are valid up to 10kHz PZT bandwidth.

Optical specifications			
Koheras BoostiK™ System	**E15**	**C15**	**Y10**
Center wavelength [nm] [1]	1535-1575, optionally other	1535-1575, optionally other	1030-1121
Laser emission	CW - inherently single frequency	CW - inherently single frequency	CW - inherently single frequency
Beam quality	$M^2 < 1.05$	$M^2 < 1.05$	$M^2 < 1.05$
Output power [mW] [2]	Up to 2 W (optional higher)	Up to 2 W (optional higher)	Up to 5 W
Line width (120 µsec) [kHz]	‹ 1	‹ 50 (optionally ‹10)	‹ 70 (optionally ‹10)
Phase-noise [µrad/√Hz] 1m opt. path	‹-120 @ 500MHz/ ‹-110 @ 10Hz	‹-100 @ 500MHz/ ‹-95 @ 10Hz	NA
RIN peak [MHz]	app. 0.3	app. 0.9	app. 1.5
RIN level [dBc/Hz]	‹-115 @ 1MHz/‹-140 @ 10MHz	‹-120 @ 1MHz/‹-140 @ 3MHz [3]	‹-115 @ 1MHz/‹-140 @ 10MHz
Optical S/N [dB] (50 pm res.)	› 50 (depending on wavelength)	› 50 (depending on wavelength)	› 50 (depending on wavelength)
PM output	Optional	Optional	Optional
Thermal tuning	Standard	Standard	Standard
Thermal tuning range [nm]	› 0.8	› 0.8	› 0.5
Thermal tuning range (incl. Piezo feature)[nm]	› 0.7	› 0.7	› 0.4
Fast Piezo tuning capability	Optional	Optional	Optional
Piezo-electric tuning range [pm]	› 16 (0-200 V DC)	› 16 (0-200 V DC)	› 9 (0-200 V DC
Piezo-electric tuning bandwidth [kHz] [5]	up to 100	up to 100	up to 100
Optical monitor output	Incl. (FC/APC)	Incl. (FC/APC)	Incl. (FC/APC)

Specifications are subject to change without notice.

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