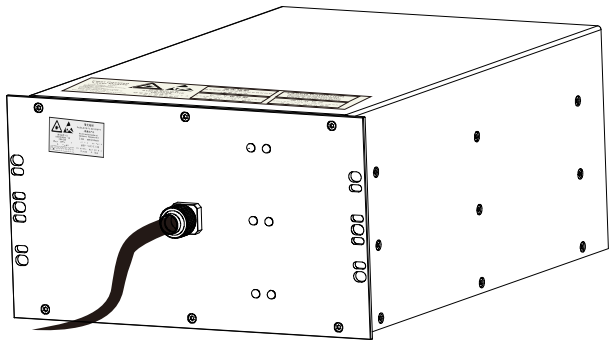
High Power 4IN1-40W Fiber Coupled Laser Module
LYUV4-AD Series



Main Features

- 40W High Power
- Four Wavelength in One Module
- High Reliability
- High Cost-effective
- Low power Consumption
- UV Resistant Fiber Coupling
- Miniaturized/ Modular

Application Scenarios:

PCB Plate Making

Fluorescence Excitatio n Material Processing

Biochemical Research

BULASER's LYUV4-AD fiber laser module provides 40W laser power through 105 μm bundled fiber; the module provides high brightness, small size and easy-to-use thermal management through distributed laser diodes, making the water-cooled ar chitecture with predictable high reliability.

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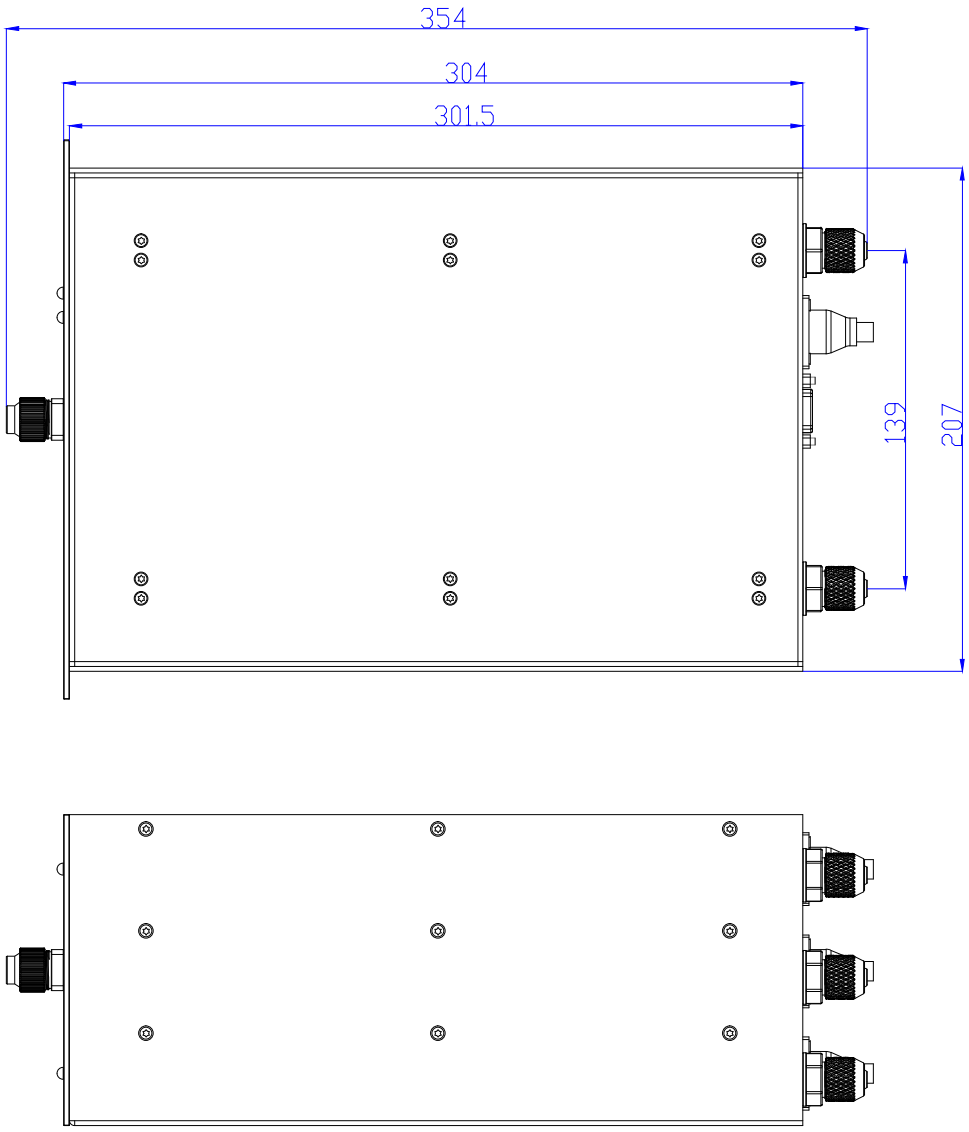
Dimensions (Unless otherwise stated, dimensions are in mm)



