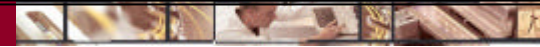


Press Release March 21, 2003

K O H E R A S
The Fiber Laser Technology House

Technologies
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For Immediate Release

Frequency locked Narrow line-width DFB fiber laser

BIRKERØD, DENMARK, March 21, 2003 - Koheras A/S introduces a frequency locked version of its narrow line-width DFB fiber laser systems. The laser combines the most distinctive performance within DFB fiber laser technology today such as ultra narrow linewidth, unprecedented low phase noise and high power levels, with state-of-the-art frequency locking technology delivered by DiCOS Technologies, Québec City, CANADA.

The laser is available for operation within in the 1.02-1.20 and 1.52-1.61 μm wavelength bands and offers a spectral width down to 1 kHz or below and a frequency stability of 1 MHz/1000 s. The laser comes as OEM or turnkey solutions with integrated control electronics and 110/220 V power supply.

Key applications for this laser are laser spectroscopy, optical spectrum analyzer calibration, wavelength meter referencing and calibration, tunable laser wavelength locking and calibration, and other applications demanding ultra-stable wavelength operation combined with extremely low phase noise and narrow linewidth.

About Koheras

Koheras A/S develops and manufactures high-quality Bragg grating based DFB fiber lasers. Target applications for Koheras fiber lasers are optical sensors (acoustic, pressure, and other), hydrophones, coherent communications, test and measurement systems for telecom, high resolution spectroscopy, LIDAR, and several high-end markets. The company is 100% owned by NKT Holding, Denmark.

Preliminary data sheet is available on next page. Visit Koheras at www.koheras.com

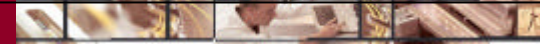
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KOHERAS FREQUENCY LOCKED FIBER LASER SYSTEM (NEW)

K O H E R A S
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ULTRA-NARROW LINEWIDTH FIBER LASER SYSTEM

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Description

KOHERAS Frequency locked system is an ultra-narrow linewidth single wavelength distributed feedback (DFB) fiber laser system designed with absolute wavelength locking.

The fiber laser is available as a turn-key solution with integrated driver electronics and needs only 110/220 V power supply for operation.

The system is available with up to 1W fiber laser output. Please ask for further information

Key Features

- Stable single mode and single polarization operation
- Narrow linewidth and long coherence length
- Burst noise and mode hop free operation
- Absolute frequency – no calibration required
- Internal modular reference
- Low phase noise
- Specific wavelengths available in the C, L and Ytterbium band
- Optional PM output

Examples of Applications

- Laser spectroscopy
- Optical spectrum analyzer calibration
- Wavelength meter referencing and calibration
- Tunable lasers wavelength locking and calibration
- Other applications demanding an ultra-accurate wavelength

Specifications

KOHERAS FIBER LASER SYSTEM	E15-WR	C15-WR	Y10-WR
Center wavelength within range [nm]	1528-1570; 1570-1610	1528-1570; 1570-1610	1020-1200
Frequency stability [MHz / 1000 s]	< 1.0	< 1.0	< 1.0
Line-width [kHz]	< 2 (typ. < 1)	< 30 (typ. < 10)	< 70 (typ. < 20)
Output power [dBm]	> -10 ; > 10; > 7 (PM)	> 7 ; 17; 20	> 10
Power variation 10 hours [dB]	< 0.1	< 0.1	0.1 - 0.3
Signal-to-Noise ratio [dB] (50 pm res.)	> 60; > 50	> 70	> 65
RIN peak [kHz] (typical)	> 250	700	1000
Connectors	FC-APC, FC-PC	FC-APC, FC-PC	FC-APC, FC-PC
Power supply	100-250 V; 50 - 60 Hz	100-250 V; 50 - 60 Hz	100-250 V; 50 - 60 Hz
PM output	Optional	Optional	Optional