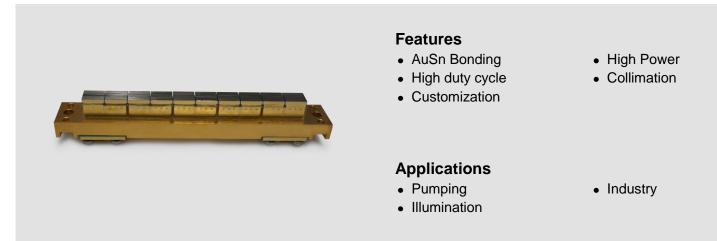
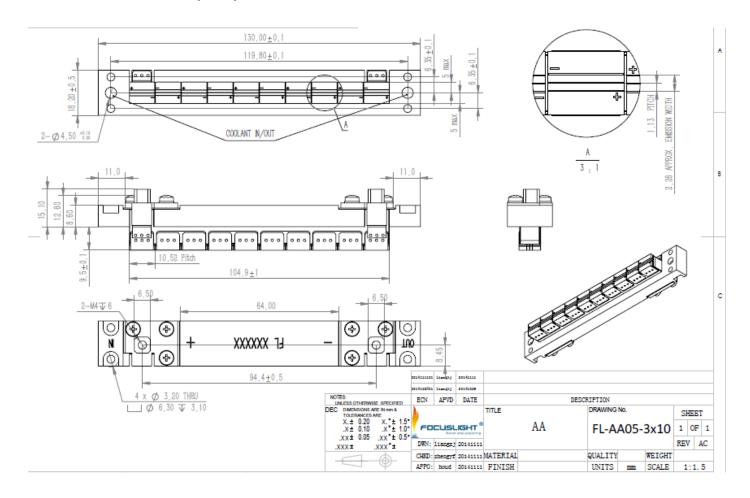
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## **Conduction Cooled Vertical Stacks**

## AA05



## **Device Dimension (mm)**



## **Specification**

Module Type <sup>1</sup>	Units	FL-AA05-N*1-X-#
Operation Mode		QCW
Pulse Width	us	≪400
Frequency	Hz	≪400
Duty Cycle	%	$\leqslant$ 8
Bar Pitch	mm	0.43, 0.73, 1.13, 2.13
Expected Lifetime	shots	1X10 <sup>9</sup>
Optical Parameters <sup>3,5</sup>		
Center Wavelength $\lambda$	nm	808 9xx
Wavelength Tolerance	nm	±3 ±5
Output Power/bar <sup>2</sup>	W	100 ~ 400
Number of Bars	-	3~30
Spectral Width FWHM	nm	≪4 ≪6
Spectral Width FW90%E	nm	≪6 ≪8
Fast Axis Divergence(FWHM)	o	≤35
Slow Axis Divergence (FWHM)	o	$\leqslant$ 8
Polarization Mode	-	TE/TM
Wavelength Temp. Coefficient	<b>nm/℃</b>	~0.28 ~0.33
Electrical Parameters <sup>3,5</sup>		
Operating Current I <sub>op</sub>	А	120 ~ 430
Threshold Current I <sub>th</sub>	А	≪40 ≪18
Operating Voltage/bar $V_{op}$	V/bar	≪2
Slope Efficiency/bar	W/A	≥1
Power Conversion Efficiency	%	≥55 ≥60
Ambient Parameters		
Operating Temperature	°C	-45 ~ 60
Recommended Operating Temperatu	°C	25
Storage Temperature <sup>4</sup>	$^{\circ}\!$	-55 ~ 85

<sup>1</sup>Explanation for the name of Module Type: FL(abbreviation of Focuslight) –GSxx (structure code) –N (Number of Bars) -X(Power) -#(center wavelength)(Q:QCW).

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

<sup>3</sup>Data at 25°C temperature, unless otherwise stated.

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

<sup>5</sup>If there are any other requirements, please contact us.



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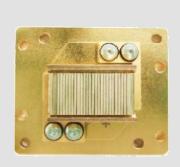
Add: 56 Zhangba 6<sup>th</sup> Road, High-Tech Zone Xi'an, Shaanxi 710077, P. R. China Tel: +86 29 8956 0050 Fax: +86 29 8177 5810 Email: <u>sales@focuslight.com.cn</u> Website: <u>www.focuslight.com.cn</u>