Note: The water pipe is equipped with inner diameter Φ6.5-Φ8mm/outer diameter Φ10mm hose.

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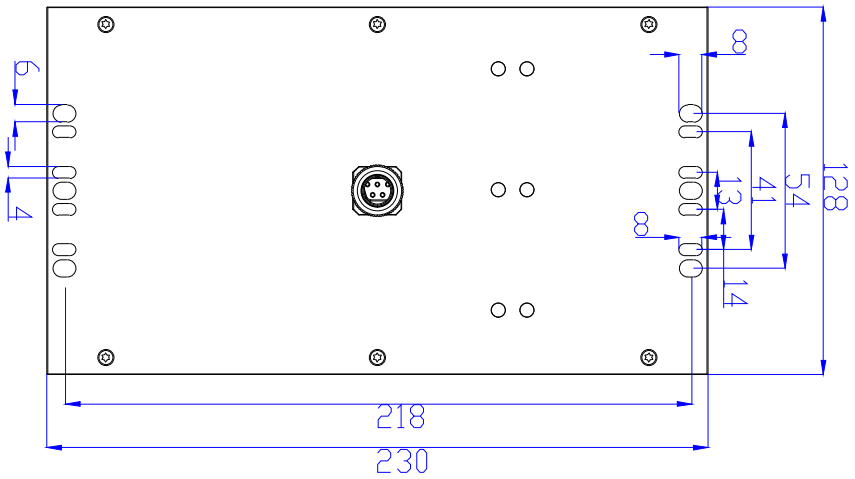
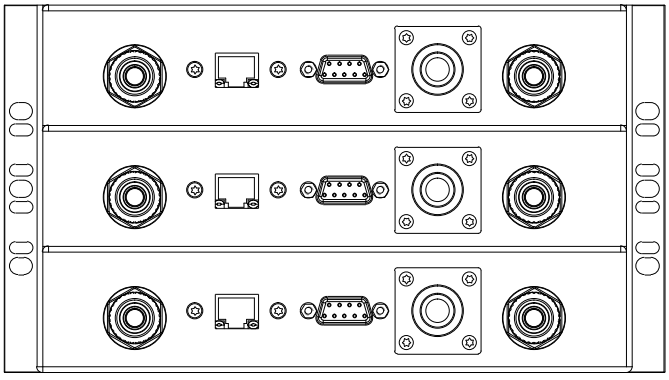
Dimensions (Unless otherwise stated, dimensions are in mm)





Note: The water pipe is equipped with inner diameter Φ6.5-Φ8mm/outer diameter Φ10mm hose.

