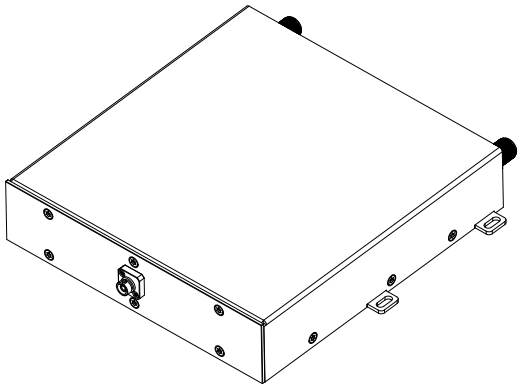
375 nm Fiber Coupled Laser Module

LY375-12W-FF800 Series



Main Features：

- 12W output Power
- High Reliability
- High Cost-effective
- Low power consumption
- UV Resistant Fiber Coupling
- Miniaturized/ Modular

Application Scenarios:

PCB Plate Making
Fluorescence Excitation
Material Processing
Biochemical Research

The BULASER's LY375-12W-FF800 fiber laser module delivers 12W of laser power via an 800μm fiber. The module provides high brightness, small size, and easy-to-use thermal management through a spatially coupled laser diode modules, enabling a water-cooled architecture with predictable high reliability.

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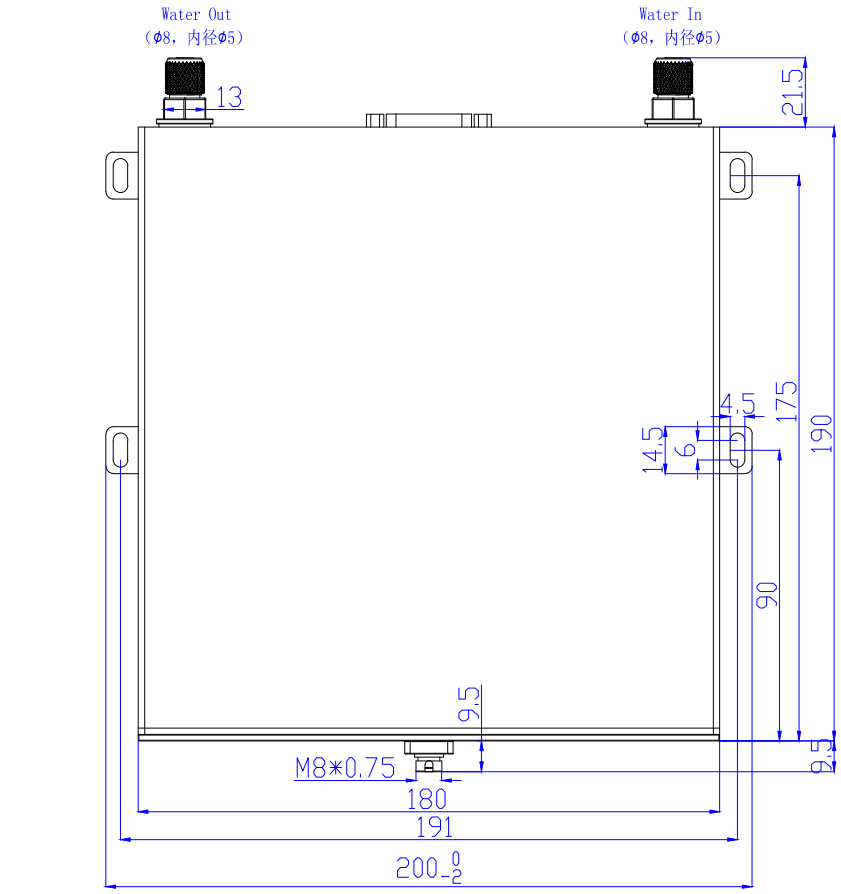
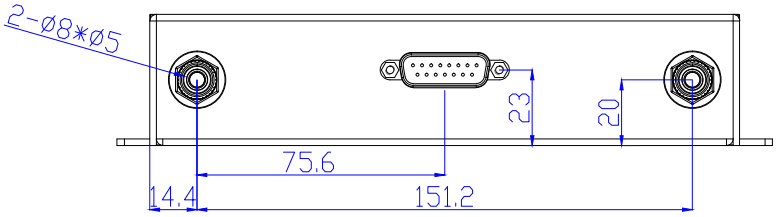
Dimensions (Unless otherwise stated, dimensions are in mm)





Note: The water pipe is equipped with a flexible hose with an inner diameter of Φ5mm and an outer diameter of Φ8mm.

