390 nm/350mW Fiber Coupled Laser Module

Specification of LY3935AS10A-105

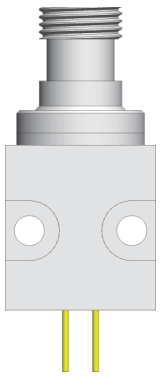
Features :

- Optical power : 300mW(CW)
- Violet laser : 390nm
- Low working current : 310mA(Typ.)
- Low working voltage : 4.5V(Typ.)

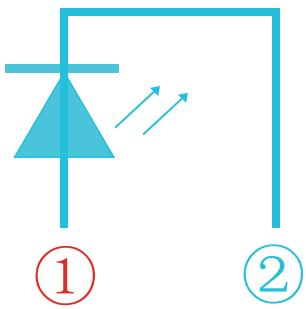
Application

- PCB Plate Making
- Fluorescence Excitation
- Material Processing
- Biochemical Research
- Criminal Investigation
- UV Exposure

Appearance



Internal Circuit



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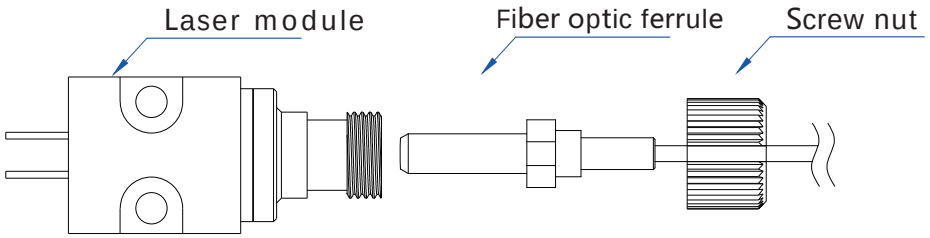
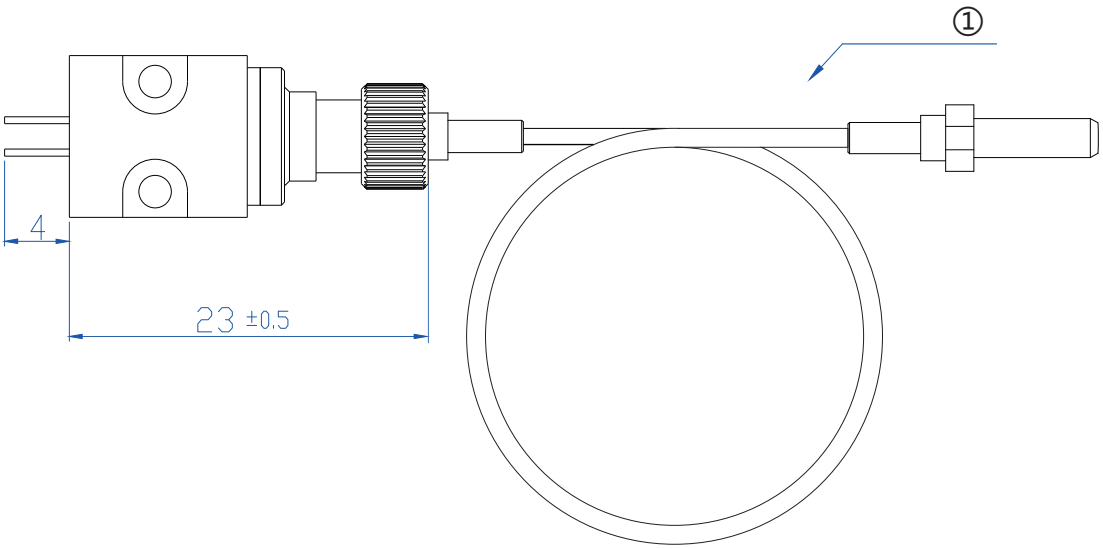
Appearance and assembly:





Note①:UV105/125-22/250 fiber ;
This product does not contain UV105/125-22/250 optical fiber; please contact our sales department if you need to purchase optical fiber.

