



**Model Number: APS-520nm-80mW-STM-3.8mm-CC**  
**APS 80 mW 520 nm Laser Diode Module With Adjustable Aspheric Collimating Lens**

**Note: This Diode Will Not Quite Reach Full Power at Maximum Current Due to Module Thermal Resistance**

**Absolute Maximum Ratings at 25 °C**

Item	Ratings	Unit
CW Output Power	80	mW
Laser Diode Reverse Voltage	2	V
Maximum Operating Current	300	mA
Operating Temperature	-20 to 60	°C
Storage Temperature	-40 to 85	°C

- 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, Laser Projection and  
Shows**

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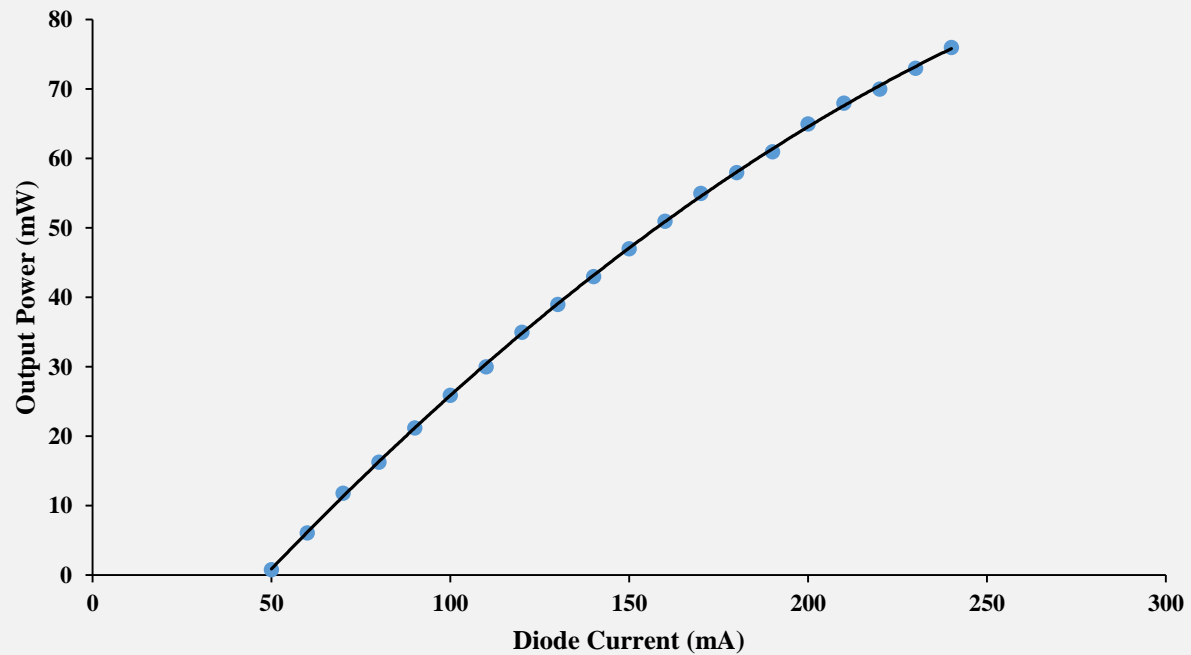
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**Optical and Electrical Characteristics at 25 °C**

