monocrom
LASER DIODE DEVICES

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Product Division	LDBA
Product	**LB-64P01-19YCW**

Laser Diode Bar Assemblies

Description

Single Laser Bar at 640nm for CW and QCW, conductive cool

Main Features

Solder-free diode bar mounting technology, exclusive from MONOCROM S.L.

The main features of the solder-free concept of the clamp-mounting technology are:

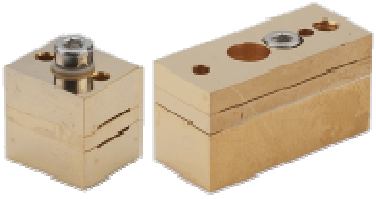
- **Long lifetime,** due to the absence of the mechanical stress caused by the soldering process at high temperature
- **Minimum "smile",** less than 0.5 mm
- **High reliability in pulsed conditions,** since the clamped bars do no suffer the same fatigue effect than the soldered ones due to the thermal cycle
- **Small thermal resistances,** owing to the reduction of the contact resistance between electrodes and laser bar. No micro channels are needed to reach low thermal resistances.
- **Large storage temperature interval,** tested from –60ºC to + 85ºC

Some Applications

- Extreme Environmental conditions – aeronautics, space, automotion.
- Pulsed-Energy mode – medicine, aesthetic, laser pumping.
- Material processing – fibre coupling, plastic and metallic industry, research.