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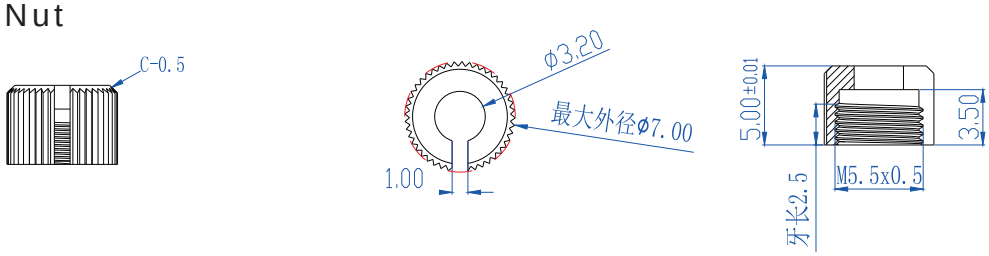
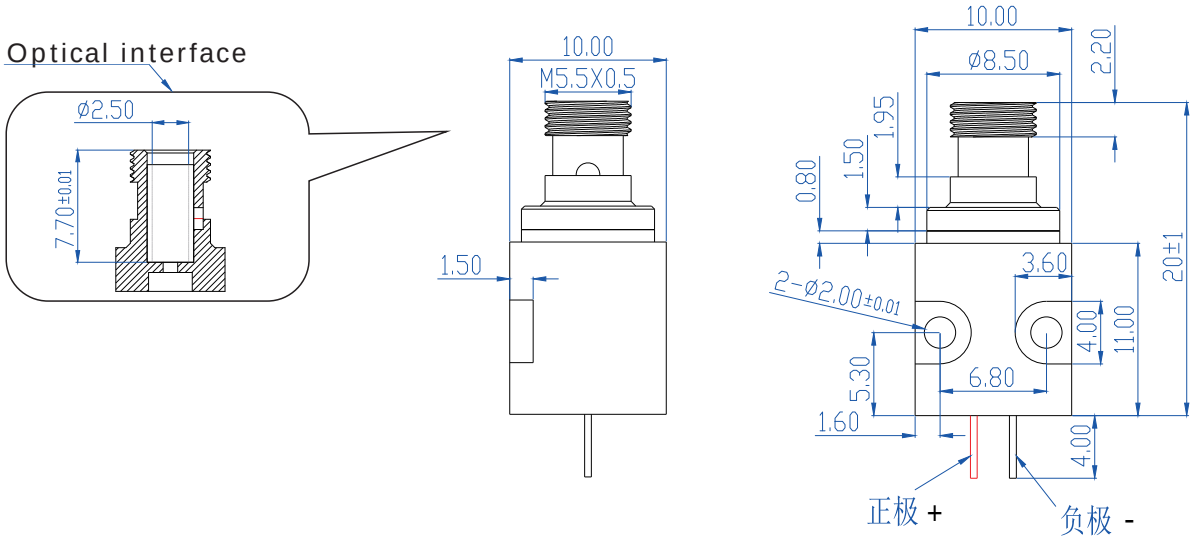
Dimension:

Screw Nut



Laser module



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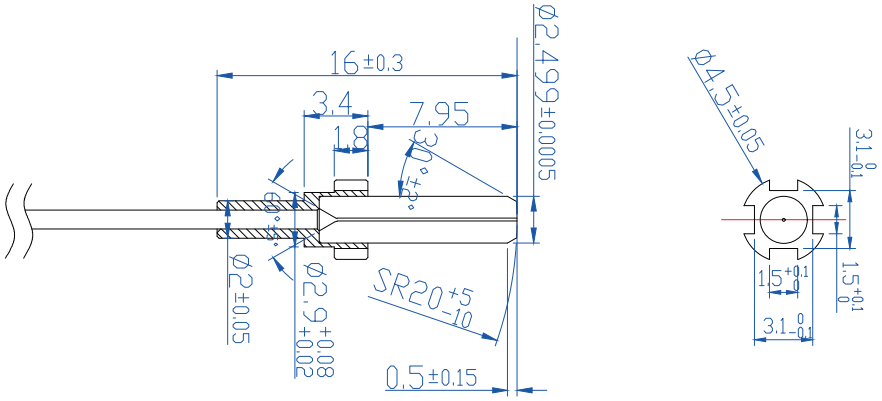
Fiber ferrule requirements:

