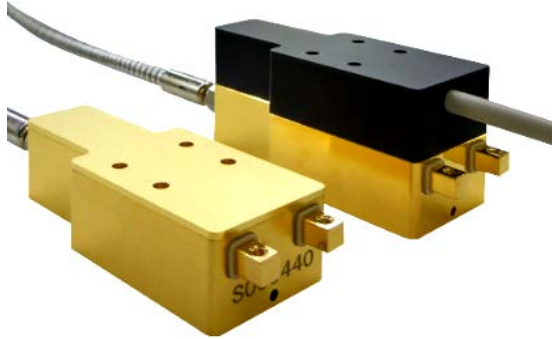


## Fiber Coupled Single Bar Diode Laser (CW)



### Features

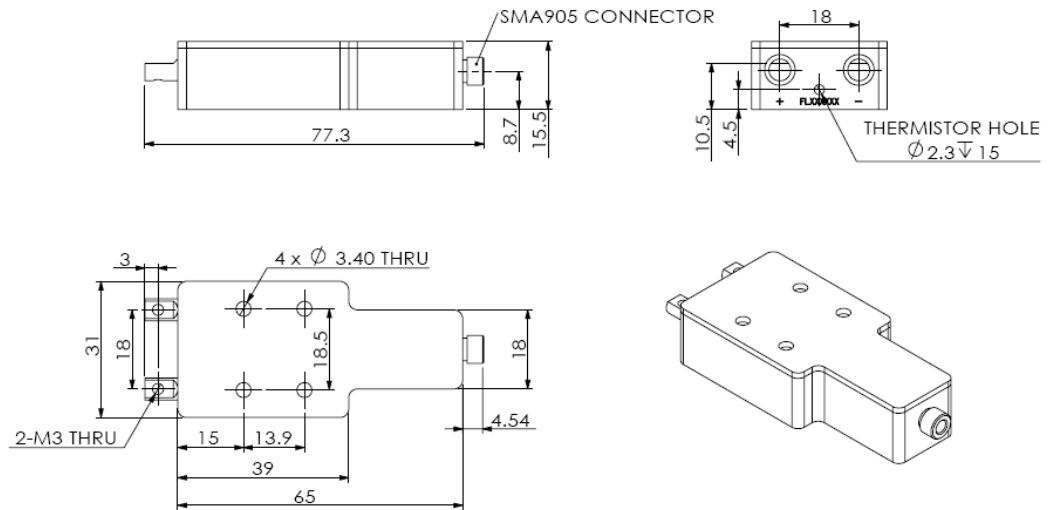
- High power, high brightness
- Small size, low weight
- Gaussian wavelength spectrum
- Additional function

### Applications

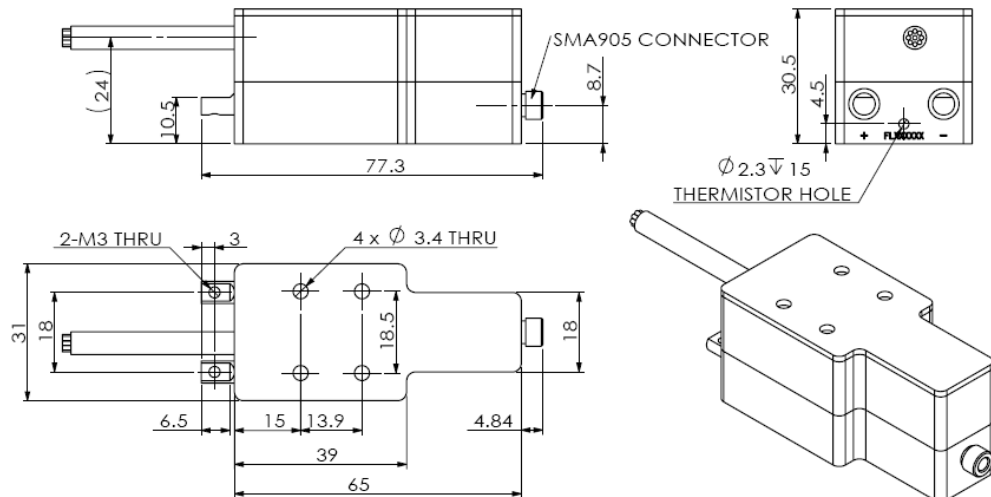
- Pumping
- IR Illumination
- Medical
- Industry Manufacture