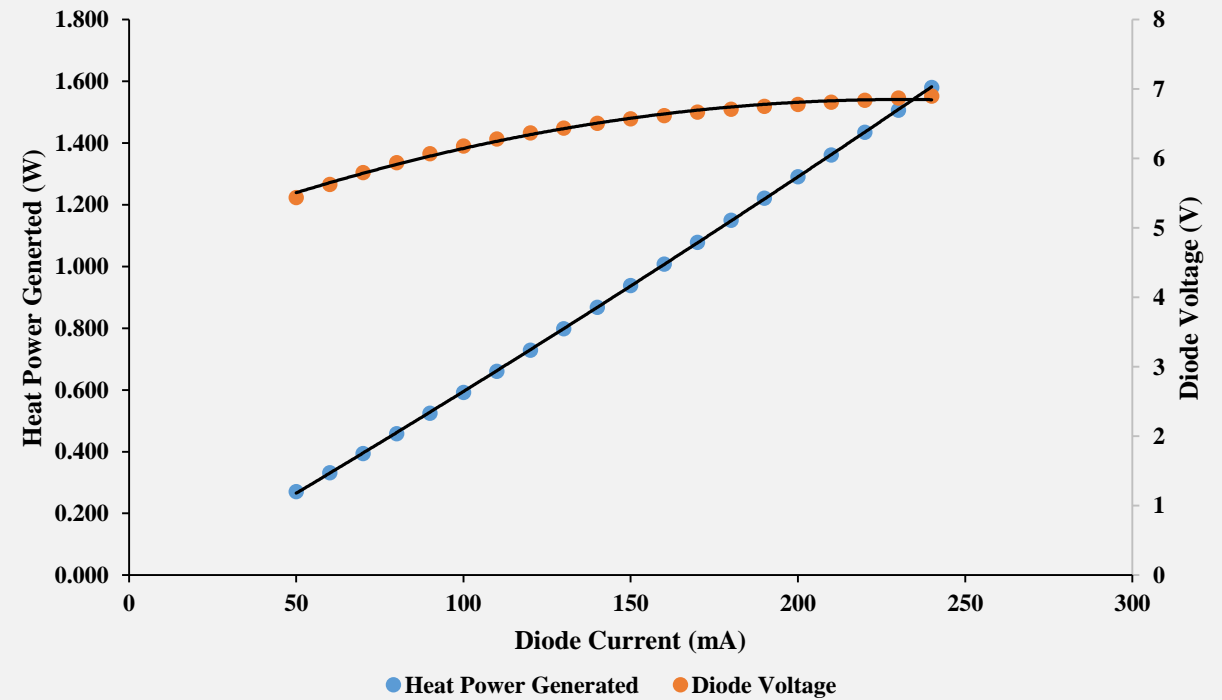
Parameter	Min	Typical	Max	Units	Test Condition
Threshold Current	-	40	70	mA	-
Operating Current	-	200	240	mA	$P_o = 80 \text{ mW}$
Operating Voltage	-	6	8	V	$P_o = 80 \text{ mW}$
Fast Axis Beam Divergence	18	22.5	25	°	$P_o = 80 \text{ mW}$ 1/e <sup>2</sup> Full Angle
Slow Axis Beam Divergence	5	6.3	7.5	°	$P_o = 80 \text{ mW}$ 1/e <sup>2</sup> Full Angle
Lasing Wavelength	515	520	530	nm	$P_o = 80 \text{ mW}$
Transverse Mode	STM	STM	STM	-	All Currents
Polarization TE	-	-	-	-	Horizontal