Ferrule size



The extension length of the ferrule is 7.95mm, the module allows the ferrule length range to be ±0.15mm, the ferrule diameter is 2.5mm,

To ensure the replaceability of the optical fiber bundle, the ferrule is not marked with an allowable tolerance range of ±0.05mm.

Fiber parameters:

Fiber Model	UV105/125-22/250
Typical numerical aperture	0.22
Fiber core diameter	105μm±2. 5
Cladding diameter	124.7μm±1
Coating diameter	242μm±5
Core/cladding concentricity deviation	≤0.6μm

Note:This product does not contain UV105/125-22/250 optical fiber; please contact our sales department if you need to purchase optical fiber.

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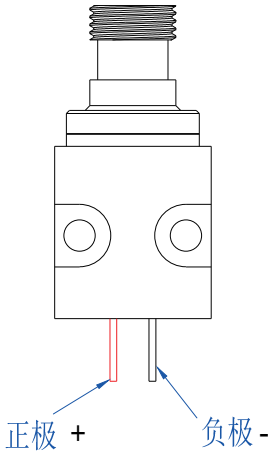
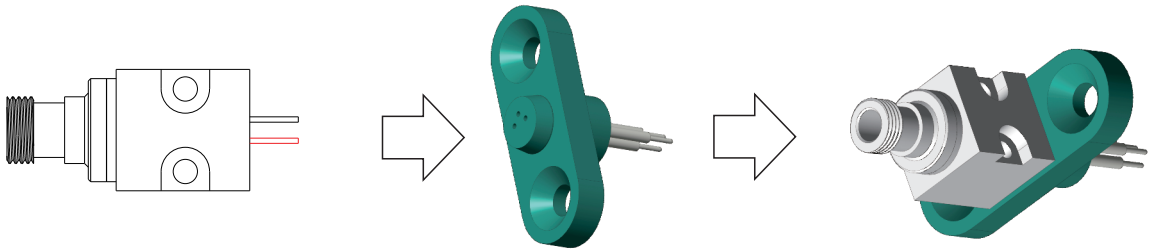
Electrical Interface:



The electrical interface can be connected in two ways:

1:Soldering connection①

2:Connetor ②



Note①：Use soldering method to connect; the solder temperature is controlled at 280℃±5℃, and the soldering time is within 3 seconds. ②：Use a connector to connect; please use a connector with reliable contact and good connection; (Connector requires contact resistance <5mΩ)

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Absolute Maximum Ratings (Tc=25°C

Item	Symbol	Ratings	Unit/Condition
Optical output power	PO	350	mW
LD Reverse Voltage	VR(LD)	2	V
Operating Temperature	TOPR	17-25	℃
Working Relative Humidity	RH	50%-70%	No condensation
Storage Temperature	TSTG	-40~+80	℃

Optical and Electrical Characteristics (Tc=25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	Ith	-	150	200	mA	
Working current	Iop	-	310	380	mA	PO=850mW
Working voltage	Vop	-	4.5	5.5	V	PO=850mW
Wavelength	λ	390	395	400	nm	PO=850mW
Coupling Efficiency	η	80	85	-	%	Fiber core diameter 105/125μm
Shell Polarity				0	+/-/0	No polarity

Note: it is recommended to use the device below 2000m above sea level.

