

# LDBA Description

monocrom has developed a new concept of mounting high power diode bars. In the patented technology, exclusive from monocrom, the laser bars are clamped without soldering within two copper blocks which serve as electrodes as well as heat sinks.

The main features of our laser diodes are:

- Long LIFETIME. >20.000 hours. No mechanical stress. No maintenance required.
- Widest OPERATION MODE RANGE: from nanoseconds to CW.
- High BRIGHTNESS with minimum "SMILE" <0.5µm.
- High EFFICIENCY >50% and compact size.
- High ENERGY per laser pulse at LOW COST per Watt.
- Custom BEAM DELIVERY. Fiber-coupled, direct irradiation, collimated modules.
- Efficient COOLING. Conduction-cooled, Water cooled (tap water compatible). No problems of micro-channel degradation.
- Broad range of WAVELENGTHS, 635-2000 nm.
- Wide STORAGE temperature, -60°C to +85 °C.
- High FLEXIBILITY, for a wide range of applications.

If we do not have it,  
**we can create it...**

We are creating and manufacturing laser modules to our customers for more than fifteen years, thanks to the effort of a highly qualified, creative and motivated team. **Our courage, creativity and dynamism make us different.** We have demonstrated the applicability of new concepts in laser physics and technology, like our patented **clamped high power diode laser**, or our Q-Switched green SSL, capable of providing microseconds pulses and considered the most important development in Eye surgery from the last years. **Our present challenge is to design an ultra lightweight and resistant green laser device for a space mission to MARS.**

...and make it  
**come true**

Our in-house facilities, including a wide machinery park together with Optics Labs allow us to keep all the development and manufacturing processes inside, at monocrom.

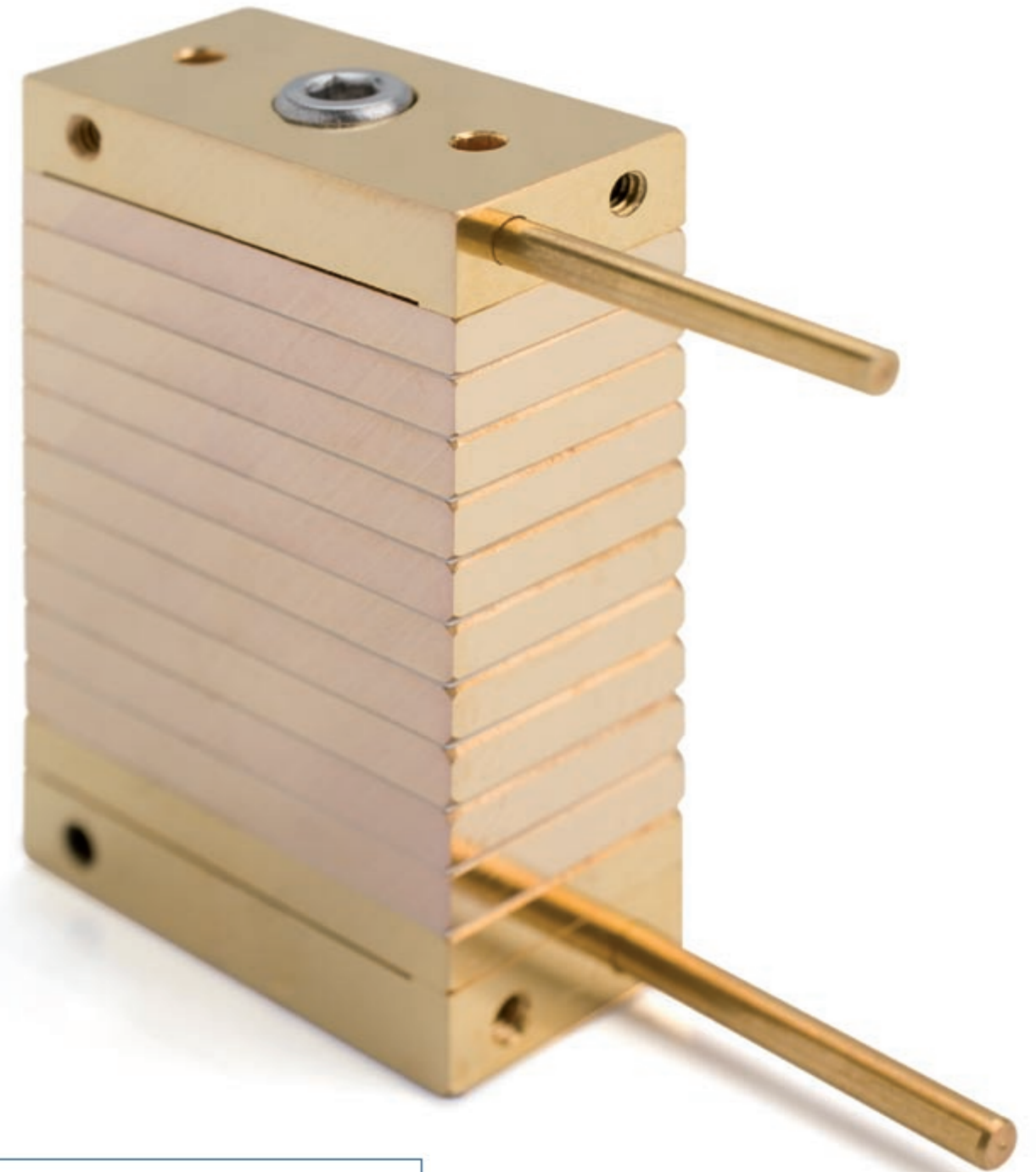
We design, manufacture and guarantee all our products. We also offer to our customers an After-Sales service in order to make sure that we meet our customers' expectations.