## Device Dimension (mm)

### Basic model



### Full function model



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

## Specification

Module Type <sup>1</sup>	Units	FL-S-30-808	FL-S-40-808	FL-S-50-808
<b>Optical<sup>3,7</sup></b>				
Center Wavelength $\lambda$	nm	808	808	808
Wavelength Tolerance	nm	$\pm 3$	$\pm 3$	$\pm 3$
Output Power <sup>2</sup>	W	30	40	50
Spectral Width FWHM	nm	$\leq 4$	$\leq 4$	$\leq 4$
Wavelength Temp. Coefficient	nm/°C	$\sim 0.3$	$\sim 0.3$	$\sim 0.3$
<b>Fiber Parameters</b>				
Fiber Numerical Aperture	NA	0.22	0.22	0.22
Fiber Core Diameter	$\mu\text{m}$	200 or 400	200 or 400	400
Connector Type <sup>6</sup>	-	SMA905	SMA905	SMA905
Fiber Length <sup>5</sup>	m	1.5	1.5	1.5
<b>Electrical Parameters<sup>3,7</sup></b>				
Operating Current $I_{op}$	A	$\leq 45$	$\leq 55$	$\leq 65$
Operating Voltage $V_{op}$	V	$\leq 2$	$\leq 2$	$\leq 2$
Typical Power Conversion Efficiency	%	$\geq 40$	$\geq 40$	$\geq 40$
<b>Thermal Parameters</b>				
Operating Temperature	°C	15~30	15~30	15~30
Recommended Thermal Dissipation Capacity	W	$\geq 90$	$\geq 120$	$\geq 150$
<b>Additional Feature 1 - Pilot Beam</b>				
Output Power	mW	$\geq 0.7$	$\geq 0.7$	$\geq 0.7$
Wavelength	nm	650	650	650
Operation Voltage	V	3	3	3
Operation Current	mA	$\leq 100$	$\leq 100$	$\leq 100$
<b>Additional Feature 2 - Fiber Detection Sensor</b>				
Operation Voltage	V	10~30	10~30	10~30
Operation Current	mA	12	12	12
Output Signal	mA	$\leq 100$	$\leq 100$	$\leq 100$
<b>Additional Feature 3- Power Monitor Diode</b>				
Operation Voltage	V	5	5	5
Operation Current	V	$\leq 100$	$\leq 100$	$\leq 100$
Output signal	mA	$\leq 2.5$	$\leq 2.5$	$\leq 2.5$
<b>Additional Feature 4- Temperature Sensor<sup>8</sup></b>				
Temperature Sensor	Type	NTC	NTC	NTC
<b>Additional Feature 5- Reflection Protection</b>				
Wavelength	nm	1030...1130	1030...1130	1030...1130
Reflection Ratio	%	$\geq 99.0$	$\geq 99.0$	$\geq 99.0$

Module Type <sup>1</sup>	Units	FL-S-30-9XX	FL-S-40-9XX	FL-S-50-9XX
<b>Optical<sup>3,7</sup></b>				
Center Wavelength $\lambda$	nm	915/940/976	915/940/976	915/940/976
Wavelength Tolerance	nm	$\pm 5$	$\pm 5$	$\pm 5$
Output Power <sup>2</sup>	W	30	40	50
Spectral Width FWHM	nm	$\leq 5$	$\leq 5$	$\leq 5$
Wavelength Temp. Coefficient	nm/°C	$\sim 0.34$	$\sim 0.34$	$\sim 0.34$
<b>Fiber Parameters</b>				
Fiber Numerical Aperture	NA	0.22	0.22	0.22
Fiber Core Diameter	$\mu\text{m}$	200 or 400	200 or 400	400
Connector Type <sup>6</sup>	-	SMA905	SMA905	SMA905
Fiber Length <sup>5</sup>	m	1.5	1.5	1.5
<b>Electrical Parameters<sup>3,7</sup></b>				
Operating Current $I_{\text{op}}$	A	$\leq 45$	$\leq 55$	$\leq 65$
Operating Voltage $V_{\text{op}}$	V	$\leq 2$	$\leq 2$	$\leq 2$
Typical Power Conversion Efficiency	%	$\geq 45$	$\geq 45$	$\geq 45$
<b>Thermal Parameters</b>				
Operating Temperature	°C	15~30	15~30	15~30
Recommended Thermal Dissipation Capacity	W	$\geq 90$	$\geq 120$	$\geq 150$
<b>Additional Feature 1 - Pilot Beam</b>				
Output Power	mW	$\geq 0.7$	$\geq 0.7$	$\geq 0.7$
Wavelength	nm	650	650	650
Operation Voltage	V	3	3	3
Operation Current	mA	$\leq 100$	$\leq 100$	$\leq 100$
<b>Additional Feature 2 - Fiber Detection Sensor</b>				
Operation Voltage	V	10~30	10~30	10~30
Operation Current	mA	12	12	12
Output Signal	mA	$\leq 100$	$\leq 100$	$\leq 100$
<b>Additional Feature 3- Power Monitor Diode</b>				
Operation Voltage	V	5	5	5
Operation Current	V	$\leq 100$	$\leq 100$	$\leq 100$
Output signal	mA	$\leq 2.5$	$\leq 2.5$	$\leq 2.5$
<b>Additional Feature 4- Temperature Sensor<sup>8</sup></b>				
Temperature Sensor	Type	NTC	NTC	NTC
<b>Additional Feature 5- Reflection Protection</b>				
Wavelength	nm	1030...1130	1030...1130	1030...1130
Reflection Ratio	%	$\geq 99.0$	$\geq 99.0$	$\geq 99.0$

