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**LASER LAB SOURCE**

manufactured by  **RealLight**

## 638nm Narrow Line Width Butterfly Laser Diode 350mW Output Power, 105 $\mu$ m Fiber Coupled



### **RLS / 638NM-100MW-RL**

- o Butterfly Package Laser Diode
- o Narrow Line Width < 0.1nm
- o 105 $\mu$ m Fiber-Coupled, FC/PC Connector  
SMA905 Connector Optional
- o Industry-Standard Type-1 Pinout



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## BUTTERFLY LASER DIODE

These multimode butterfly-packaged lasers deliver high power, narrow line width laser light due to the internal volume Bragg grating.

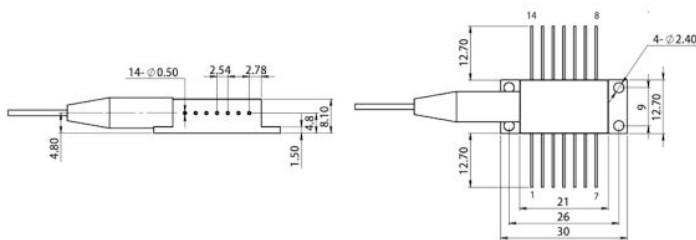
## RELIABLE PERFORMANCE IN A STANDARD LASER PACKAGE

These laser diodes are offered in an industry standard 14-pin butterfly package with a 105µm multi-mode fiber pigtail, terminated with an FC/PC connector.

The laser package integrates a thermo-electric cooler with 10 kΩ thermistor, and an internal monitor photodiode.

The pinout is industry-standard Type-1 pinout. The package is electrically floating relative to ground, offering flexibility in mounting and control of the laser.

## DIMENSIONS AND PINOUT



Pin	Function	Pin	Function
1	TEC (+)	14	TEC (-)
2	Thermistor	13	-
3	PD Anode	12	-
4	PD Cathode	11	Laser Diode Cathode
5	Thermistor	10	Laser Diode Anode
6	-	9	-
7	-	8	-

## SPECIFICATIONS

### LASER SPECIFICATIONS

- CW Output Power: 350 mW
- Center Wavelength: 638 nm (±0.5 nm)
- Spectral Width: < 0.1 nm
- Temperature Tuning Coefficient: 0.01 nm/°C
- Current Tuning Coefficient: 0.05 nm/A

### FIBER AND CONNECTOR

- Fiber Core Diameter: 105 µm
- Fiber Cladding Diameter: 125 µm
- Fiber Coating Diameter: 250 µm
- Numerical Aperture: 0.22 NA
- Connector: FC/PC or SMA905 (specify @ time of order)

### ELECTRICAL SPECIFICATIONS

- Threshold Current: 0.18 A
- Operating Current: 0.7 A
- Operating Voltage: 2.2 V
- TEC max Current: 2.5 A
- TEC max Voltage: 6.3 V
- Monitor Photodiode Range: 2000 µA
- Thermistor: 10 (±5%) kΩ (@25°C)
- Slope Efficiency: 0.7 W/A

### GENERAL SPECIFICATIONS

- Operating Temperature Range: 10°C – 30°C
- Storage Temperature Range: -20°C - 70°C
- Max Operating Humidity, Relative: 75 %
- Max Storage Humidity, Relative: 90 %
- Lead Soldering Temp: 250°C max, 10 sec

### PRIMARY APPLICATIONS

- Raman Spectroscopy
- Analytical Instruments
- Biological Research



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## **PRODUCT SALES AND SERVICE:**

Unlimited phone and email support is provided for products purchased through Laser Lab Source. Orders for this product are fulfilled by Laser Lab Source in North America and select international regions. It is manufactured by Real-Light, Beijing.

## **PRODUCT WARRANTY:**

This product is sold with a full one-year warranty. It is warranted to be free from defects in material and/or workmanship for a period of one year from the date of shipment.



Laser Lab Source, a division of Research Lab Source, Inc.  
670 S. Ferguson St., Suite 3  
Bozeman, MT 59718 USA

Phone: 406-219-1472

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



5th floor Block F No.1 Building  
No.139 Jinghai 3rd Road  
Beijing Development Area  
Beijing, China