[www.monocrom.com](http://www.monocrom.com)

**monocrom**   
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 LDBA

# Laser Diode **Bar Assemblies**



## Ordering Information:



800 Village Walk #316  
Guilford, CT 06437  
Ph: 203-401-8093

Email orders to: [sales@xsoptix.com](mailto:sales@xsoptix.com)  
Fax orders to: 800-878-7282

**monocrom**   
LASER DIODE DEVICES

monocrom has developed a new concept of mounting high power diode lasers bars. In the patented technology, the laser bars are clamped without soldering within two copper blocks. This technology allows us to offer you the most reliable high power diode lasers.

Different solutions are available, from direct irradiation to fiber-coupled, from single bars to laser bar stacks of kW of power, from CW to nanosecond pulses, from visible to near-infrared, from conductive to water-cooled housing, and all adapted to our customers needs.

# Laser Diode Bar Assemblies

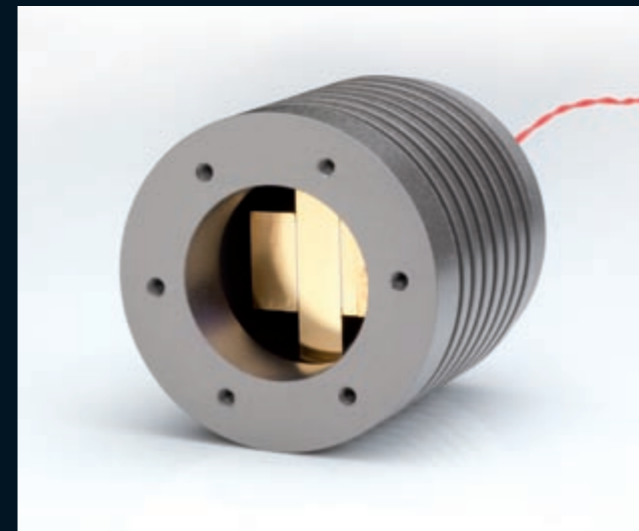
## OPEN PACKAGING

<b>Reference:</b>	LB-VVWXY-ZZMMM   WW: Wavelength; X: Cooling, P for passive, A for water; YY:number or bars, from 01 to 10; ZZ:number of emitters; MMM: operation mode, p, cw of qcw
<b>Laser bars:</b>	20-90 % fill factor. 0,6 to 3mm resonator
<b>Wavelength:</b>	635, 780, 810, 850, 880, 915, 940, 980, 1060 nm
<b>Optical power:</b>	up to kW
<b>Operation mode:</b>	pulsed (nanoseconds-milliseconds), QCW, CW
<b>Housing:</b>	standard, customised
<b>Cooling system:</b>	Conductive, Active (tap water can be used)
<b>Beam delivery:</b>	Non-collimated, FAC, FSAC collimated, fibre-delivery