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Specification of LY3935AS10A-105

Optoelectronic Characteristics (TC=25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Electric power	Pw	-	1.39	2.10	W	
Power stability	Ps	-	-	3	%	s=▵P/P ①

ODS materials and supplies:

This product must not contain the following substances. In addition, the following materials must not be used in the production of this product. Ozone depleting substances: CFCs, halons, carbon tetrachloride, 1.1.1-trichloroethane (methyl chloroform) products that comply with 6-2 RoHS. This product complies with the RoHS Directive (2011/65/EU). The information on chemical substances in the product is based on the Product Information Notification of Chinese Laws and the Management Measures for the Control of Pollution from Electronic Information Products.

Name and content of toxic and harmful substances or elements in the product:

铅（Pb）	汞(Hg)	镉(Cd)	六价铬 (铬 (VI))	多溴联苯 (PBB)	多溴联苯二 苯醚 (PBDE)
○	○	○	○	○	○

This table is compiled in accordance with the regulations of SJ/T11364.

○ Indicates that the content of toxic and hazardous substances in all homogeneous materials of this part is lower than the stated concentration limit. The requirements are in GB/T2657.

Note ①: In the formula, ▵P is the absolute value of the output power change within a certain time range, and P is the average output power within this time. This parameter is greatly affected by drive stability. To test this parameter, a constant current source with a stability within 1% is required.

It is recommended to use the device below 2000m above sea level.

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Reliability test:

Check content	Inspection methods and equipment	Number of test samples	LTPD sampling	Judgement standard	Disadvantage level	
					Main	Secondary
Rated current light attenuation	Rated current 0.62A, chiller setting temperature 20℃, ambient temperature 25℃, probe LM-10 (Coherent), wavelength 405nm, continuous lighting test, the probe directly tests the optical end power of the module;	15		See table 1		
Accelerated aging	Rated current 0.7A, chiller setting temperature 20℃, ambient temperature 25℃, probe LM-10 (Coherent), wavelength 405nm, continuous lighting test, the probe directly tests the power of the optical end of the module;	5		See table 2		
Working Temperature						
Storage temperature	Place the optical fiber module in an anti-static vacuum package, put the whole into a thermostat, set the temperature to +80°C, wait for 3 hours, wait for the temperature to return to 25°C, set the temperature to -40°C, wait for 3 hours, and wait Return the temperature to 25°C and take it out for testing;	15		See table 3		
Plug and unplug	Insert the optical fiber module vertically into the connector, then pull it out vertically, and repeat the test 5,000 times. After replacing the new connector, measure the contact resistance;	5		See table 4		
Strength						
ESD						
Shock						
Fall						
Solderability	Soldering temperature: 280±5℃ (using flux) Soaking time: 3±0.5 s Solder and flux: Senju Metal Industry M705, ESR-250;	11	20	More than 95% solder coverage		
Resistant to welding	Soldering tip temperature: 350±5℃; soaking time: 3+0/-1s	11	20			

