FocusFiber®

Fiber Coupled Single Bar Diode Laser (CW)

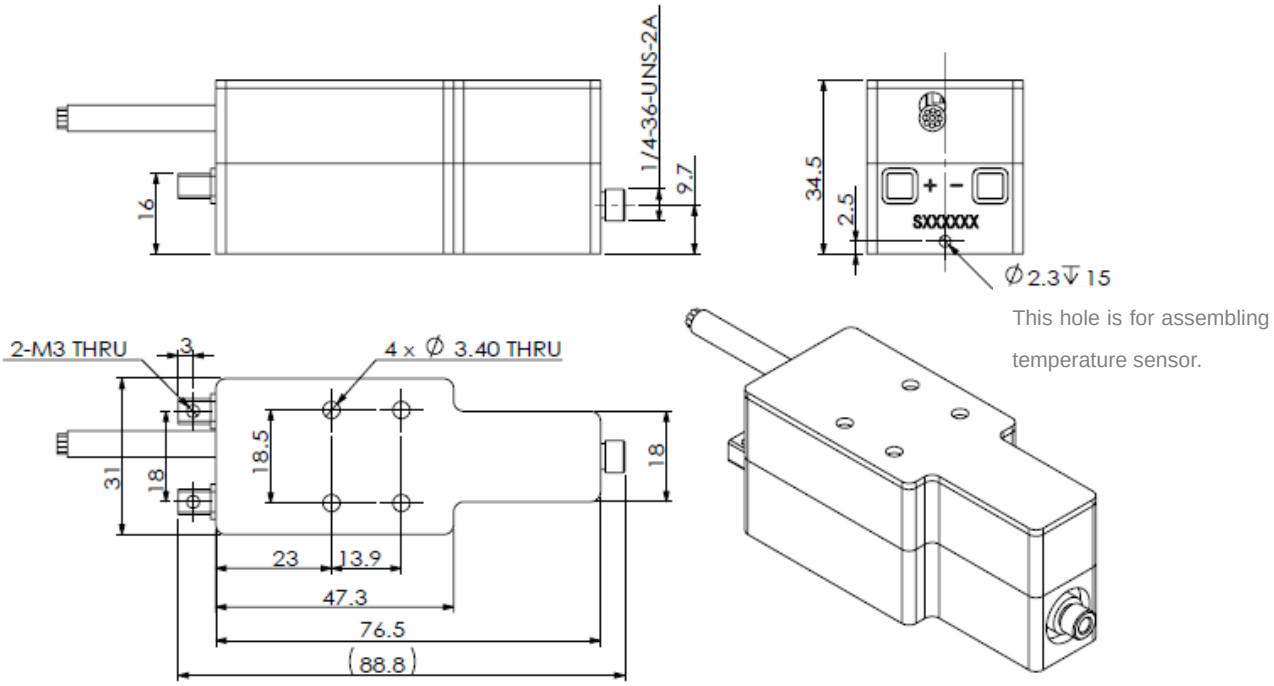
Features

- High power, high brightness
- Small size, low weight
- Gaussian wavelength spectrum
- Additional function

Applications

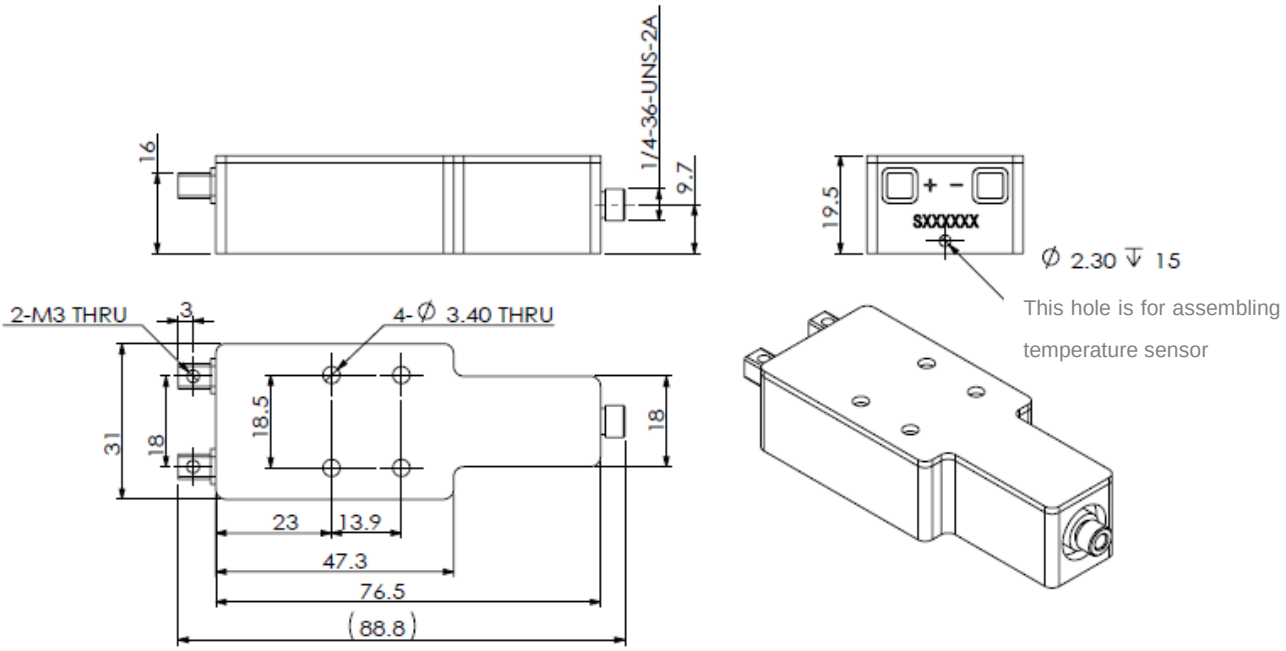
- Pumping
- IR Illumination
- Medical
- Industry manufacture

