NKT Photonics
the power of light

Crystal Fibre • *aero*LASE • Koheras • SuperK

Koheras BoostiK™ Module

- **Single frequency fiber laser**
- **High power - ultra narrow linewith**
- **Low intensity and phase noise**

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
- Ultra narrow linewidth and long coherence length
- Low phase and intensity noise
- High wavelength selectability
- PM output (optional)
- High power output
- M^2 < 1,05 (single mode fiber output)

Examples of applications

- Aerosol backschattering
- Wind LIDAR and Ranging
- Sensor interrogation
- Scientific applications

Technical specifications	
KOHERAS BoostiK™ Module	**E15/C15/Y10**
Power supply requirements [VDC]	12 V/ 4-6A
Fiber pigtail length [m]	> 1
Optical output connector	E2000 APC, 2 mm kevlar
Dimensions (HxWxD) [mm]	74x148x282 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]	+ 0.2 / -0.4	+ 0.2 / -0.4	+ 0.15 / -0.3
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] 4	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. Shot-noise limited > 5 MHz.
4. External piezo driver required.

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