



**Model Number: APS-520nm-50mW-STM-3.8mm-APC**

## **APS 50 mW 520 nm Laser Diode Module With Adjustable Aspheric Collimating Lens**

### **Absolute Maximum Ratings at 25 °C**

<b>Item</b>	<b>Ratings</b>	<b>Unit</b>
<b>CW Output Power</b>	<b>50</b>	<b>mW</b>
<b>Laser Diode Reverse Voltage</b>	<b>2</b>	<b>V</b>
<b>Maximum Operating Current</b>	<b>160</b>	<b>mA</b>
<b>Operating Temperature</b>	<b>-20 to 60</b>	<b>°C</b>
<b>Storage Temperature</b>	<b>-40 to 85</b>	<b>°C</b>

- **Simple Integrated Package**
- **Excellent Diode Heatsinking**
- **Small Footprint**
- **Simple Connection With Two Power Leads**
- **Adjustable Collimating Lens**
- **Lightweight, Rugged**
- **Precision Machined**

**Applications: Pointing, Alignment,  
Illumination**

Advanced Photonics Sciences, LLC. Tel.: 570-553-1120

[www.advancedphotonicsciences.com](http://www.advancedphotonicsciences.com)

[info@advancedphotonicsciences.com](mailto:info@advancedphotonicsciences.com)





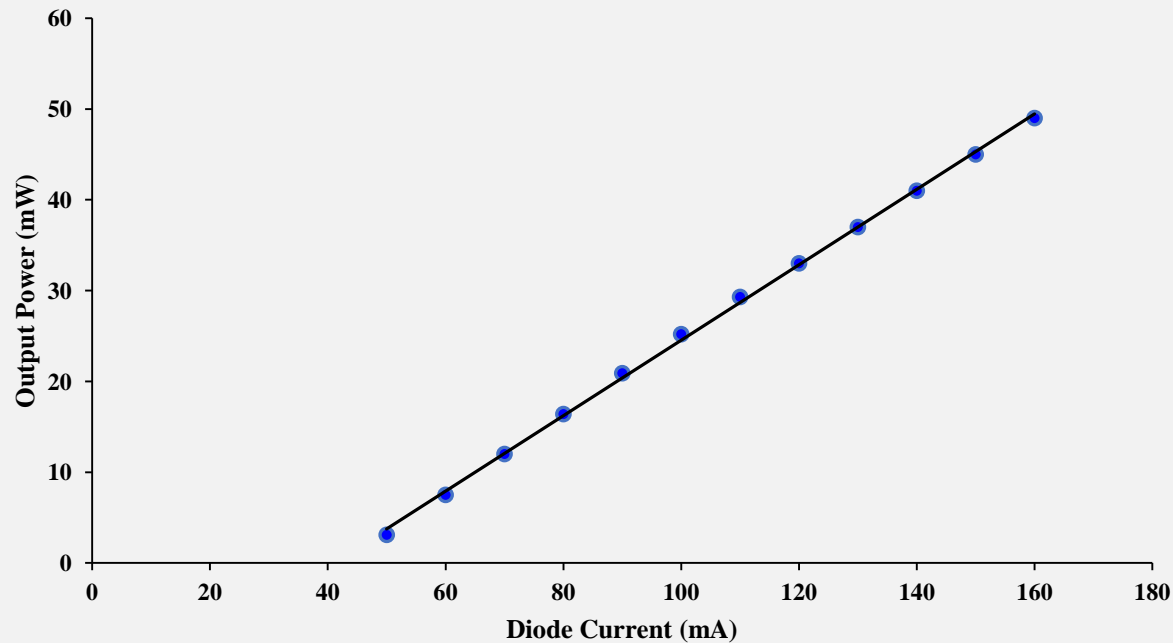
**Model Number: APS-520nm-50mW-STM-3.8mm-APC**  
**APS 50 mW 520 nm Laser Diode Module With Adjustable Aspheric Collimating Lens**