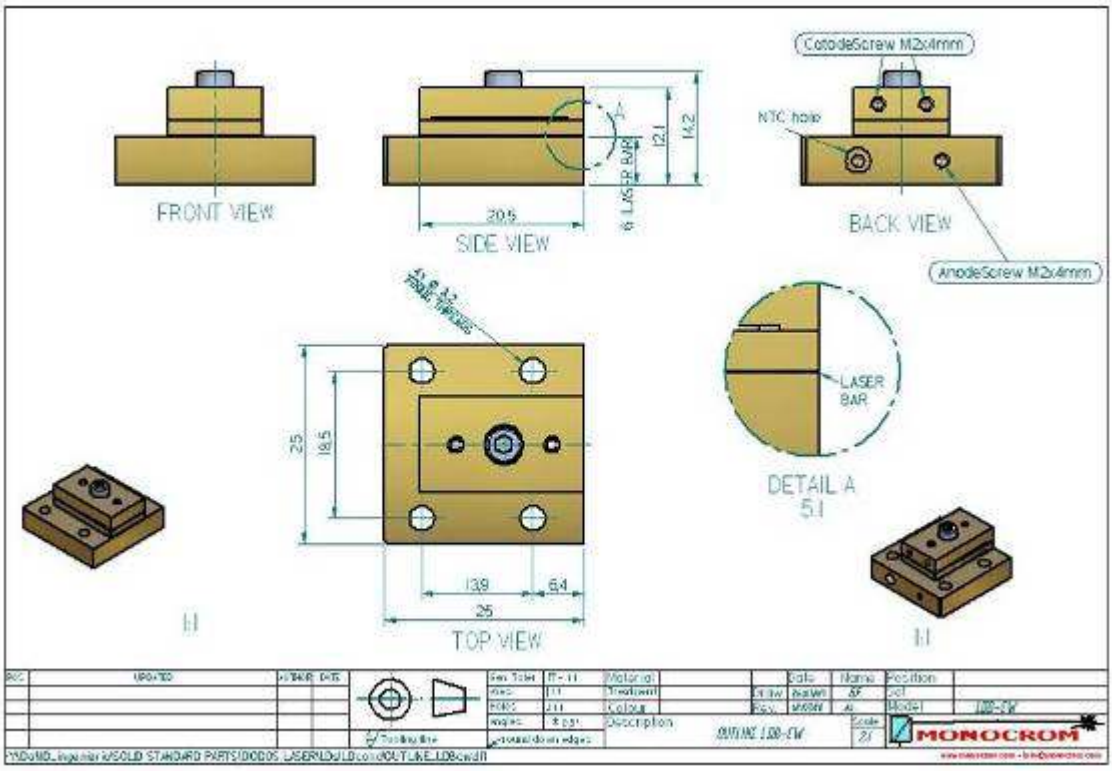
Pictures of different models

For CW operation

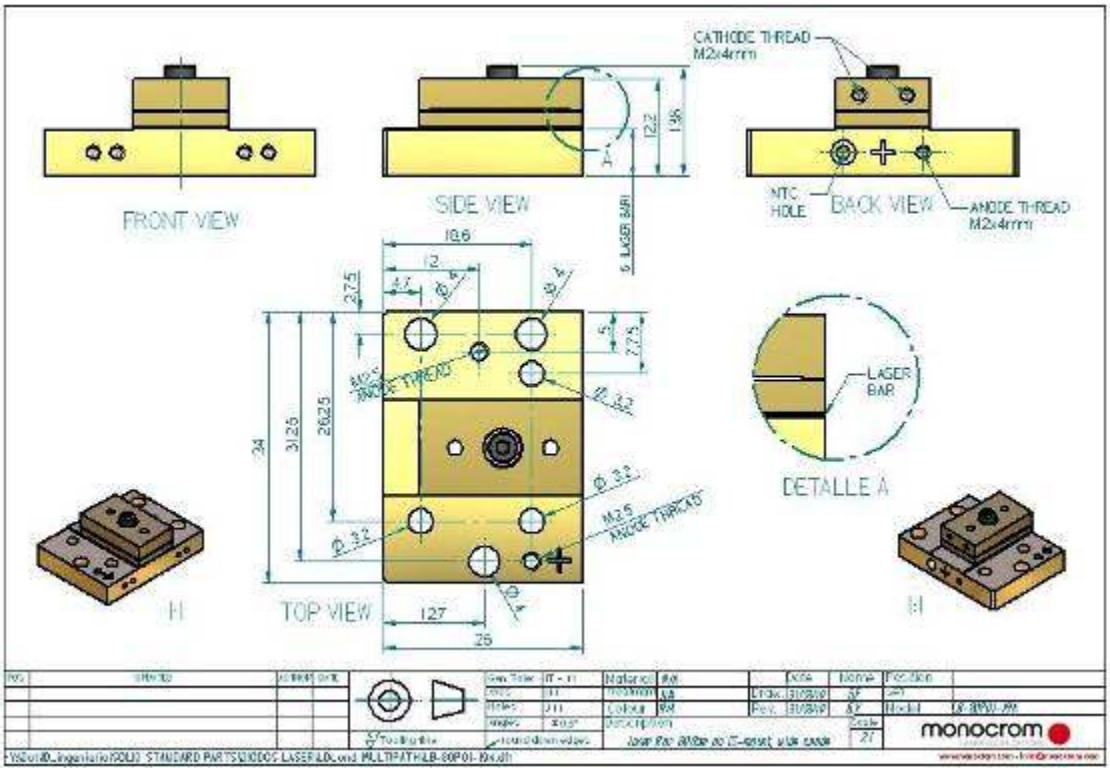


For QCW operation

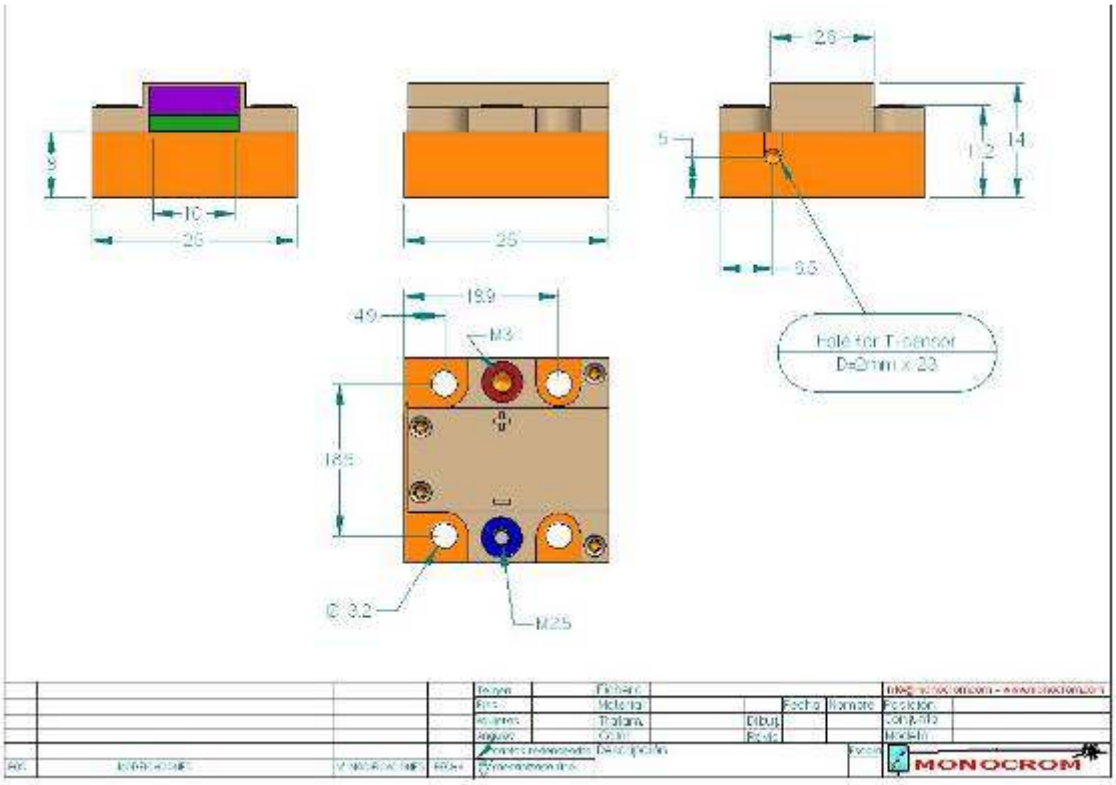
Outline of CW Mounting



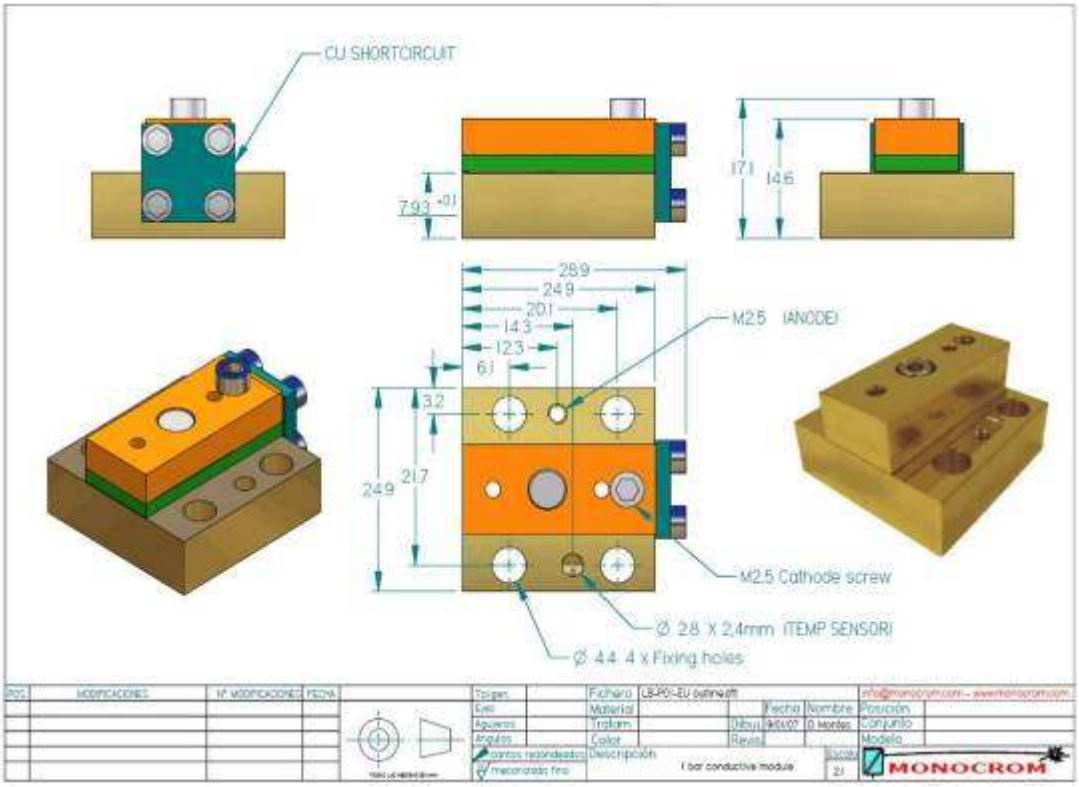
Bar Height: 6mm



Bar Height: 6mm. Wide anode

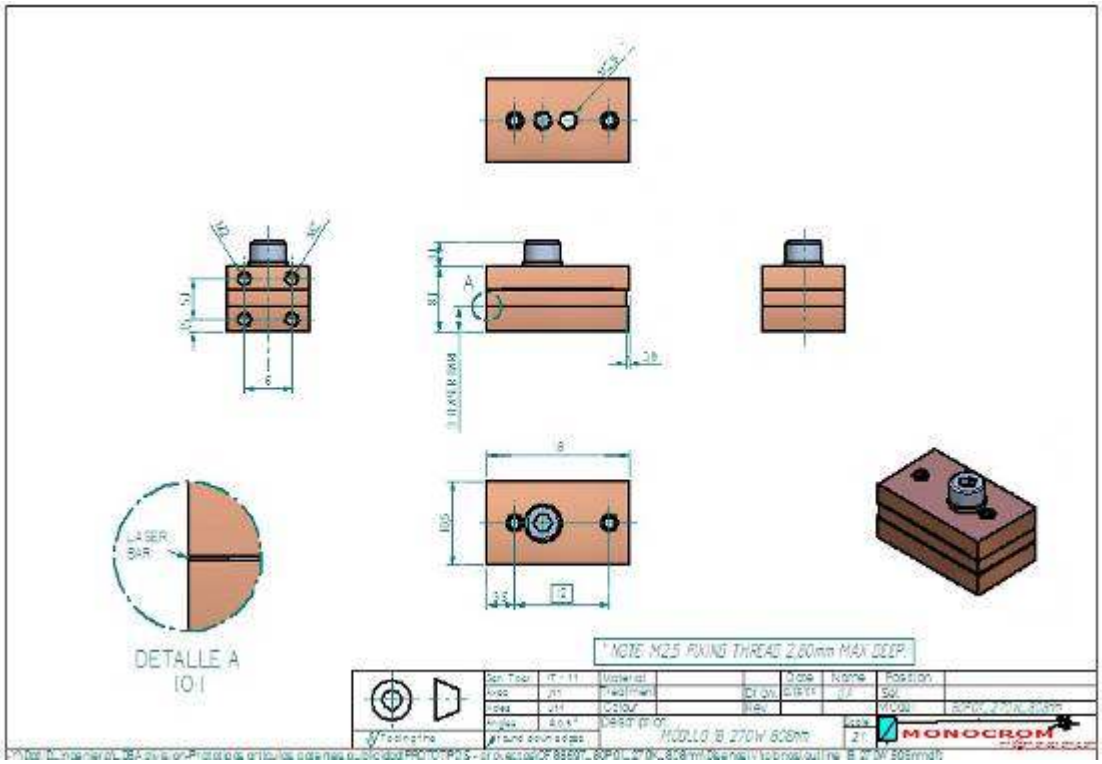


Bar Height: 8mm. Plastic Cover

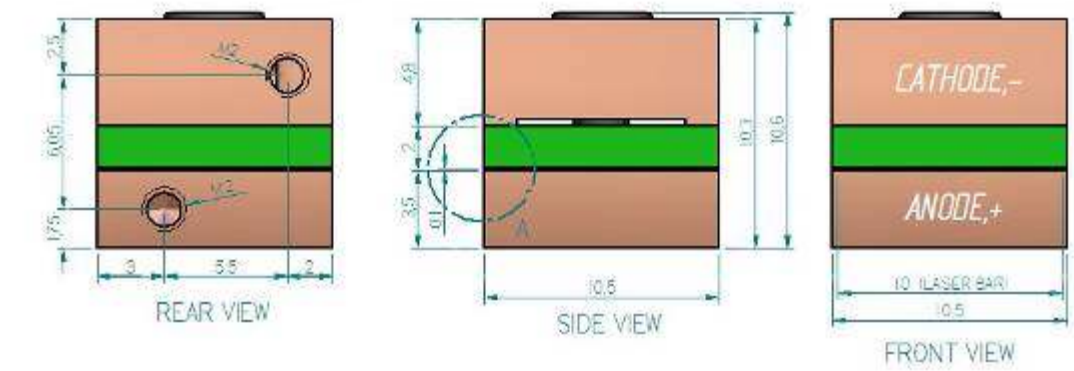


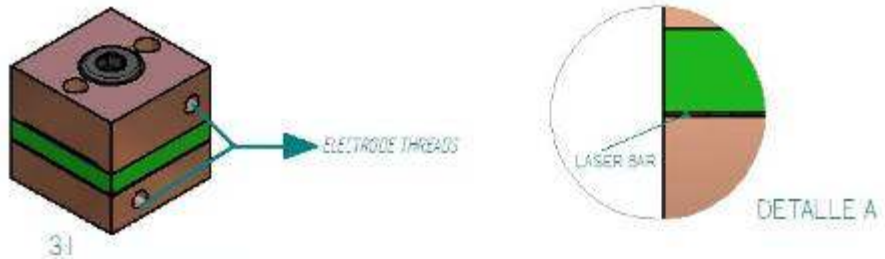
Bar Height: 8mm, compatible with other commercial CS-mount

Outline of QCW Mounting



Standard mounting for QCW





Compact design

Other customized designs under request

