

# Koheras AdjustiK™ System

## Turn-key 19" 2U benchtop box system

- Inherently single frequency fiber laser
- Ultra narrow linewidth and low phase noise
- Available with KHz frequency modulation (option)

Koheras AdjustiK™ System is a benchtop version of the BasiK™ Module, a single frequency DFB fiber laser system with active wavelength stabilization and thermal wavelength tuning, optionally combined with piezo-electric tuning.

The Koheras AdjustiK™ System is available as a turn-key solution with integrated driver electronics and needs only 110/230 V power supply for easy operation, and is ideal as equipment for laboratory work and experimental research.

Specifications include up to 200 mW output and wavelengths (e.g. ITU grid) within 1535-1575 nm and 1030-1121 nm.



### Key features

- Stable single mode and single inherent frequency operation
- Burst noise and mode hop free operation
- Ultra narrow linewidth and long coherence length
- Low phase and intensity noise
- Excellent power stability
- High wavelength selectability
- Power and wavelength control via digital interface
- User controlled RIN suppression for E15 version
- Piezo tuning capability (optional)
- PM output (optional)
- Available in a 19" 2U rack system
- Digital user interface

### Examples of applications

- Sensor interferometry e.g. oil and gas exploration
- Acoustic sensing for e.g. marine and security applications
- Laser spectroscopy, gas absorption measurement
- LIDAR
- Test and measurement equipment for telecom
- Wavelength references
- Scientific applications

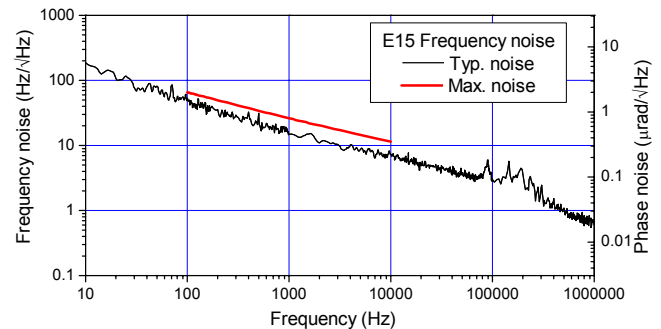
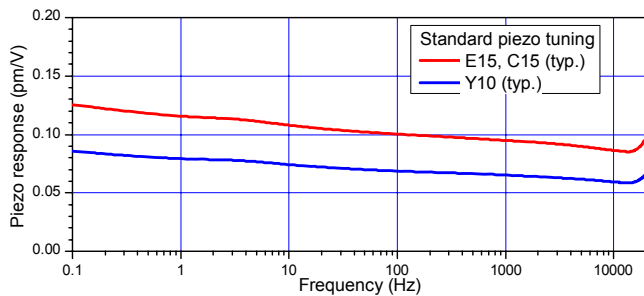
Adjustik system-110325



Optical specifications			
Koheras AdjustiK™ Module	E15	C15	Y10
Center wavelength [nm] <sup>1</sup>	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] <sup>2</sup>	up to 200	up to 200	> 100
Line width [kHz]	< 0.1 (Lorentzian)	< 50 (optionally <10)	< 70 (optionally <10)
Frequency stability [MHz] <sup>3</sup>	< 10	< 50	< 30
Frequency-noise [Hz/√Hz]	65@100Hz, 26@1kHz, 13@10kHz	-	-
Phase-noise [μrad/√Hz] 1m opt. path	2.0@100Hz, 0.8@1kHz, 0.4@10kHz	-	-
RIN peak [MHz]	app. 0.3	app. 0.9	app. 1.5
RIN level [dBc/Hz]	<100 @ peak/<135 @ 10MHz	<120 @ peak/<140 @ 3MHz <sup>4</sup>	<105 @ peak/<140 @ 10MHz
Optical S/N [dB] (50 pm res.)	> 50 (typ. > 55)	> 70 (typ. > 75)	> 65 (typ. > 70)
PM output	Optional	Optional	Optional
Thermal tuning	Standard	Standard	Standard
Thermal tuning range [nm]	- 0.4 / +0.2	- 0.4 / +0.2	- 0.3 / +0.15
Fast Piezo tuning capability <sup>5</sup>	Optional	Optional	Optional
Piezo-electric tuning range [pm] <sup>6</sup>	> 18 (0-200 VDC)	> 18 (0-200 VDC)	> 12 (0-200 VDC)
Piezo-electric tuning bandwidth [kHz]	up to 20	up to 20	up to 20
Optical monitor output	Incl (FC/APC)	Incl (FC/APC)	Incl (FC/APC)

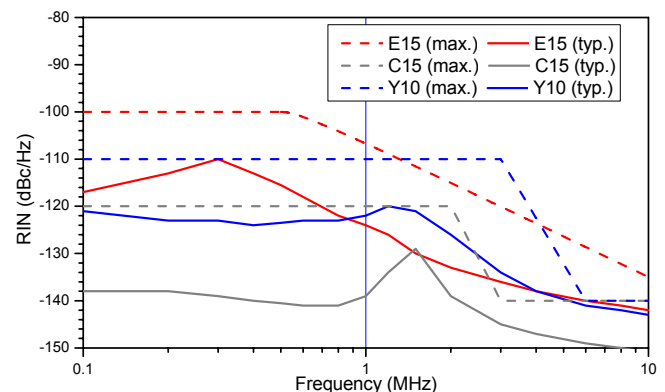
1. The center wavelength is selectable within the specified range.
2. Depends on the center wavelength.
3. Over 1 hour after warm-up and ambient temperature variation < 2 °C.
4. Shot-noise limited @  $f > 5$  MHz, optionally lower.

5. External piezo driver required.
6. Upper limit due to mechanical resonances above 30 kHz. Max. slew rate: 200 V/ms (Max. 8 V/ms for wide tuning option)



### Other specifications

KOHERAS AdjustiK™ Module	E15/C15/Y10
Power supply requirements [VDC]	90-240 VAC, 50-60Hz
Digital interface	USB 2.0
Fiber pigtail length [m]	app. 0.5 m
Connectors	FC/APC
Dimensions (HxWxD) [mm]	104x449x383 (19"- 2U)
Operating temperature range [°C]	15 - 50
Storage temperature range [°C]	-20 - 50



Specifications are subject to change without notice.  
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