Device Dimension (mm) (with additional function)



This hole is for assembling temperature sensor.

Device Dimension (mm) (without additional function)



This structure drawing is only for reference. For any other special requirement, please feel free to contact us.

Fiber Coupled Single Bar Diode Laser (CW)

Specification

Module Type[1]	Units	FL-S30-808	FL-S40-808	FL-S50-808
Optical [3,7]				
Center Wavelength λ	nm	808	808	808
Wavelength Tolerance	nm	±3	±3	±3
Output Power[2]	W	30	40	50
Spectral Width FWHM	nm	⩽3	⩽3	⩽3
Wavelength Temp. Coefficient	nm/℃	～0.28	～0.28	～0.28
Fiber Parameters				
Fiber Numerical Aperture	NA	0.22	0.22	0.22
Fiber Core Diameter	μm	200 or 400	200 or 400	400
Connector Type[6]	-	SMA905	SMA905	SMA905
Fiber Length[5]	m	1.5	1.5	1.5
Electrical Parameters [3,7]				
Operating Current I_{op}	A	≤50	≤60	≤65
Operating Voltage V_{op}	V	≤2	≤2	≤2
Typical Power Conversion Efficiency	%	≥40	≥40	≥40
Thermal Parameters				
Operating Temperature	℃	15~30	15~30	15~30
Recommended Thermal Dissipation Cap	W	≥90	≥120	≥150
Additional Feature 1 - Pilot Beam				
Output Power	mW	≥0.7	≥0.7	≥0.7
Wavelenth	nm	650	650	650
Operation Voltage	V	3	3	3
Operation Current	mA	≤100	≤100	≤100
Additional Feature 2 - Fiber Detection Sensor				
Operation Voltage	V	10~30	10~30	10~30
Operation Current	mA	12	12	12
Output Signal	mA	⩽100	⩽100	⩽100
Additional Feature 3- Power Monitor Diode				
Operation Voltage	V	5	5	5
Operation Current	V	⩽100	⩽100	⩽100
Output signal	mA	⩽2.5	⩽2.5	⩽2.5
Additional Feature 4- Temperature Sensor[8]				
Temperature Sensor	Type	NTC	NTC	NTC
Additional Feature 5- Reflection Pretection				
Wavelength	nm	1030…1130	1030…1130	1030…1130
Reflection Ratio	%	⩾99.0	⩾99.0	⩾99.0

Fiber Coupled Single Bar Diode Laser (CW)

Specification

Module Type[1]	Units	FL-S30-792	FL-S40-792	FL-S50-792
Optical [3,7]				
Center Wavelength λ	nm	792	792	792
Wavelength Tolerance	nm	±3	±3	±3
Output Power[2]	W	30	40	50
Spectral Width FWHM	nm	⩽4	⩽4	⩽4
Wavelength Temp. Coefficient	nm/℃	～0.28	～0.28	～0.28
Fiber Parameters				
Fiber Numerical Aperture	NA	0.22	0.22	0.22
Fiber Core Diameter	μm	200 or 400	200 or 400	400
Connector Type[6]	-	SMA905	SMA905	SMA905
Fiber Length[5]	m	1.5	1.5	1.5
Electrical Parameters [3,7]				
Operating Current I_{op}	A	⩽50	⩽60	⩽65
Operating Voltage V_{op}	V	⩽2	⩽2	⩽2
Typical Power Conversion Efficiency	%	⩾40	⩾40	⩾40
Thermal Parameters				
Operating Temperature	℃	15~30	15~30	15~30
Recommended Thermal Dissipation Cap	W	⩾90	≥150	≥90
Additional Feature 1 - Pilot Beam				
Output Power	mW	≥0.7	≥0.7	≥0.7
Wavelenth	nm	650	650	650
Operation Voltage	V	3	3	3
Operation Current	mA	≤100	≤100	≤100
Additional Feature 2 - Fiber Detection Sensor				
Operation Voltage	V	10~30	10~30	10~30
Operation Current	mA	12	12	12
Output Signal	mA	≤100	≤100	≤100
Additional Feature 3- Power Monitor Diode				
Operation Voltage	V	5	5	5
Operation Current	V	⩽100	⩽100	⩽100
Output signal	mA	⩽2.5	⩽2.5	⩽2.5
Additional Feature 4- Temperature Sensor[8]				
Temperature Sensor	Type	NTC	NTC	NTC
Additional Feature 5- Reflection Pretection				
Wavelength	nm	1030…1130	1030…1130	1030…1130
Reflection Ratio	%	⩾99.0	⩾99.0	⩾99.0