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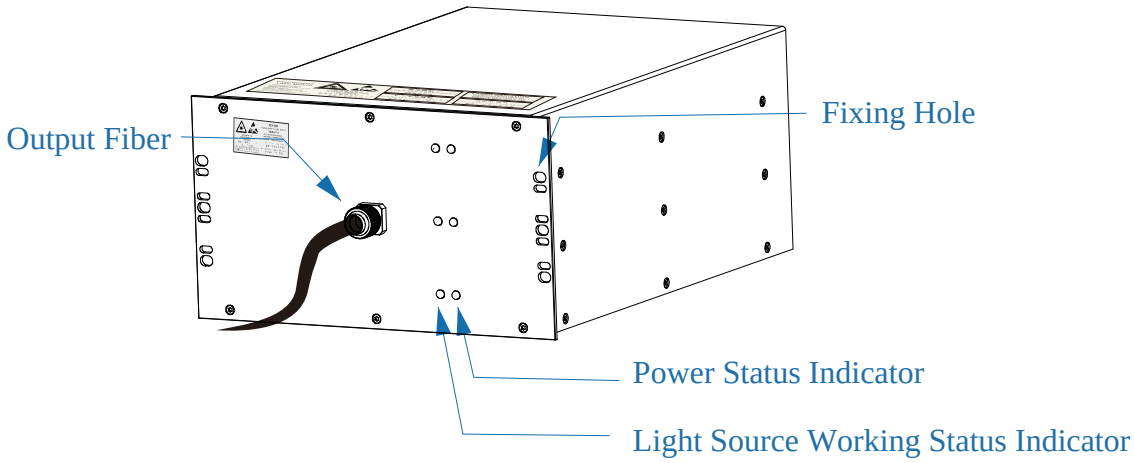
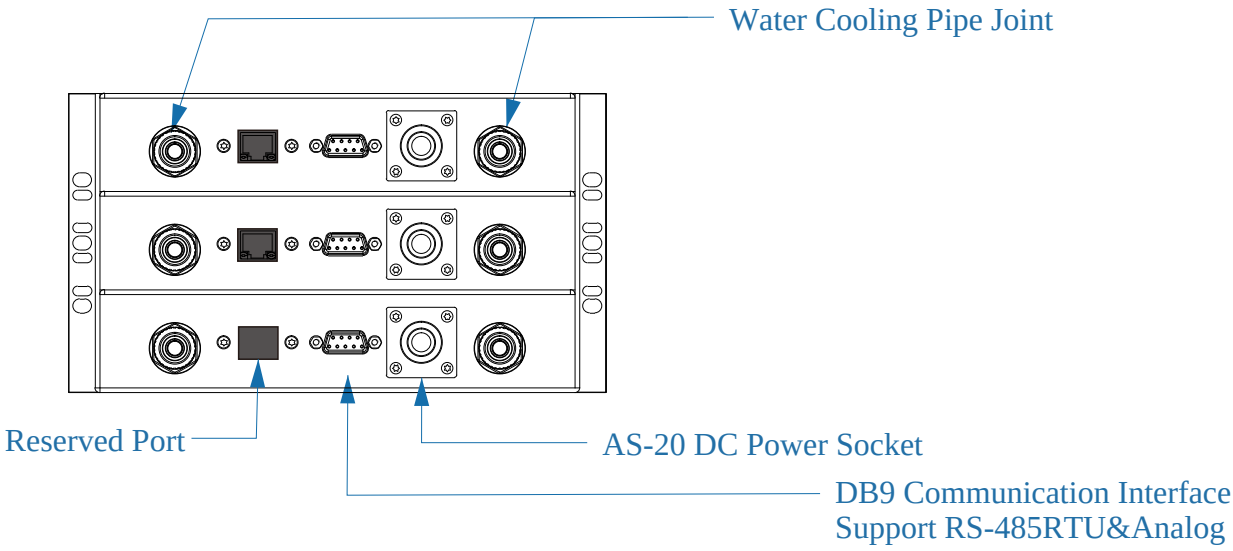
Interface Description (The following specifications are for reference only and are subject to change without notice)





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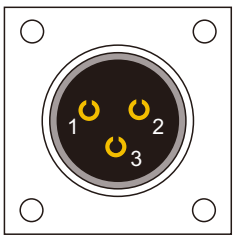
Electrical Connections (The following specifications are for reference only and are subject to change without notice)

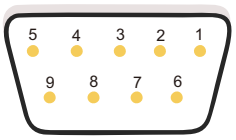
AS-20 Pins Description:

1.DC24V
2.GND
3.Earthing



DB9Pins Description:

1.AI1
2.AI1
3.A
4.B
5.G
6.SGND
7.Pul1
8.Pul1
9.DGND



Indicator Status:

🟢	Not powered on
🟢/🟢	Powered on
🟢/🟢	Light source is working （Single wavelength）
🟢	Not powered on
🟢/🟢	Powered on
🟢/🟢	Light source is working （Single wavelength）
🟢/🟢	Light source is working （Single wavelength）
🟢/🟢	Light source is working （Dual wavelength）
🟢	Not powered on
🟢/🟢	Powered on
🟢/🟢	Light source is working （Single wavelength）