**Optical and Electrical Characteristics at 25 °C**

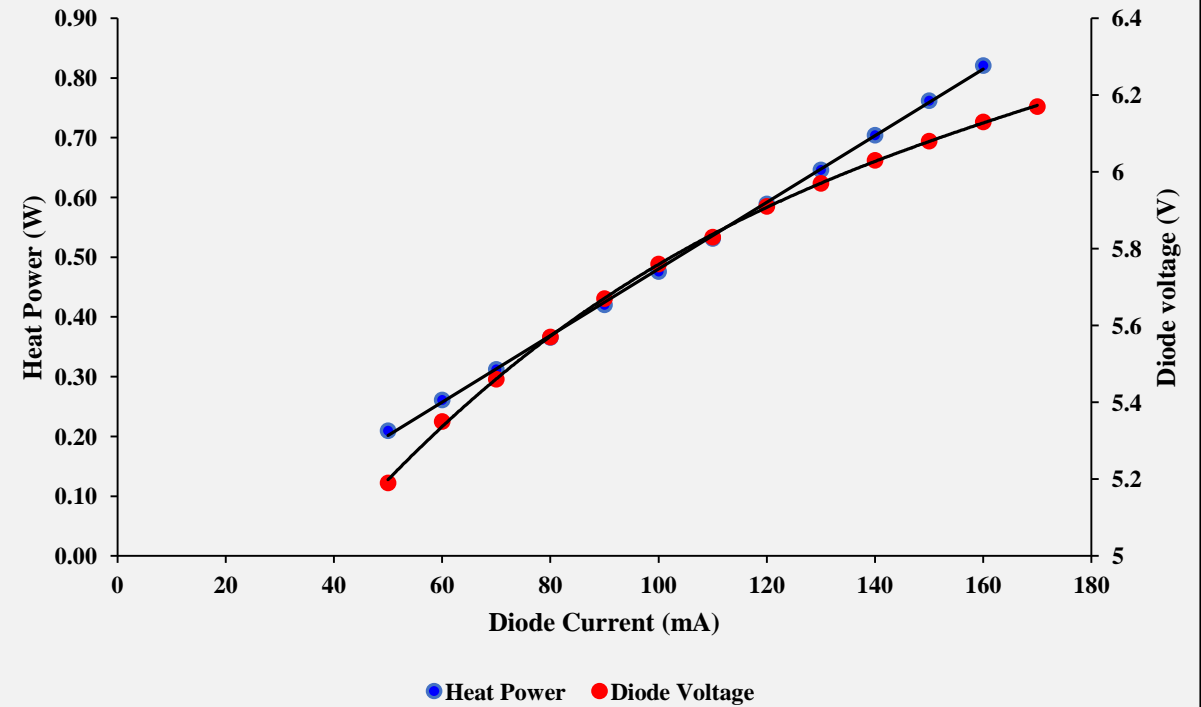
Parameter	Min	Typical	Max	Units	Test Condition
Threshold Current	-	45	75	mA	-
Operating Current	-	125	160	mA	$P_o = 50 \text{ mW}$
Operating Voltage	-	6.9	8.0	V	$P_o = 50 \text{ mW}$
Fast Axis Beam Divergence	34	40	45	°	$P_o = 50 \text{ mW}$ 1/e <sup>2</sup> Full Angle
Slow Axis Beam Divergence	9	13	16	°	$P_o = 50 \text{ mW}$ 1/e <sup>2</sup> Full Angle
Lasing Wavelength	515	520	530	nm	$P_o = 50 \text{ mW}$
Transverse Mode	STM	STM	STM	-	All Currents
Polarization TE	-	-	-	-	Horizontal