Fiber Coupled Single Bar Diode Laser (CW)

Specification

Module Type[1]	Units	FL-S30-9XX	FL-S40-9XX	FL-S50-9XX
Optical [3,7]				
Center Wavelength λ	nm	9XX	9XX	9XX
Wavelength Tolerance	nm	±5	±5	±5
Output Power[2]	W	30	40	50
Spectral Width FWHM	nm	≤4	≤4	≤4
Wavelength Temp. Coefficient	nm/℃	~0.34	~0.34	~0.34
Fiber Parameters				
Fiber Numerical Aperture	NA	0.22	0.22	0.22
Fiber Core Diameter	μm	200 or 400	200 or 400	400
Connector Type[6]	-	SMA905	SMA905	SMA905
Fiber Length[5]	m	1.5	1.5	1.5
Electrical Parameters [3,7]				
Operating Current I_{op}	A	≤50	≤60	≤65
Operating Voltage V_{op}	V	≤2	≤2	≤2
Typical Power Conversion Efficiency	%	≥45	≥45	≥45
Thermal Parameters				
Operating Temperature	℃	15~30	15~30	15~30
Recommended Thermal Dissipation Cap	W	≥90	≥120	≥150
Additional Feature 1 - Pilot Beam				
Output Power	mW	≥0.7	≥0.7	≥0.7
Wavelenth	nm	650	650	650
Operation Voltage	V	3	3	3
Operation Current	mA	≤100	≤100	≤100
Additional Feature 2 - Fiber Detection Sensor				
Operation Voltage	V	10~30	10~30	10~30
Operation Current	mA	12	12	12
Output Signal	mA	≤100	≤100	≤100
Additional Feature 3- Power Monitor Diode				
Operation Voltage	V	5	5	5
Operation Current	V	≤100	≤100	≤100
Output signal	mA	≤2.5	≤2.5	≤2.5
Additional Feature 4- Temperature Sensor[8]				
Temperature Sensor	Type	NTC	NTC	NTC
Additional Feature 5- Reflection Pretection				
Wavelength	nm	1030…1130	1030…1130	1030…1130
Reflection Ratio	%	≥99.0	≥99.0	≥99.0

Fiber Coupled Single Bar Diode Laser (CW)

Specification

Module Type[1]	Units	FL-S50-1064	FL-S15-1470	FL-S15-1550
Optical [3,7]				
Center Wavelength λ	nm	1064	1470	1550
Wavelength Tolerance	nm	±10	±20	±20
Output Power[2]	W	50	15	15
Spectral Width FWHM	nm	≤7	≤10	≤12
Wavelength Temp. Coefficient	nm/℃	~0.4	~0.5	~0.6
Fiber Parameters				
Fiber Numerical Aperture	NA	0.22	0.22	0.22
Fiber Core Diameter	μm	400	200 or 400	400
Connector Type[6]	-	SMA905	SMA905	SMA905
Fiber Length[5]	m	1.5	1.5	1.5
Electrical Parameters [3,7]				
Operating Current I_{op}	A	≤75	≤70	≤70
Operating Voltage V_{op}	V	≤2	≤2	≤2
Typical Power Conversion Efficiency	%	≥40	≥17	≥17
Thermal Parameters				
Operating Temperature	℃	15~30	15~30	15~30
Recommended Thermal Dissipation Cap	W	≥150	≥150	≥150
Additional Feature 1 - Pilot Beam				
Output Power	mW	≥0.7	≥0.7	≥0.7
Wavelenth	nm	650	650	650
Operation Voltage	V	3	3	3
Operation Current	mA	≤100	≤100	≤100
Additional Feature 2 - Fiber Detection Sensor				
Operation Voltage	V	10~30	10~30	10~30
Operation Current	mA	12	12	12
Output Signal	mA	≤100	≤100	≤100
Additional Feature 3- Power Monitor Diode				
Operation Voltage	V	5	5	5
Operation Current	V	≤100	≤100	≤100
Output signal	mA	≤2.5	≤2.5	≤2.5
Additional Feature 4- Temperature Sensor[8]				
Temperature Sensor	Type	NTC	NTC	NTC
Additional Feature 5- Reflection Pretection				
Wavelength	nm	/	/	/
Reflection Ratio	%	/	/	/

[1]Explanation for the name of Module Type: FL(abbreviation of Focuslight) –S(structure code) 50(output power) -9xx(center wavelength).

[2]Reduced lifetime if used above nominal operating conditions.

[3]Data under 25°C temperature of heat sink, unless otherwise stated.

[4]A non-condensing environment is required for storage and operation below ambient dew point.

[5]Fiber length can be specified by customer.

[6]Can be with or without fiber connector.

[7]If there are any other requirements, please contact us.

[8]Temperature sensor is not inside the module, we leave one hole for assembling temperature sensor, more details please see the Device Dimension drawing, so here the type of temperature is ours recommendation .

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