**Module Experimental Data**

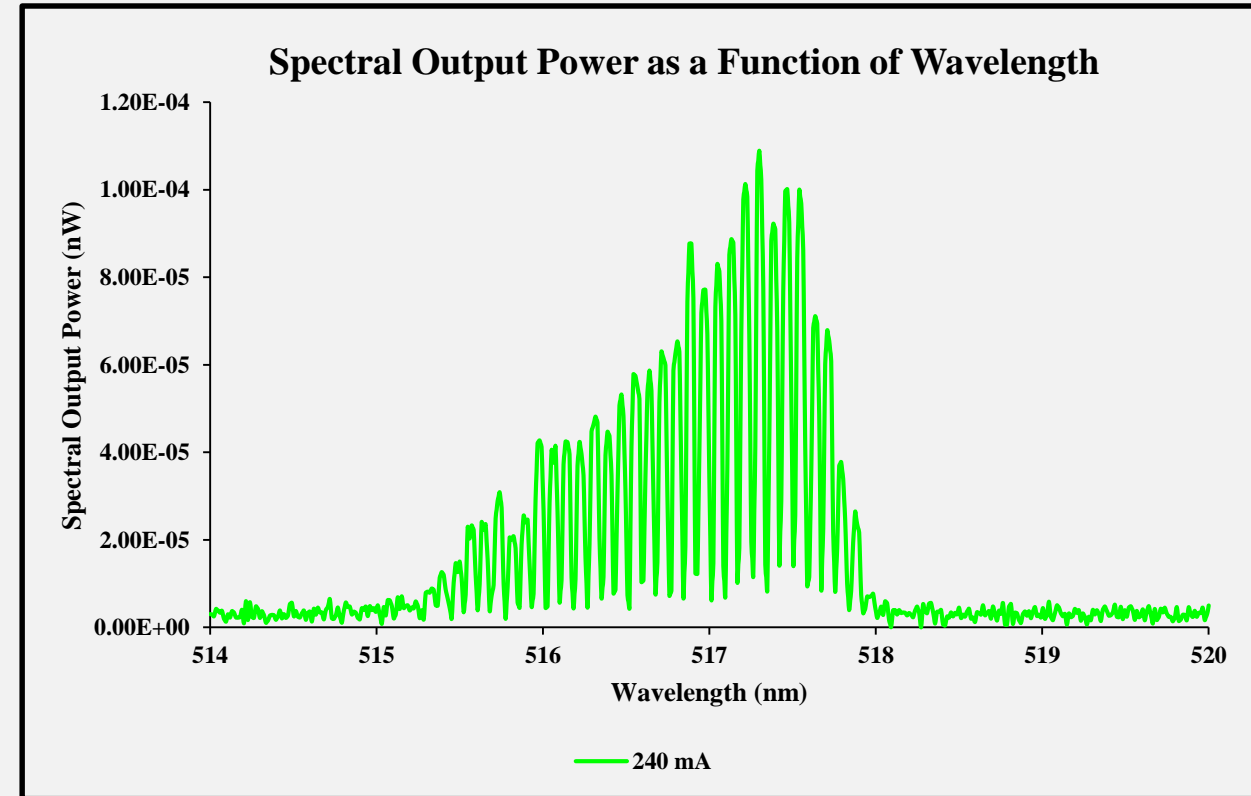
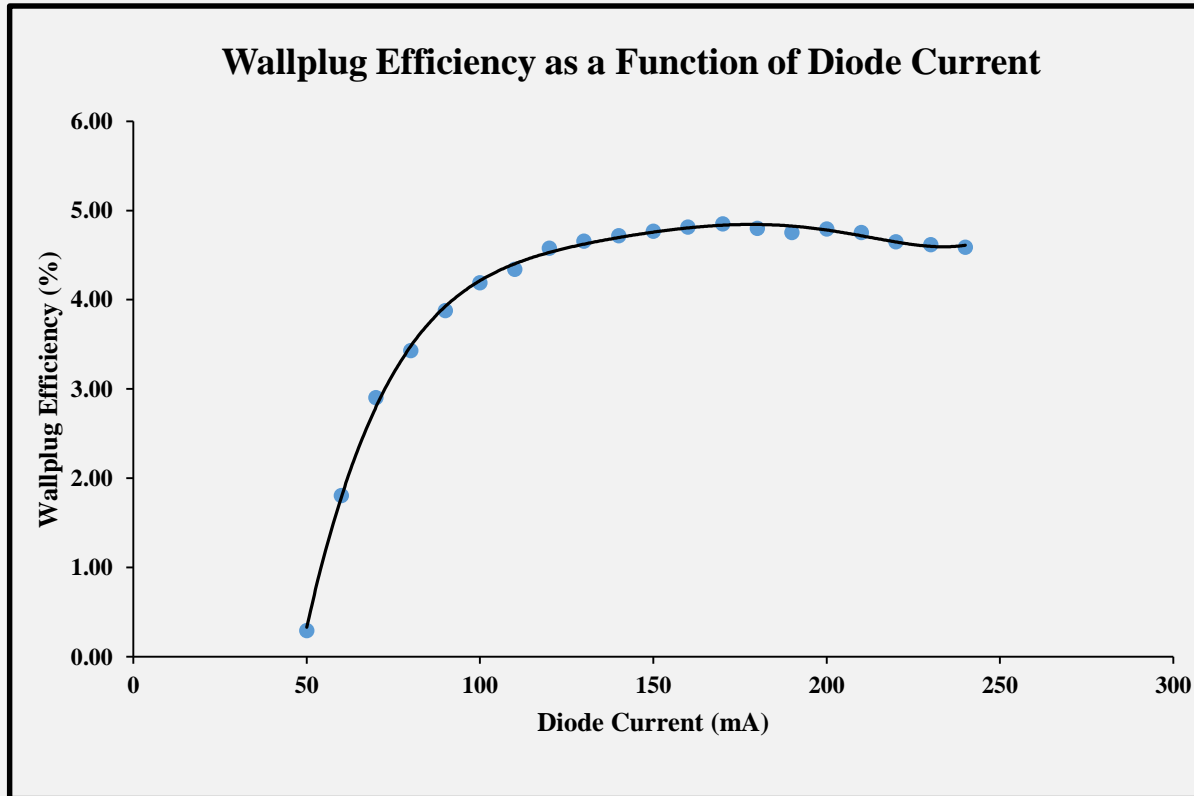
**Output Power as a Function of Diode Current**