## **Conduction Cooled Vertical Stacks**

## **GS02**



#### Features

- AuSn Bonding
- Collimation

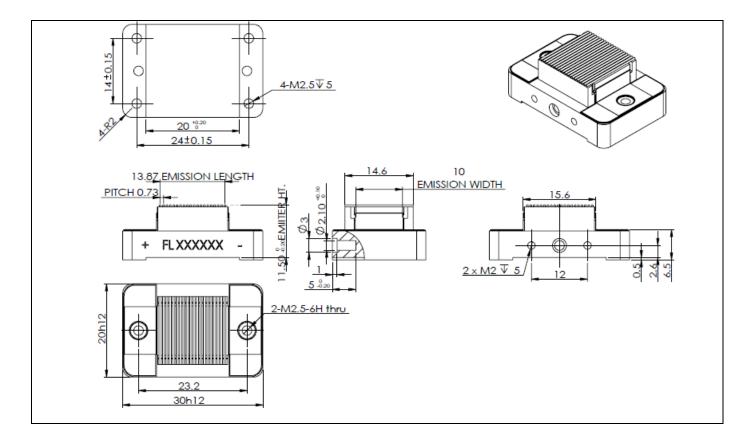
**Applications** 

- Harsh Environment Applications
- Multiple Bars
- Customization

# PumpingIllumination

- Industry
- Research

## **Device Dimension (mm)**



## **Specification**

Notice: Focuslight keep improving its products to provide our customers with outstanding quality and reliability. We may make changes to specifications and product descriptions at any time, without notice. In addition, we offer a limited warranty to ensure customer satisfaction. For complete details, please contact our sales representative.

### FOCUSLIGHT

Module Type <sup>1</sup>	Units	FL-GS02-N*1-X-#
Operation Mode		QCW
Pulse Width	us	≪400
Frequency	Hz	≤100
Duty Cycle	%	≪2
Bar Pitch	mm	0.43, 0.73, 1.13
Expected Lifetime	shots	1X10 <sup>9</sup>
Optical Parameters <sup>3,5</sup>		
Center Wavelength λ	nm	808 9xx
Wavelength Tolerance	nm	±3 ±5
Output Power/bar <sup>2</sup>	W	100 ~ 400
Number of Bars	-	10~40 10~40
Spectral Width FWHM	nm	≪4 ≪6
Spectral Width FW90%E	nm	<b>≼6 ≼8</b>
Fast Axis Divergence(FWHM)	o	≼35
Slow Axis Divergence (FWHM)	0	≪8
Fast Axis Divergence with collimation	o	≪5
Polarization Mode	-	TE/TM
Wavelength Temp. Coefficient	nm/℃	~0.28 ~0.33
Electrical Parameters <sup>3,5</sup>		
Operating Current I <sub>op</sub>	А	120 ~ 430
Threshold Current Ith	А	<b>≼40 ≼18</b>
Operating Voltage/bar V <sub>op</sub>	V/bar	≪2
Slope Efficiency/bar	W/A	≥1
Power Conversion Efficiency	%	≥55 ≥60
Ambient Parameters		
Operating Temperature	°C	-45 ~ 60
Recommended Operating Temperatur	°C	25
Storage Temperature <sup>4</sup>	°C	-55 ~ 85

<sup>1</sup>Explanation for the name of Module Type: FL(abbreviation of Focuslight) –GSxx (structure code) –N (Number of Bars) -X(Power) -#(center wavelength)(Q:QCW).

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

<sup>3</sup>Data at 25°C temperature, unless otherwise stated.

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

<sup>5</sup>If there are any other requirements, please contact us.



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## **Conduction Cooled Vertical Stacks**

