

## FIBER COUPLED HIGH POWER LASER DIODE

915nm 640W 200 $\mu$ m Fiber Coupled High Power Diode Laser

Version	Date	Prod. code
Rev A2	Jun 2022	915B640200

## OVERVIEW

Fiber coupled diode pump module offering 640 W output at 915 nm through a 200/220  $\mu$ m fiber.

The superior combination of high output power and brightness is backed by extensive reliability testing across a wide range of operating temperatures, drive currents and lifetime tests.

## FEATURES

- Extreme brightness
- Multiple single emitter-based diode laser
- High reliability
- 1040 - 1200 feedback protection
- Direct applications

# SPECIFICATIONS

Optical parameters	Minimum	Typical	Maximum
Output power		640 W	
Center wavelength	900 nm	915 nm	930 nm
NA (95% Power)		0.18	
Back reflection isolation range	1040 nm	1064 nm	1200 nm
Back reflection isolation	30 dB		

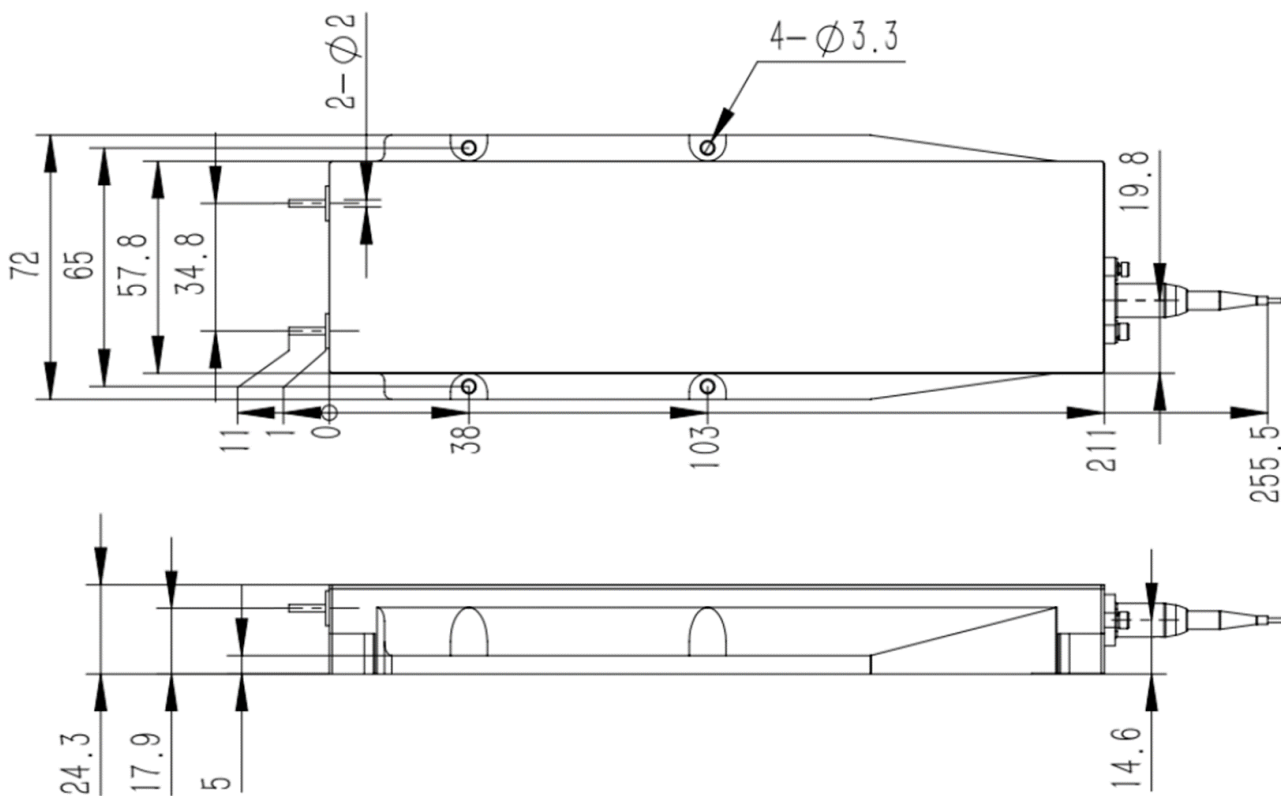
Fiber parameters	Minimum	Typical	Maximum
Fiber core diameter	196 $\mu$ m	200 $\mu$ m	204 $\mu$ m
Fiber Clad diameter	217 $\mu$ m	220 $\mu$ m	223 $\mu$ m
Numerical Aperture	0.20	0.22	0.24
Fiber length	1.5	2.0	
Fiber connector	Bare Fiber/SC Ceramic Ferrule		
Fiber bend radius	60 mm		

Electrical	Minimum	Typical	Maximum
Efficiency		48 %	
Threshold current		1.1 A	
Operating current			30.0 A
Operating voltage			52.0 V

Thermal	Minimum	Typical	Maximum
Operating temperature (package)	5 °C		45 °C
Storage temperature	-30 °C		85 °C
Wavelength temperature coefficient		0.35 nm/°C	
Lead soldering temperature		260 °C	300 °C
Lead soldering time			10 sec

## DIMENSIONS



Dimensions in mm

Typical weight 1950g

## APPLICATION NOTES

- The laser beam emitted from the diode laser is invisible, please follow the standard safety procedures for IEC Class 4 lasers, avoid eye or skin exposure to direct or scattered radiation.
- Electronic Static Discharge (ESD) is the primary cause of unexpected diode laser failure. The diode laser should be handled by trained operators wearing ESD grounding straps and the work surface should be grounded. Connectors should be attached to the pump pins prior to removing the ESD shortcut protection component.
- Ensure the end of the fiber is free of dust and contamination before operation.
- The laser should be operated according to the specifications, maximum optical power should not be exceeded.
- The laser may be damaged by excessive drive current, stable power supply should be used to avoid surge current.
- To ensure long-term reliability of the laser, a 20 - 30°C cold plate is required to operate the laser work within the proper temperature range.