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

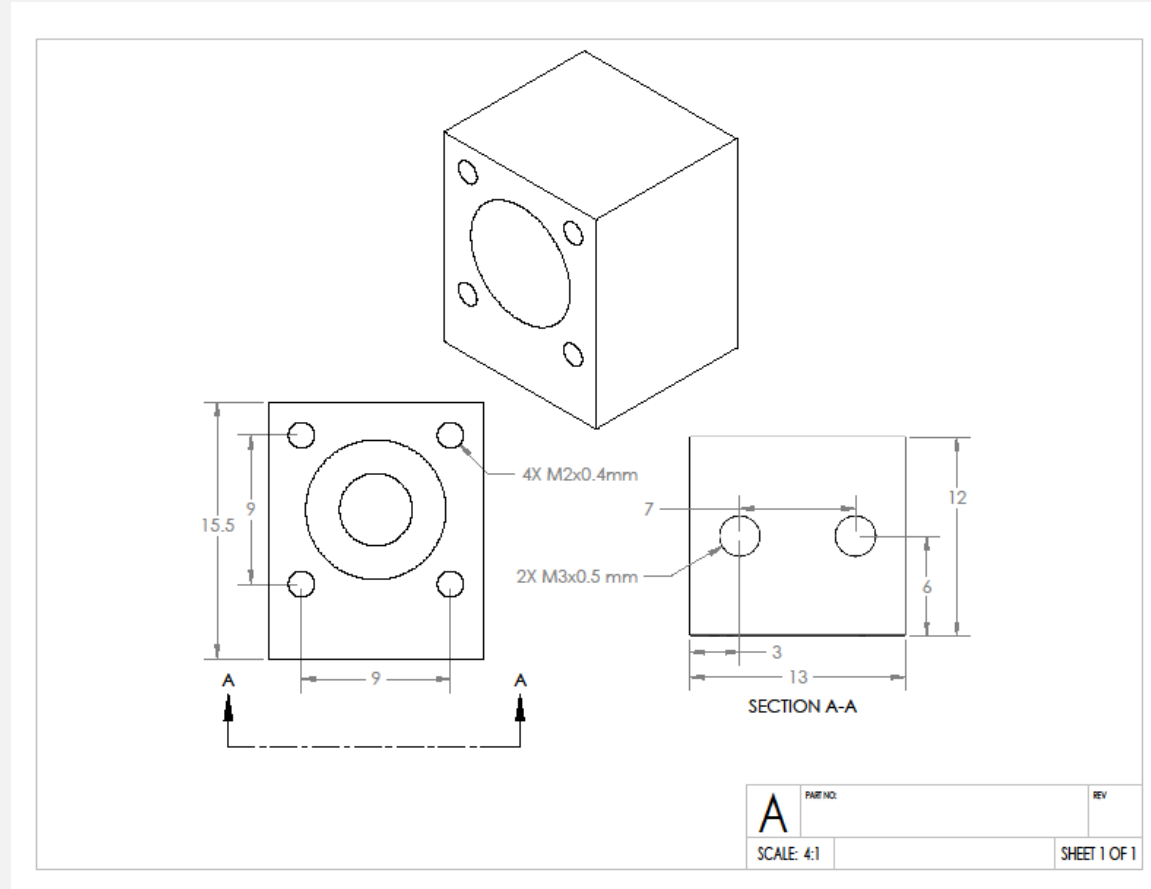


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## Module Dimensions and Mounting Screws





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## **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.**