



**Model Number: APS-638nm-5mW-STM-9.0mm-APC**

## **APS 5 mW 638 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>5</b>	<b>mW</b>
<b>Laser Diode Reverse Voltage</b>	<b>2</b>	<b>V</b>
<b>Maximum Operating Current</b>	<b>85</b>	<b>mA</b>
<b>Operating Temperature</b>	<b>-10 to 50</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, Laser Leveling,  
Alignment, Bar Code Reader**



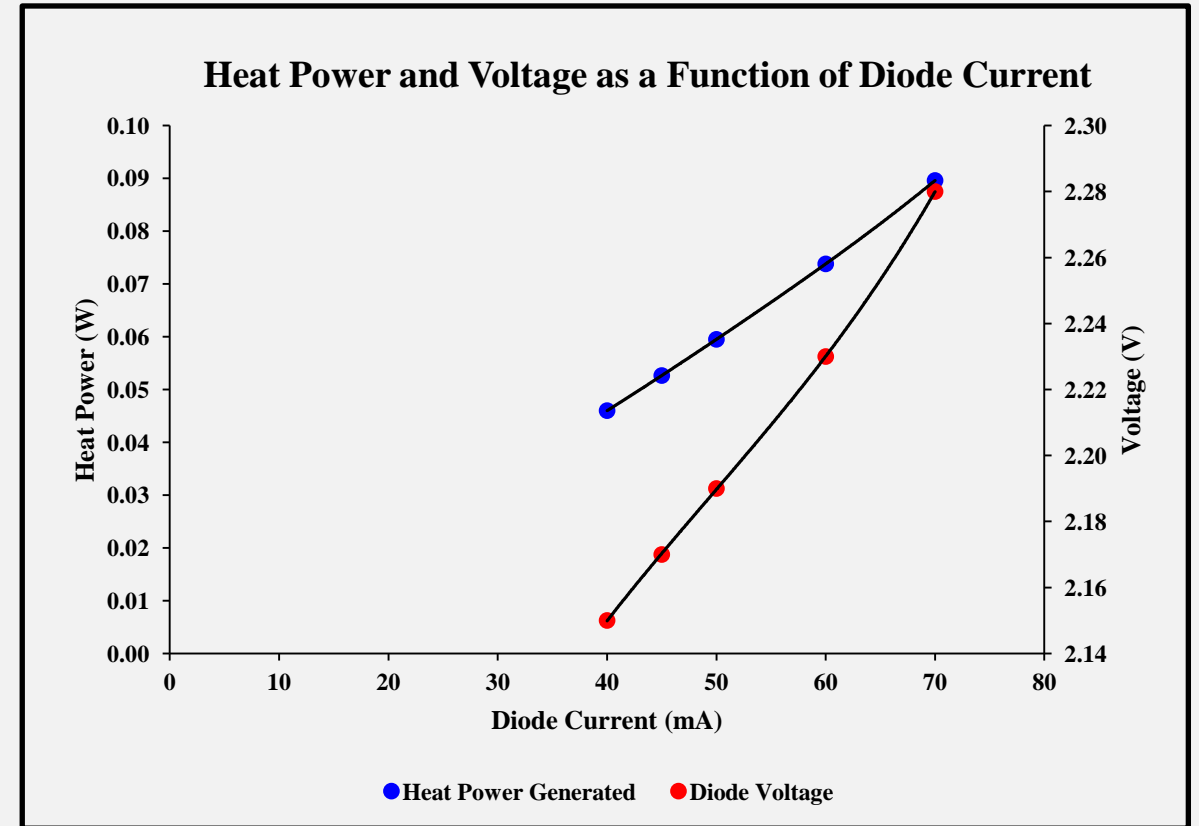
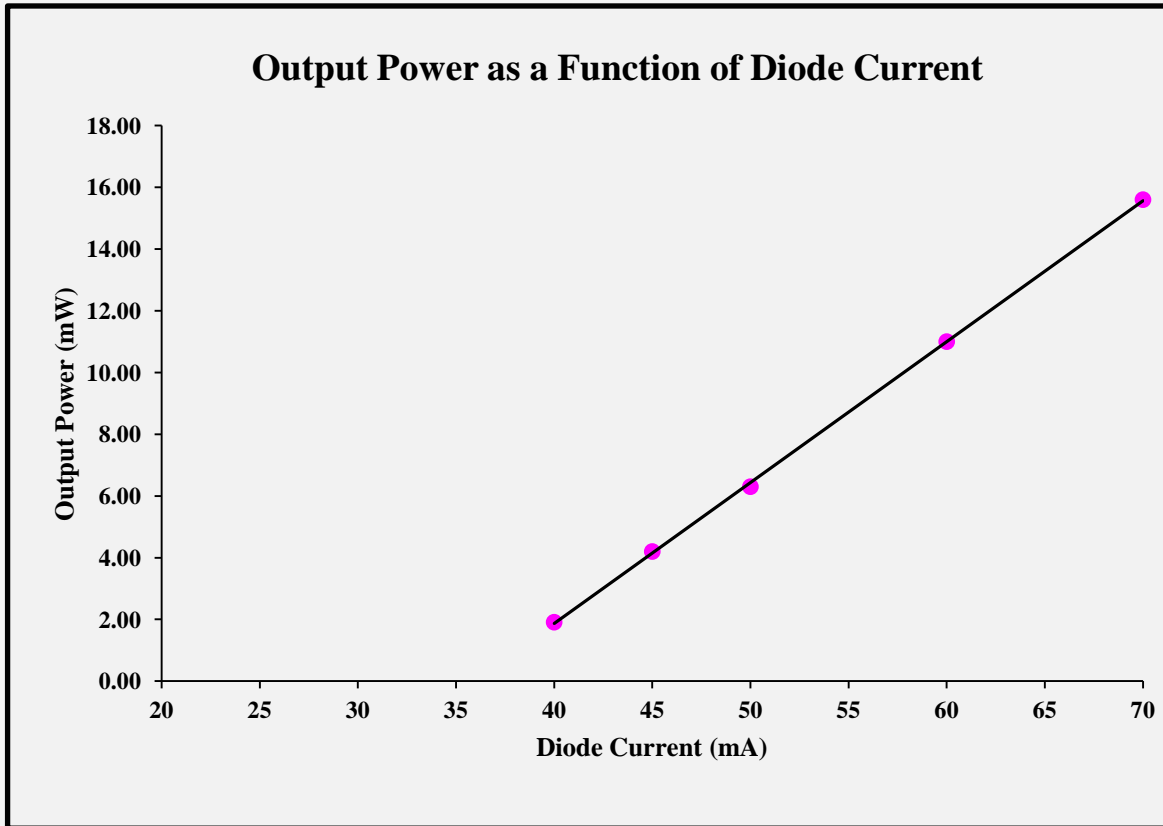