Ordering Information:

XSoptix
800 Village Walk #316
Guilford, CT 06437
Ph: 203-401-8093
Email orders to: sales@xsoptix.com
Fax orders to: 800-878-7282

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LB-64P01-19YCW | GENERAL TECH SPECIFICATIONS

Product Reference (according to type of diode)	Single Bar mounted; 64: Wavelength 640nm, P passive cooling; YCW: QCW or CW operation With or without fast and/or slow axis collimation. **LB-64P01-19YCW**	
Nº of emitters in the laser bar	19	
Laser Bar geometry	0,42 cm wide 20% fill factor emitter size: 40 μm emitter spacing: 200 μm	
Fill factor	20%	
Center wavelength @ 20ºC	640 ± 3nm	
Max. peak power	8W -CW 15W-QCW	
Operation current (for max. power), typ	11A- CW 18A -QCW	
Threshold current, typical	3A	
Pulse length, QCW(1)	Up to hundred of milliseconds	
Duty cycle (DC), QCW(1)	<50 % QCW	
Wavelength Temp.Coefficient, typ.	0,27-0,3 nm/ºC	
Thermal resistance(2)	0,6-0,8 ºC/W	
Smile	< +/- 0,3 μm	
Voltage @ Iop	(1,8-2,5 V) (Base to + voltage)	
ΔV/I	10 mV/A	
Beam divergence FWHM(1)	Typical high divergence without collimation optics (~40º-fast axis; 10º-slow axis)	
Beam divergence with FAC or FSAC	-FAC: FA(3-6mrad), SA 10° -FSAC: FA(3-6mrad), SA (2-4°)	
Cooling	Conductive	
Operation temperature(3)	<25ºC. If wet atmosphere, T>15ºC is recommended	
Electrical connections, typical	On the top: Threads M2,5mm Behind: Fast connectors (Pin ∅2x10mm), or threads M2mm	
Laser class product (EN-60825)	4	
Expected lifetime	10.000 hours CW 10^9 shoots QCW tp<1ms 10^8 shoots QCW tp>1ms	

1) Higher values also available for lower operation current
2) The module should be cooled properly to achieve these values
3) Optic Power Pop is specified at 20ºC. According to the laser bar qualification, the power decreases 5% with T.

Device sensitive to ESD & dust contamination => Handling under clean area conditions advised.
Parametrical and dimensional specifications can be modified upon request.