Module Type <sup>1</sup>	Units	FL-S-40-792	FL-S-50-1064	FL-S-15-1470/1550
<b>Optical<sup>3,7</sup></b>				
Center Wavelength $\lambda$	nm	792	1064	1470/1550
Wavelength Tolerance	nm	$\pm 3$	$\pm 10$	$\pm 20$
Output Power <sup>2</sup>	W	40	50	15
Spectral Width FWHM	nm	$\leq 4$	$\leq 7$	$\leq 10$
Wavelength Temp. Coefficient	nm/ $^{\circ}\text{C}$	$\sim 0.28$	$\sim 0.4$	$\sim 0.5$
<b>Fiber Parameters</b>				
Fiber Numerical Aperture	NA	0.22	0.22	0.22
Fiber Core Diameter	$\mu\text{m}$	400	400	200
Connector Type <sup>6</sup>	-	SMA905	SMA905	SMA905
Fiber Length <sup>5</sup>	m	1.5	1.5	1.5
<b>Electrical Parameters<sup>3,7</sup></b>				
Operating Current $I_{\text{op}}$	A	$\leq 60$	$\leq 70$	$\leq 70$
Operating Voltage $V_{\text{op}}$	V	$\leq 2$	$\leq 2$	$\leq 2$
Typical Power Conversion Efficiency	%	$\geq 40$	$\geq 40$	$\geq 17$
<b>Thermal Parameters</b>				
Operating Temperature	$^{\circ}\text{C}$	15~30	15~30	15~30
Recommended Thermal Dissipation Capa	W	$\geq 120$	$\geq 150$	$\geq 150$
<b>Additional Feature 1 - Pilot Beam</b>				
Output Power	mW	$\geq 0.7$	$\geq 0.7$	$\geq 0.7$
Wavelength	nm	650	650	650
Operation Voltage	V	3	3	3
Operation Current	mA	$\leq 100$	$\leq 100$	$\leq 100$
<b>Additional Feature 2 - Fiber Detection Sensor</b>				
Operation Voltage	V	10~30	10~30	10~30
Operation Current	mA	12	12	12
Output Signal	mA	$\leq 100$	$\leq 100$	$\leq 100$
<b>Additional Feature 3- Power Monitor Diode</b>				
Operation Voltage	V	5	5	5
Operation Current	V	$\leq 100$	$\leq 100$	$\leq 100$
Output signal	mA	$\leq 2.5$	$\leq 2.5$	$\leq 2.5$
<b>Additional Feature 4- Temperature Sensor<sup>8</sup></b>				
Temperature Sensor	Type	NTC	NTC	NTC
<b>Additional Feature 5- Reflection Protection</b>				
Wavelength	nm	1800~2100	/	/

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

<sup>2</sup>Reduced lifetime if used above nominal operating conditions.

<sup>3</sup>Data under 25 $^{\circ}\text{C}$  temperature of heat sink, unless otherwise stated.

<sup>4</sup>A non-condensing environment is required for storage and operation below ambient dew point.

<sup>5</sup>Fiber length can be specified by customer.

<sup>6</sup>Can be with or without fiber connector.

<sup>7</sup>If there are any other requirements, please contact us.

<sup>8</sup>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 .



For any other special requirements, please feel free to contact us.



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