LAZ-LAB-NIR series

Near Infra-Red continuous wave laser

The iXblue LAZ-LAB-NIR-Series is a collection of continuous wave lasers embedded in a compact and smart package. Several fiber-coupled distributed feedback diode lasers have been selected in the Near Infra-Red window based on spectral quality as well as a proven reliability.
These lasers, available from 780 nm to 1080 nm, were screened and qualified for ideal performance when combined with iXblue phase and amplitude NIR $LiNbO_3$ modulators.
The selected lasers will enhance the modulated optical performance (insertion loss, extinction ratio, polarization extinction ratio, residual amplitude modulation) and are compliant with the maximum ratings of the modulator.
The iXblue LAZ-LAB-NIR is coming with a user friendly and easy to use Graphical User interface. This low noise and proven electronic enhances the diode laser optical signal.
The intelligent electronic allows for laser fine tuning, wavelength, and power adjustments.

FEATURES

- Optical wavelength choice
- Matching laser for $LiNbO_3$ modulators
- High optical performances
- Proven solution

APPLICATIONS

- Matching laser for $LiNbO_3$ modulators
- Carrier suppression
- Fiber optics sensors
- Pulse applications
- Analog transmission

OPTIONS

- Other wavelength value
- Higher power level

RELATED EQUIPMENTS

- $LiNbO_3$ modulators

LAZ-LAB-NIR Performance Highlight

Parameter	Min	Typ	Max	Unit
Operating wavelength	From 780 nm to 1080 nm			
Output power	Up to 16 dBm (1)			dBm
Output power tuning range	-40	-	16	dBm
Wavelength stability	-	±10	-	pm
Connection	User freindly Graphical User Interface			-
Compact package	220 x 220 x 52			mm^3

(1): Higher power level on demand

iXblue

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Optical Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Operating mode	CW	-	Continuous wave			-
Polarization	POL	Polarization maintaining fiber	Linear, aligned with optical connector key			
Operating wavelength	λ	On customer choice	778	780	782	nm
			850	852	854	nm
			918	920	922	nm
			974	976	978	nm
			1029	1030	1031	nm
			1059	1060	1061	nm
			1063	1064	1065	nm
			1079	1080	1081	nm
Wavelength tuning range	Δλ	-	-	0.8	1	nm
Wavelength stability	-	-	-	±10	-	pm
Spectrum linewidth[1]	δλ	780 nm, 852 nm	-	-	1	MHz
		920 nm, 976 nm, 1030 nm, 1060 nm, 1064 nm, 1080 nm	-	-	10	MHz
Side mode suppression ratio	SMSR	-	30	40	-	dB
Maximum output power	P_{out}	780 nm	-	-	13	dBm
		852 nm, 920 nm, 976 nm, 1030 nm, 1060 nm, 1064 nm, 1080 nm	-	-	16	dBm
Output power tuning range	ΔP_{out}	-	-40	-	13 / 16	dBm
Output power stability	-	Over 24 hours	-	-	1	%
Polarization extinction ratio	PER	-	16	20	-	dB

(1) Full width at half maximum, FWH.

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Interfaces, Dimensions and Compliance

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Optical output connector	-	Front panel	FC/APC or SC/APC			-
Power supply	-	Rear panel	DC POWER JACK 2 mm - 12 V - 2 A			-
Operating temperature	-	Envrionmental	15	-	35	°C
Storage temperature	-	Envrionmental	-20	-	50	°C
Width x Depth x Height	-	Dimensions	220 x 220 x 52			mm^3
Electromagnetic compatibility	EMC	-	EN 61000-4			-
Optical standard	-	-	NF EN 60825-1 & EN 60825-2 Ed.2014			-
Laser class	-	-	Class 3R			-

Maximum ratings

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Power supply	-	-	9	-	18	V_{DC}

Ordering information

Operating wavelength:
780 (780 nm), **852** (852 nm), **920** (920 nm), **976** (976 nm), **1030** (1030 nm), **1060** (1060 nm), **1064** (1064 nm), **1080** (1080 nm)

Output connector: **FA** (FC/APC), **SA** (SC/APC)

LAZ-LAB-□nm-□

About us

iXblue Photonics produces specialty optical fibers and Bragg gratings based fiber optics components and provides optical modulation solutions based on the company lithium niobate ($LiNbO_3$) modulators and RF electronic modules.
iXblue Photonics serves a wide range of industries: sensing and instruments, defense, telecommunications, space and fiber lasers as well as research laboratories all over the world.

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Aunion Tech Co.,Ltd
1pb Djmmp* @sgjbgle 4*0..5 Fmlekcg Pm_b* Vsfsg Bgqrpgar* Qf_lef_g
Tel: +86-21-51083793 Fax:+86-21-34241962
E-Mail: info@auniontech.com Website: www.auniontech.com