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**Optical and Electrical Characteristics at 25 °C**

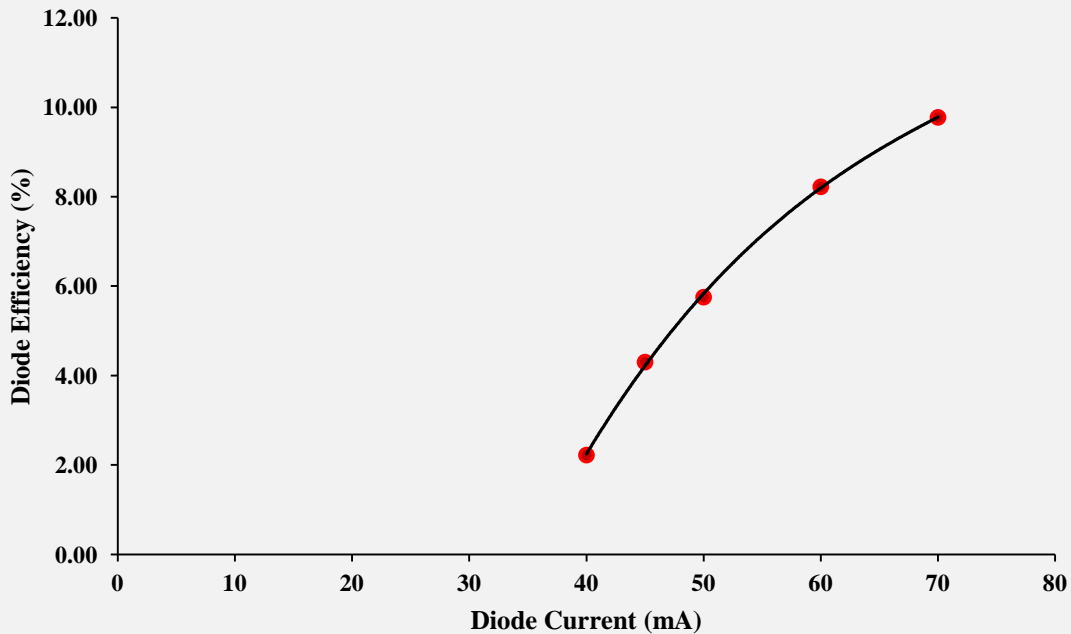
Parameter	Min	Typical	Max	Units	Test Condition
Threshold Current	20	45	70	mA	-
Operating Current	-	55	85	mA	$P_o = 5 \text{ mW}$
Operating Voltage	-	-	2.7	V	$P_o = 5 \text{ mW}$
Fast Axis Beam Divergence	45	56	67	°	$P_o = 5 \text{ mW}$ 1/e <sup>2</sup> Full Angle
Slow Axis Beam Divergence	9	14	20	°	$P_o = 5 \text{ mW}$ 1/e <sup>2</sup> Full Angle
Lasing Wavelength	625	638	640	nm	$P_o = 5 \text{ mW}$
Transverse Mode	STM	STM	STM	-	All Currents
Polarization TE	-	-	-	-	Horizontal