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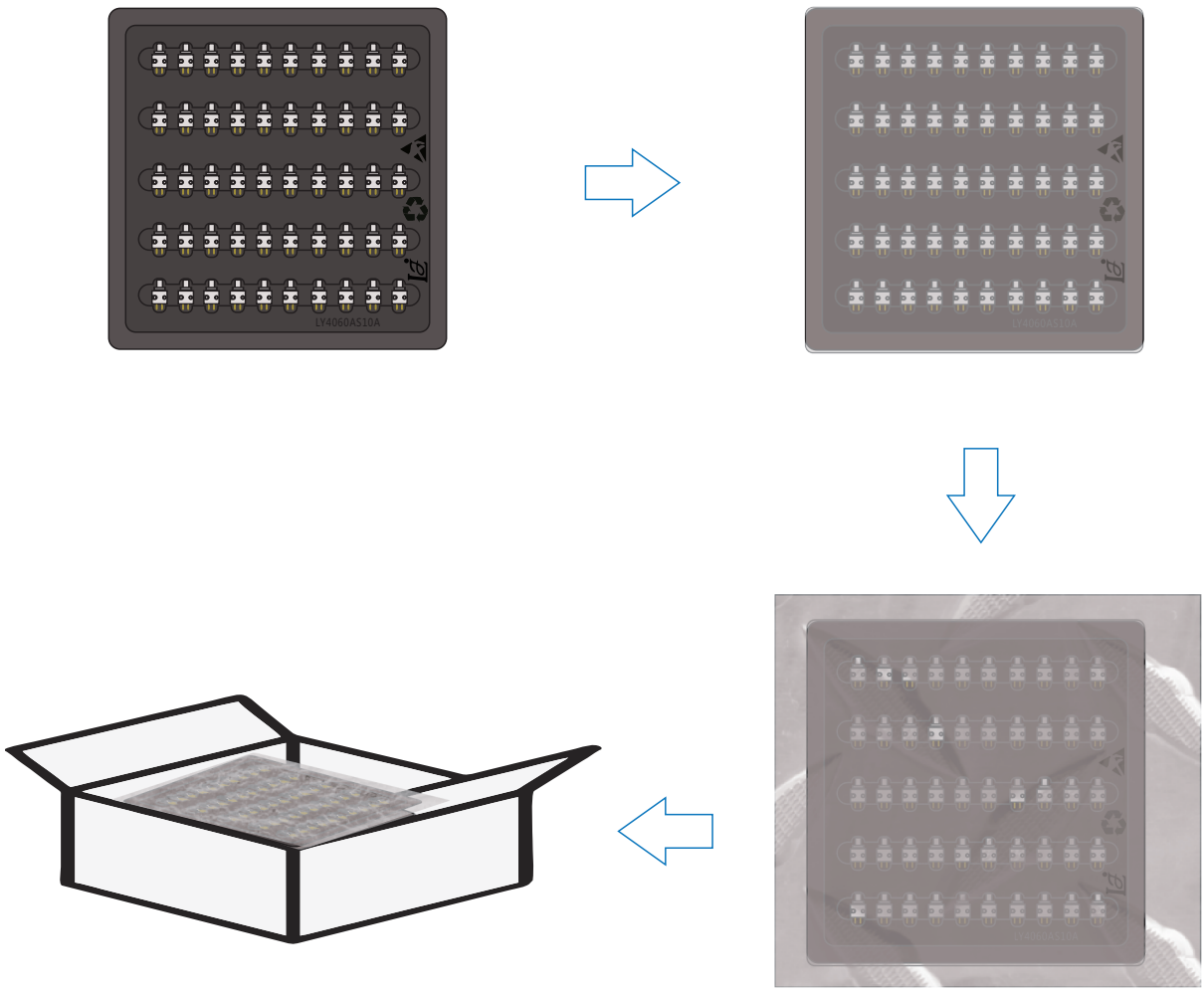
Package：



50只/box
Size:L235XW210XH38㎜

390 nm/350mW Fiber Coupled Laser Modulee

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BU-LASER's special reminder: Please pay attention to electrostatic protection during transportation and use of laser products, and please do not exceed the maximum value in the application, so as to avoid the rapid aging of the laser.

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When you design product applications, please pay attention to use within the allowable range. Especially the maximum rating, working voltage, current range,heat radiation characteristics, installation conditions, and other characteristics. BU-LASER shall not be held responsible for any malfunction or damage when used beyond the guaranteed scope. Even within the guaranteed range, considering the generally foreseeable failure rate or failure mode in semiconductor devices, please adopt system measures, such as fail-safe, TVS diode, etc. to protect the laser tube.

The laser will cause direct or indirect damage to the human body, especially the eyes. If you need to observe the laser, please use an ultraviolet camera to observe it.