

# M9 9.0mm TO-Can

## STANDARD FEATURES

- 14.0 or 6.5mm pin length
- AR coated window
- AlN carrier, AuSn bonding
- Hermetically sealed package
- Plated gold over nickel pins



## APPLICATIONS

- Raman spectroscopy
- Laser therapy
- Laser pumping
- Medical
- Defense

## SPECIFICATIONS

| Parameter                                      | Unit      | Min    | Typ | Max |
|--|-----------|--------|-----|-----|
| Wavelength <sup>1</sup>                        | nm        | -      | 940 | -   |
| Operating Power                                | mW        | -      | 300 | -   |
| Operating Current                              | mA        | -      | 370 | 430 |
| Operating Voltage                              | V         | -      | -   | 2.2 |
| Threshold                                      | mA        | -      | 35  | 55  |
| Slope Efficiency                               | W/A       | 0.8    | -   | -   |
| Vertical Far Field @ FWHM                      | deg. FWHM | -      | 28  | -   |
| Horizontal Far Field @ FWHM                    | deg. FWHM | -      | 8   | -   |
| Operational Temp <sup>2</sup>                  | °C        | -20    | 25  | 50  |
| Storage Temp                                   | °C        | -40    | -   | 80  |
| Lifetime (based at 25°C, Iop, CW) <sup>3</sup> | hour      | 10,000 | -   | -   |

## NOTES

- 1) Wavelength options at ±3, 5 and 10nm.
- 2) Lifetime is based on operation at 25°C within a hermetically sealed package. Devices must be passively or actively cooled in accordance with the provided specifications. Failure to comply with heatsinking requirements may result in device failure.
- 3) Lifetime is quoted on accelerated CW testing.
- 4) See mechanical drawing (RDW 840015) for dimensions.

# CUSTOMIZE YOUR PACKAGE

Choose the last 3 digits of the part number to  
create your custom package

RPM9-940-0300-XXX  
(PKG) (λ) (POWER) (123)

# 1

| 1st digit |                       |
|-----------|-----------------------|
| R         | SM PD, cathode ground |
| S         | SM P-up for submounts |

# 2

| 2nd digit |  |
|-----------|--|
| 3         | Wavelength tolerance $\pm 3\text{nm}$  |
| 5         | Wavelength tolerance $\pm 5\text{nm}$  |
| 9         | Wavelength tolerance $\pm 10\text{nm}$ |

# 3

| 3rd digit |         |
|-----------|---------|
| 0         | SM chip |

## OPERATING CONSIDERATIONS

Operating the diode laser outside of its maximum ratings may present a safety hazard or cause a device failure. Additionally, CW diode lasers may be damaged by excessive drive current or switching transients. When using a power supply with the component, it must be used within the specified parameters. DO NOT exceed the maximum peak optical power. Before turning the power supply on, connect the component to the power supply and ensure the output voltage value is zero. After the component has been successfully connected, increase the current slowly and monitor both the output power and drive current. Device degradation accelerates with increased temperature; therefore, careful attention to minimize the case temperature is advised. A proper heat-sink for the diode laser on a thermal radiator will greatly enhance laser life.

## ESD CAUTION

The primary cause of diode failure is unexpected electrostatic discharge. To help prevent device failures, be sure to handle devices with extreme care. The user should always wear an ESD wrist strap, ground all applicable work surfaces and follow anti-static techniques when handling diode lasers.

## FDA 21 CFR 1040.10

All devices are manufactured, tested and labeled in compliance with FDA 21 CFR 1040.10 regulations, as applicable under the Radiation Control for Health and Safety Act of 1968. For smaller devices, the appropriate compliance labeling may be affixed to the shipping container. All products comply with 21 CFR Chapter 1, Subchapter J.

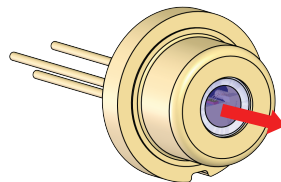
## SAFETY

Caution: Laser light emitted from a diode may be harmful to the human eye. Avoid looking directly into the diode laser aperture when the device is in operation. Note: The use of optical instruments with this product will increase eye hazard.

## CONTACT US

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O'Fallon MO 63366 USA

MKT RPM9000015 REV A



**WARNING!**  
Invisible laser radiation is emitted from devices as shown above

**DANGER**



**VISIBLE AND/OR INVISIBLE LASER RADIATION**  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR SCATTERED RADIATION

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**DIODE LASER MAXIMUM PEAK POWER**  
360mW MAX @ WAVELENGTH 940nm

**CLASS 4 LASER PRODUCT**