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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	-	24	26	V
Working Current	I_{op}	-	7x3	-	A
Laser Power	P_o	-	10*4	-	W 435nm≥10 415nm≥10 405nm≥10 375nm≥10
Correlation	Correl	0.98	0.99	-	I/Po
Wavelength	λ_p	435/410/400/375	440/415/405/380	445/420/410/385	nm
Slope Efficiency	η_d	1.4	1.8	2.2	mW/mA
ESD	V_{esd}	-	-	500	V
Cooling Medium	R	-	Purified water	-	H2o
Ambient Temperature	T_a	18	22	25	℃
Storage Temperature	T_{stg}	-30	25	70	℃
Water Temperature	T_c	18	19	22	℃
Water Pressure	WP	-	0.2	0.5	Mpa
Flow Rate	F_r	15	-	-	Liter / min
Humidity	RH	-	55%	70%	%RH

Note: Please use non-conductive deionized purified water as the coolant, and please replace it regularly (2 months/time). (Humidity: 50%-70%RH non-condensing state)

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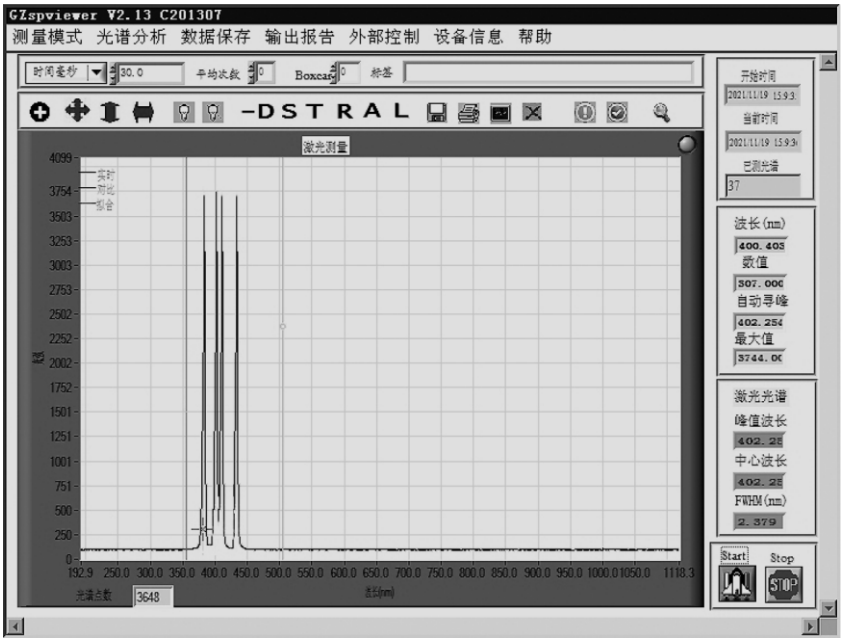
Specifications (The following specifications are for reference only and are subject to change without notice)

Parameter	Symbol	Min	Typ	Max	Unit
Fiber Bend Radius	R_b	-	120	-	mm
Fiber Axial Pull	N_{apf}	-	-	2	kgf
Fiber Core Diameter	D_c	-	105	-	μm
Numerical Aperture	NA	0.20	0.22	0.24	
Fiber Bundle Diameter	D_{bc}	-	2*1.28	-	mm
Fiber Length	L_f	-	1or3	-	m
Fiber Interface	OFS	-	SMA905	-	/



Laser Wavelength Test Chart

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Safe Operation (Safety matters, please read carefully)

The laser emitted by 375-415nm laser contains ultraviolet light, which may be harmful to the human eye.When the device is running, avoid directly observing the fiber end face or observing the collimated beam along its optical axis.

Use beyond the maximum rating may cause device failure or safety hazards.A high-quality power supply must be used to extend the life of the device.(Diode lasers may be damaged by excessive ripple voltage or switching surges. When using, the power connector should be connected before connecting to the main power supply)

Monitor the temperature. Rising temperature will accelerate the degradation of device performance (or even damage) so it is recommended to pay attention to reducing the temperature of the laser module to meet the requirements.For example: If the chassis is operated at 35°C instead of 25°C, the expected life will be reduced by more than four times; when storing at low temperatures, please drain the moisture in the device to prevent freezing and cracking of the pipes.

Incorrect ID settings will cause the device to be unable to connect.

Device ID number, this ID number can be changed by software

BULASER's statement: All reverse engineering is prohibited!