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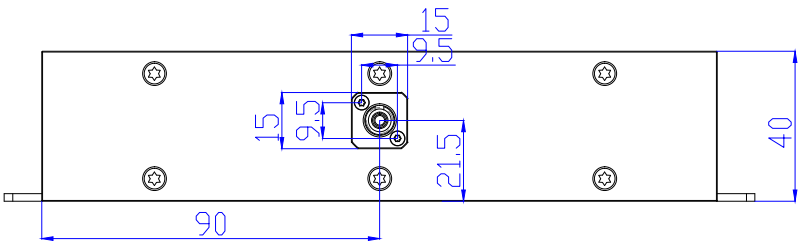
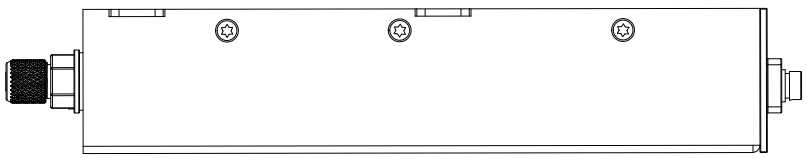
Dimensions (Unless otherwise stated, dimensions are in mm)





Note: The water pipe is equipped with a flexible hose with an inner diameter of Φ5mm and an outer diameter of Φ8mm.

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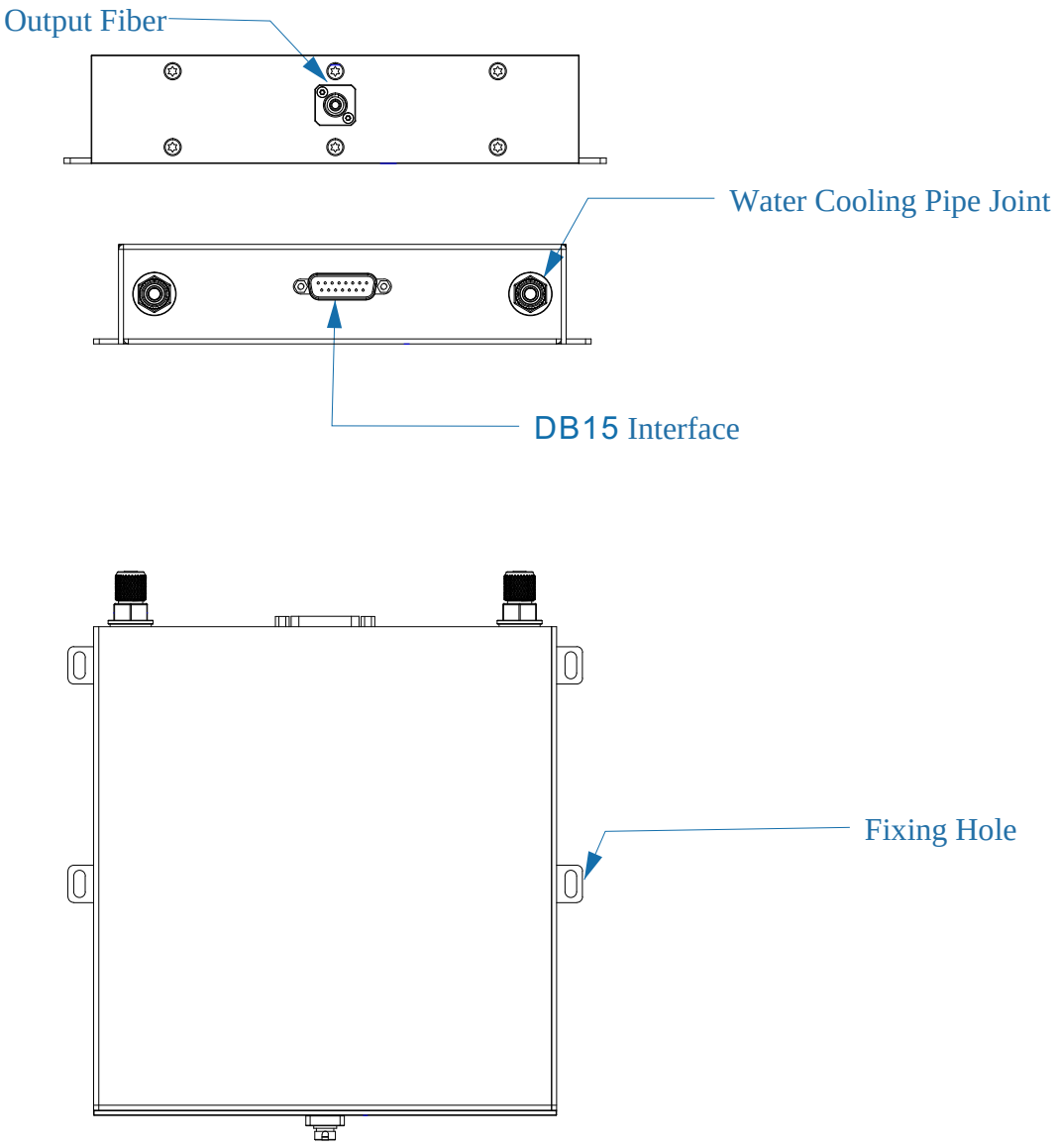
Interface Description