## Module Experimental Data

**Output Power as a Function of Diode Current**

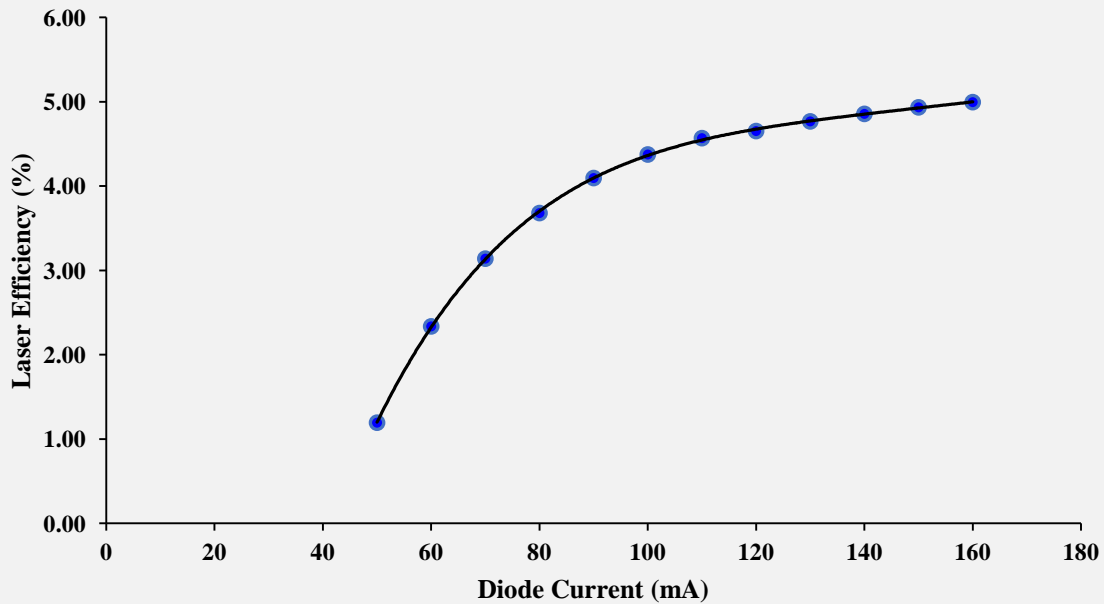


**Heat Power and Voltage as a Function of Diode Current**

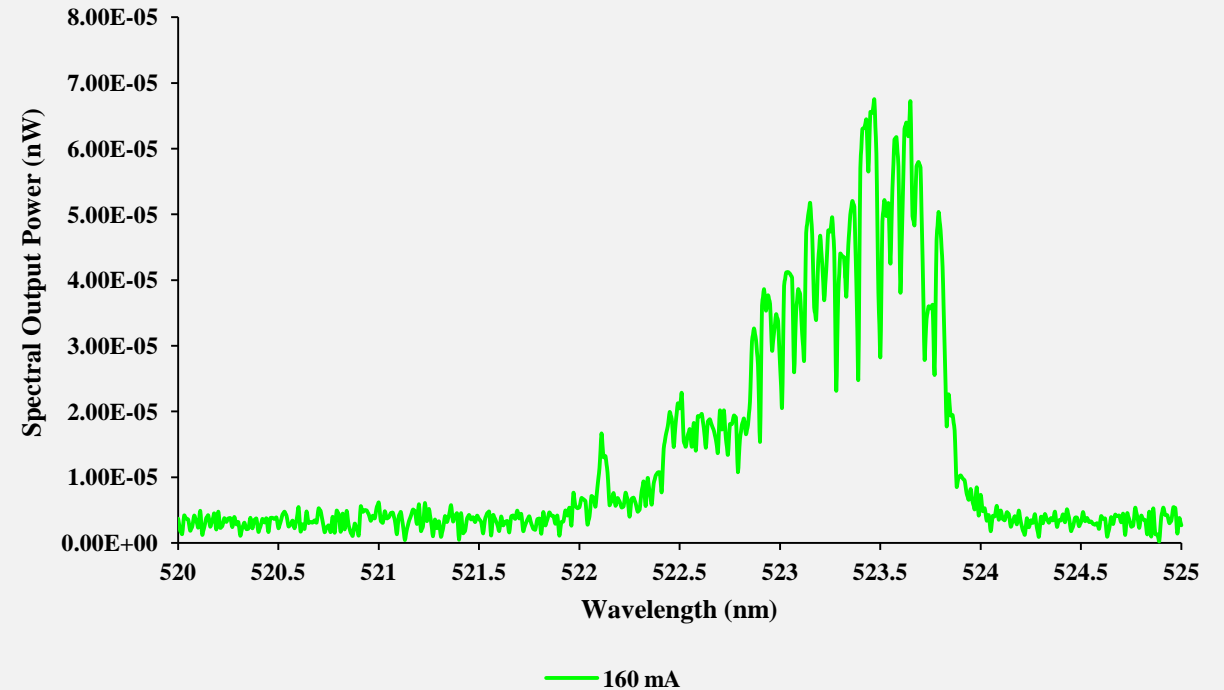


## Module Experimental Data

Wallplug Efficiency as a Function of Diode Current

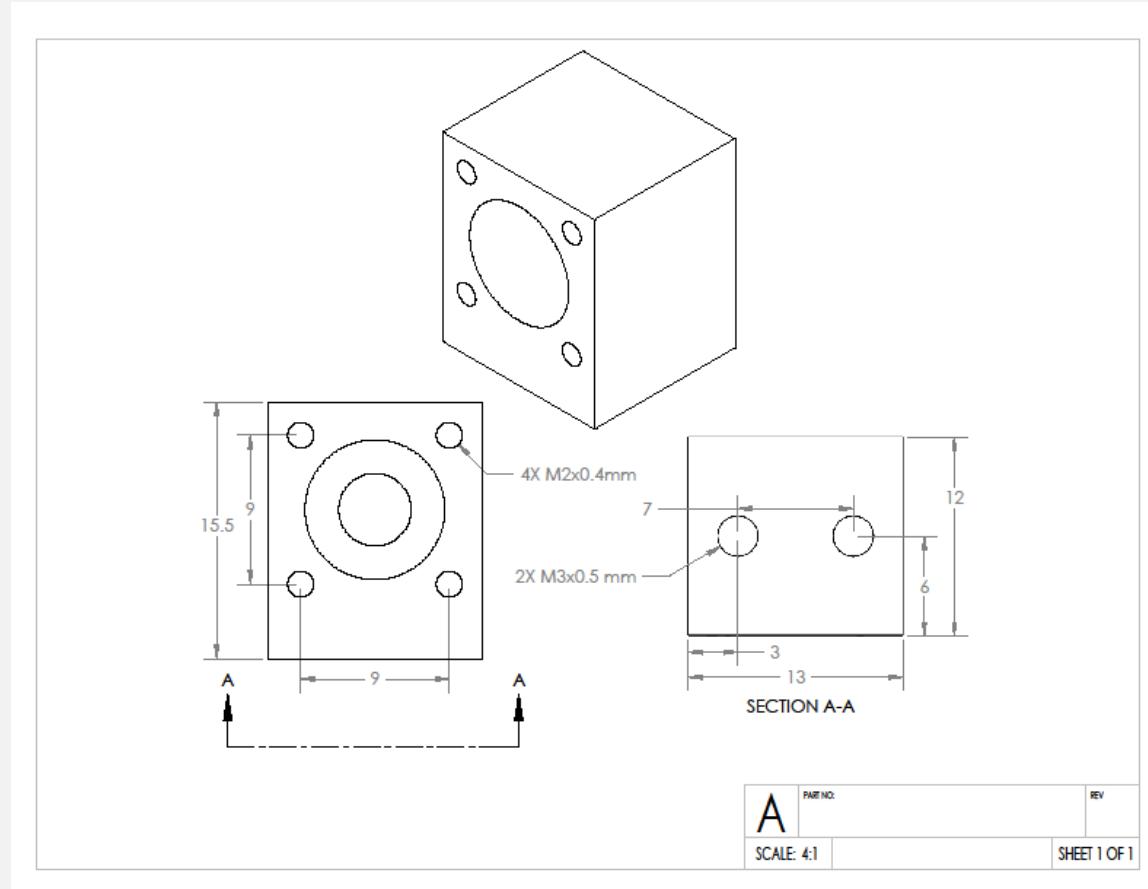


Spectral Output Power as a Function of Wavelength



**Model Number: APS-520nm-50mW-STM-3.8mm-APC**

## Module Dimensions and Mounting Screws





**Model Number: APS-520nm-50mW-STM-3.8mm-APC**

## **Laser Safety Warnings**

- **This OEM Micro-Module is meant for integration into other systems, and as such is not CDRH compliant.**
- **This Micro-Module is a Class 3B laser product.**
- **Always use laser safety glasses with sufficient Neutral Density at the operating wavelength of 520 nm to protect your eyes.**
- **Skin exposure to this laser product should be avoided.**