## **GS03**



#### Features

- AuSn Bonding
- Low thermal resistance
- High Temperature application

Narrow Spectrum

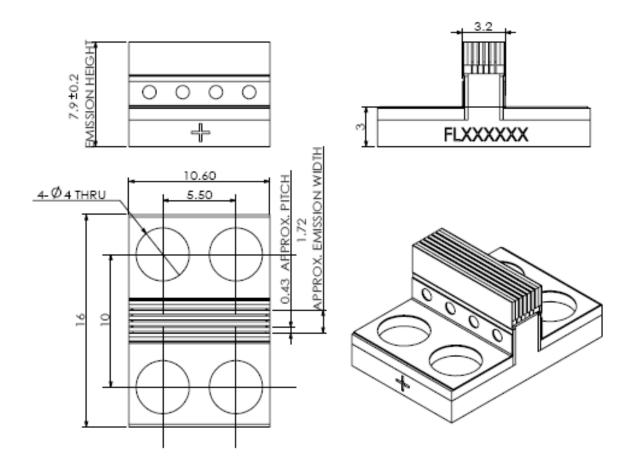
• Standard product

#### Applications

- Slab-pumping
- Illumination

- Industry
- Research

## **Device Dimension (mm)**





## **Specification**

Module Type <sup>1</sup>	Units	FL-GS03-N*1-X-#
Operation Mode		QCW
Pulse Width	us	≪400
Frequency	Hz	≤100
Duty Cycle	%	≤2
Bar Pitch	mm	0.43, 0.73, 1.13
Expected Lifetime	shots	1X10 <sup>9</sup>
Optical Parameters <sup>3,5</sup>		
Center Wavelength $\lambda$	nm	808 9xx
Wavelength Tolerance	nm	±3 ±5
Output Power/bar <sup>2</sup>	W	100 ~ 400
Number of Bars	-	2~12
Spectral Width FWHM	nm	≪4 ≪6
Spectral Width FW90%E	nm	≪6 ≪8
Fast Axis Divergence(FWHM)	o	≤35
Slow Axis Divergence (FWHM)	o	≪8
Polarization Mode	-	TE/TM TE
Wavelength Temp. Coefficient	nm/°C	~0.28 ~0.33
Electrical Parameters <sup>3,5</sup>		
Operating Current I <sub>op</sub>	А	120 ~ 430
Threshold Current Ith	А	≪40 ≪18
Operating Voltage/bar V <sub>op</sub>	V/bar	≤2
Slope Efficiency/bar	W/A	≥1
Power Conversion Efficiency	%	≥55 ≥60
Ambient Parameters		
Operating Temperature	°C	-45 ~ 60
Recommended Operating Tempera	°C	25
Storage Temperature <sup>4</sup>	°C	-55 ~ 85

<sup>1</sup>Explanation for the name of Module Type: FL(abbreviation of Focuslight) –GSxx (structure code) –N (Number of Bars) -X(Power) -#(center wavelength)(Q:QCW).

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

<sup>3</sup>Data at 25°C temperature, unless otherwise stated.

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

 $^{\textrm{5}}\mbox{If there are any other requirements, please contact us.}$ 



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## **Conduction Cooled Vertical Stacks**

## **GS04**



### Features

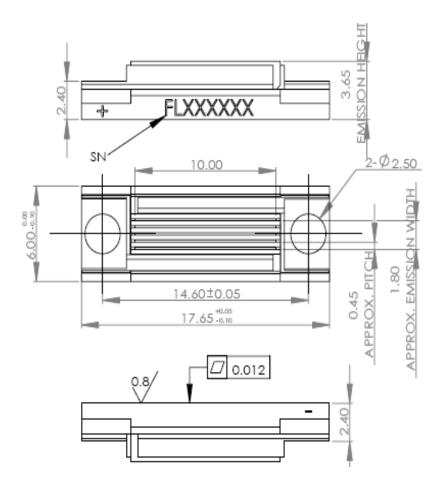
- AuSn Bonding
- Compact Size for integration
- Harsh Environment Applications
- High reliability
- Long Lifetime

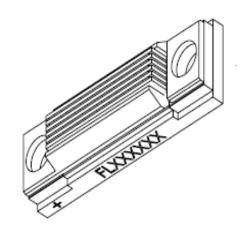
## Applications

- Side-pumping
- Illumination

- Industry
- Research

## **Device Dimension (mm)**





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## **Specification**

Module Type <sup>1</sup>	Units	FL-GS04-N*1-X-#
Operation Mode		QCW
Pulse Width	us	≤500
Frequency	Hz	≪20
Duty Cycle	%	≤1
Bar Pitch	mm	0.43
Expected Lifetime	shots	1X10 <sup>9</sup>
Optical Parameters <sup>3,5</sup>		
Center Wavelength $\lambda$	nm	808 9xx
Wavelength Tolerance	nm	±3 ±5
Output Power/bar <sup>2</sup>	W	100 ~ 400
Number of Bars	-	2~6
Spectral Width FWHM	nm	≪4 ≪6
Spectral Width FW90%E	nm	≪6 ≪8
Fast Axis Divergence(FWHM)	o	35
Slow Axis Divergence (FWHM)	o	8
Polarization Mode	-	TE/TM
Wavelength Temp. Coefficient	<b>nm/°</b> C	~0.28 ~0.33
Electrical Parameters <sup>3,5</sup>		
Operating Current I <sub>op</sub>	А	100 ~ 420
Threshold Current I <sub>th</sub>	А	≤40 ≤18
Operating Voltage/bar $V_{op}$	V	≤2
Slope Efficiency/bar	W/A	≥1.1
Power Conversion Efficiency	%	≥55 ≥60
Ambient Parameters		
Operating Temperature	°C	-45 ~ 60
Recommended Operating Tempera	°C	25
Storage Temperature <sup>4</sup>	°C	-55 ~ 85

<sup>1</sup>Explanation for the name of Module Type: FL(abbreviation of Focuslight) –GSxx (structure code) –N (Number of Bars) -X(Power) -#(center wavelength)(Q:QCW).

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

<sup>3</sup>Data at 25°C temperature, unless otherwise stated.

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

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