(The following specifications are for reference only and are subject to change without notice)



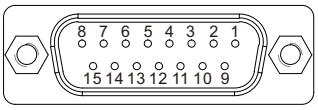
375 nm Fiber Coupled Laser Module

LY375-12W-FF800 Series

Electrical Connections (The following specifications are for reference only and are subject to change without notice)

DB15 **Pins Description:**

1.375 nm Laser LD1(+)
2.375 nm Laser LD1(-)
3.375 nm Laser LD2 (+)
4.375 nm Laser LD2(-)
5.375 nm Laser LD3 (+)
6.375 nm Laser LD3 (-)
7.375 nm Laser LD4(+)
8.375 nm Laser LD4(-)
9.-
10. Thermistor 1
11. Thermistor 1
12. Thermistor 2
13. Thermistor 2
14.-
15.-



375 nm Fiber Coupled Laser Module

LY375-12W-FF800 Series

Specifications (The following specifications are for reference only and are subject to change without notice)

Parameter	Symbol	Min	Typ	Max	Unit
Working Voltage	V_f	40	42	44	V @8S
Working Voltage	V_f	40	42	44	V @8S
Working Voltage	V_f	40	42	44	V @8S
Working Voltage	V_f	40	42	44	V @8S
Working Voltage	I_{op}	-	0.62	0.67	A Per channel
Laser Power	P_o	-	12	-	W
Correlation	Correl	-	0.99	-	I/P_O
Wavelength	λ_p	370	378	380	nm
Slope Efficiency	η_d	1.3	1.8	2.4	W/A
ESD	V_{esd}	-	500	-	V
Cooling Medium	R	-	Purified water	-	H2o
Water Temperature	T_c	20	21	22	℃
Water Pressure	WP	-	0.2	0.5	Mpa
Flow Rate	F_r	3	-	-	Liter / min

Note: Please use non-conductive deionized purified water as the coolant and change it regularly (every 2 months). Humidity: 50%-70%RH, non-condensing condition.

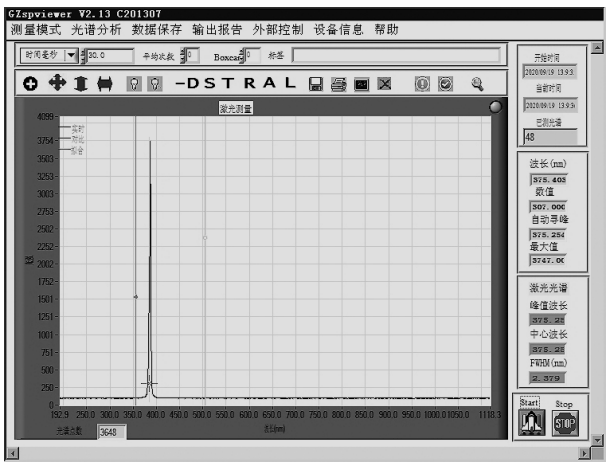
375 nm Fiber Coupled Laser Module

LY375-12W-FF800 Series

Specifications

(The following specifications are for reference only and are subject to change without notice)

Parameter	Symbol	Min	Typ	Max	Unit
Ambient Temperature	T_a	18	22	25	℃
Storage Temperature	T_{stg}	-30	25	70	℃
Humidity	RH	-	55%	70%	%RH
Fiber Bend Radius	BFR	-	120	-	mm
Fiber Axial Pull	N_{apf}	-	-	2	kgf
Fiber Core Diameter	D_c	-	800	-	μm
Numerical Aperture	NA	-	0.22	-	
Fiber Length	L_f	-	5	-	m
Fiber Interface	OFS	-	FC	-	



Laser Wavelength Test Chart

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Safe Operation (Safety matters, please read carefully)

The laser light emitted by the 375nm laser contains ultraviolet light, which may be harmful to the human eye. Avoid viewing the fiber end face directly or viewing the collimated beam along its optical axis while the device is operating.

Use beyond the maximum ratings may result in device failure or a safety hazard. A high-quality power supply is required to prolong device life. (The diode laser may be damaged due to excessive ripple voltage or switching surge. When using, the power connector should be connected and then connected to the main power supply)

The temperature needs to be monitored, and an increase in temperature will accelerate the degradation of device performance or even damage. Therefore, it is recommended to pay attention to reducing the temperature of the laser module to meet the requirements. For example: if the enclosure is operated at 35°C instead of 25°C, the life expectancy will be reduced by more than four times; When storing at low temperature, please drain the water in the equipment to prevent the pipes from freezing.

Incorrect ID settings can cause the device to fail to connect. And please note that one device cannot use two or more laser modules with the same ID.

BULASER's statement: All reverse engineering is prohibited!