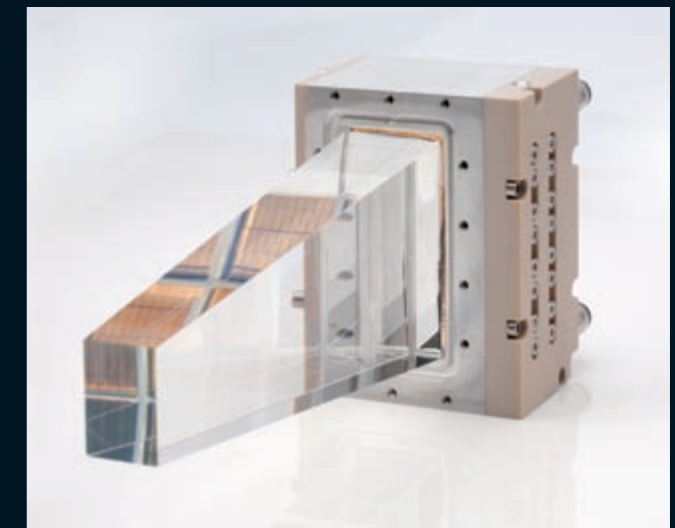
## DIODE LASER PUMPING HEADS

<b>Reference:</b>	PH-PPP-MM   PP: Peak power; MM: operation mode CW or QCW
<b>Wavelength:</b>	1064nm – Nd:YAG 3mm 808nm– Diode Laser Pumping
<b>Operation mode:</b>	CW.
<b>Optical power:</b>	<100W @ CW / <300W @ CW <600W @ QCW / <1800W @ QCW
<b>Housing:</b>	A10, A15, S35, LLL.
<b>Cooling system:</b>	Water cooled, without micro-channels



## CONDUCTIVE DIODE LASER HEADS

<b>Reference:</b>	LBS-VVWPXX-ZZMMM-PPP-OO (WW: wavelength; XX: number of bars; ZZ: number of emitters; MMM: operation mode; PPP: peak power; OO: optics)
<b>Wavelength:</b>	780, 810, 915, 940, 980 ... nm
<b>Operation mode:</b>	QCW.
<b>Optical power:</b>	< 5000 W
<b>Housing:</b>	Customized
<b>Cooling system:</b>	TEC
<b>Beam delivery:</b>	Direct irradiation, FAC-SAC, customized



## WATER COOLED DIODE LASER HEADS

<b>Reference:</b>	LBS-VVWXX-SXS   WW: Wavelength; XX: number or bars, from 01 to 50; SXS: output spot size)
<b>Wavelength:</b>	780, 810, 915, 940, 980 nm
<b>Optical power:</b>	< 5000 W
<b>Operation mode:</b>	QCW.
<b>Housing:</b>	Customized
<b>Cooling system:</b>	Water cooled, high cooling eff. without micro-channels
<b>Beam delivery:</b>	Free or lens duct 6x6, 8x8, 10x10, 12x12.
<b>Main application:</b>	skin treatment, 40 J/cm <sup>2</sup> from pulses of 20ms

## FIBER-COUPLED DIODE LASER HEAD

<b>Reference:</b>	LBS-VVWPXX-ZZMMM-PPP-OOO (WW: wavelength; XX: number of bars; ZZ: number of emitters; MM: operation mode; PPP: peak power; OOO: fiber output)
<b>Wavelength:</b>	780, 810, 915, 940, 980 ... nm
<b>Operation mode:</b>	CW, QCW
<b>Optical power:</b>	< 500 W
<b>Housing:</b>	Compact and light-weight
<b>Cooling system:</b>	Water or conduction cooled
<b>Beam delivery:</b>	100-600µm fibre

**NEW**  
no photo available