## Module Experimental Data

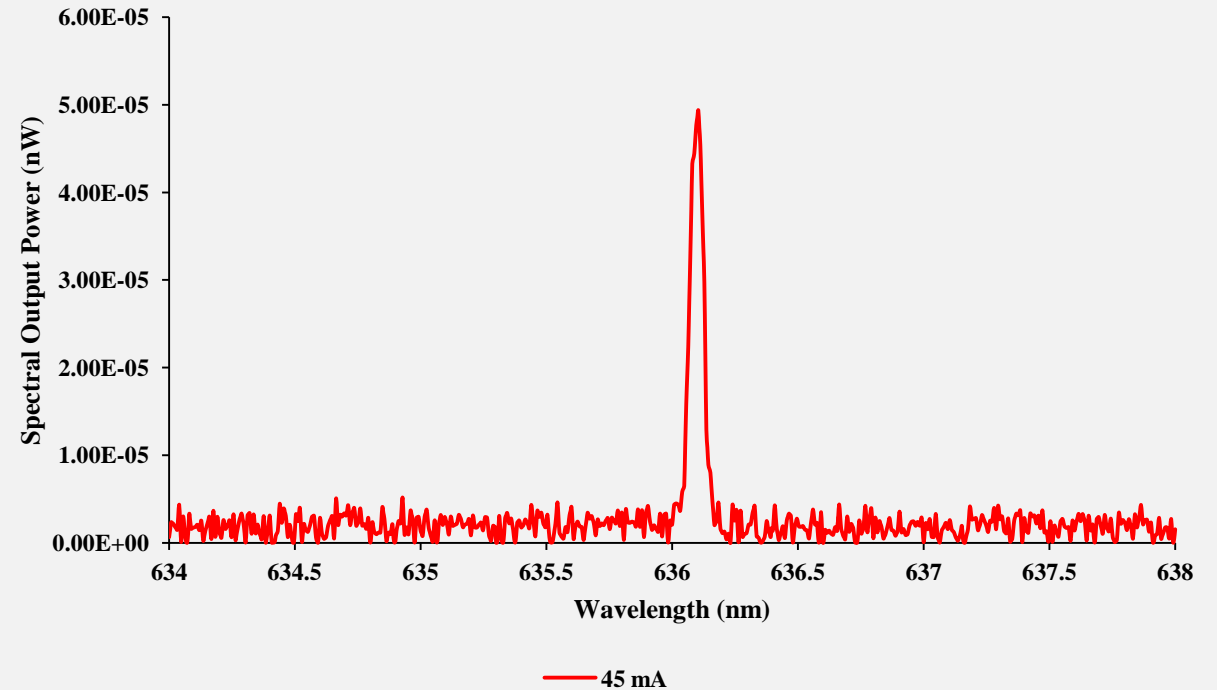


## Module Experimental Data

Wallplug Efficiency as a Function of Diode Current

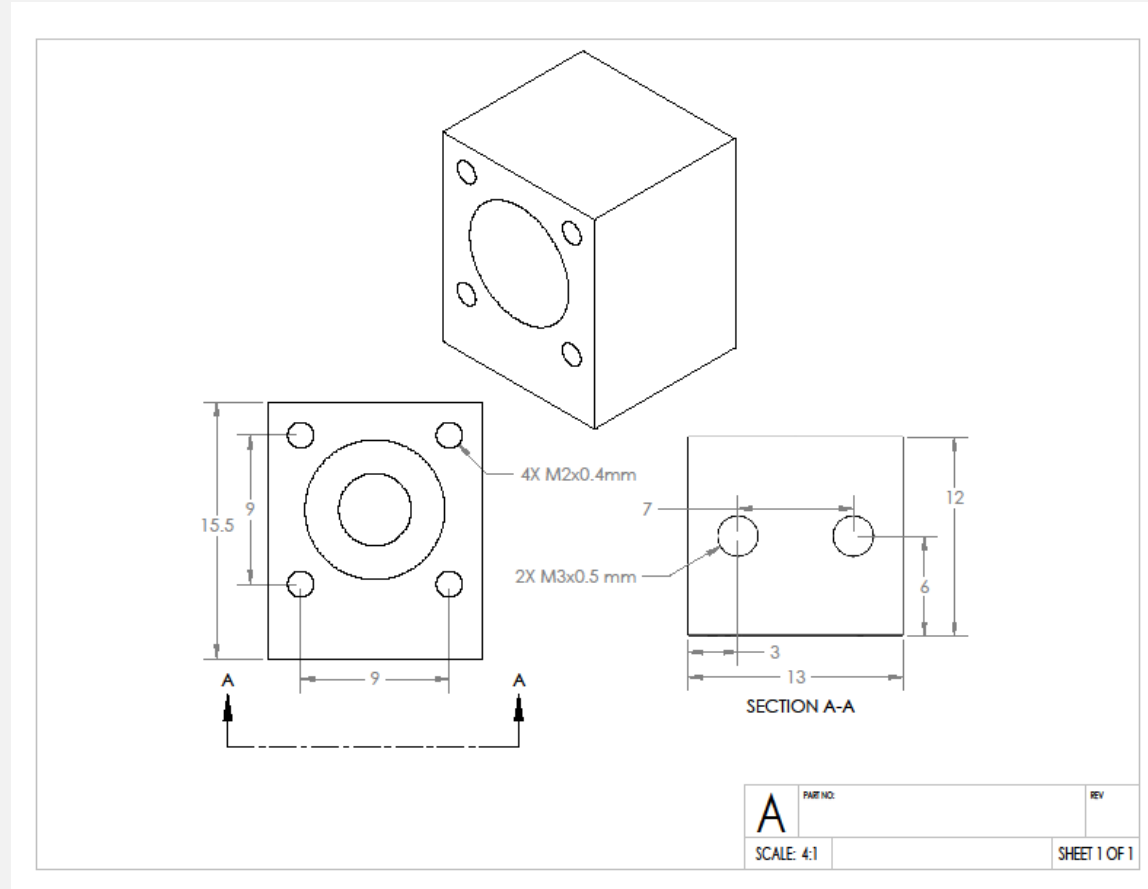


Spectral Output Power as a Function of Wavelength



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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 638 nm to protect your eyes.**
- **Skin exposure to this laser product should be avoided.**