

Koheras BoostiK™ Module

Rugged industrial OEM module

- Single frequency fiber laser
- High power - ultra narrow linewidth
- Low intensity and phase noise
- Featuring computer software control

Koheras BoostiK™ Module is a high power, narrow linewidth and truly single wavelength distributed feedback (DFB) fiber laser system supplied in a compact rugged package suitable for OEM integration for sensing applications.

This laser has been mechanically designed for operation in harsh airborne or ground based environments such as LIDAR, wind sensing, and security featuring unique thermal insulation and isolation to acoustic noise and vibrations. The module is operated via remote digital control with multiple control and monitor options.



Key features

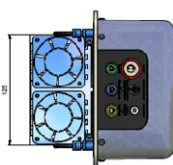
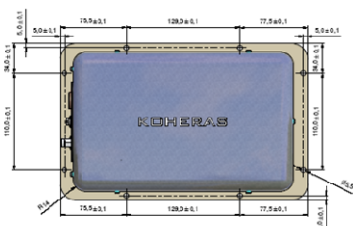
- Stable single mode and single polarisation operation
- Burst noise and mode hop free operation
- Ultra narrow linewidth and long coherence length
- High wavelength selectability
- PM output (optional)
- High power output
- Unprecedented low phase and intensity noise
- $M^2 < 1,05$ (single mode fiber output)
- Compact and rugged package
- Digital interface and computer software control

Examples of applications

- Aerosol backscattering
- LIDAR
- Wind shear
- Sensor interrogation
- Harmonic generation
- Atom trapping
- Scientific applications

Technical specifications	
KOHERAS Boostik™ Module	E15/C15/Y10
Power supply requirements [VDC]	12 V/ 4-6A
Fiber pigtail length [m]	> 1
Connectors	FC/APC
Dimensions (HxWxD) [mm]	90x178x282 excl. heat sink
Operating temperature range [°C]	15 - 40
Storage temperature range [°C]	-20 - 50

Optical specifications			
Koheras Boostik™ Module	E15	C15	Y10
Center wavelength [nm] ¹	1535-1575, optionally other	1535-1575, optionally other	1030-1121
Laser emission	CW - single frequency	CW - single frequency	CW - single frequency
Beam quality	M ² < 1.05	M ² < 1.05	M ² < 1.05
Output power [mW] ²	Up to 1 W (optional higher)	Up to 1 W (optional higher)	Up to 1 W (optional higher)
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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1. The center wavelength is selectable within the specified range.
2. Depends on the center wavelength.
3. Shot-noise limited > 10 MHz.
4. External piezo driver required.
5. All optical specifications are valid up to 10kHz PZT bandwidth.



Boostik module-100112