

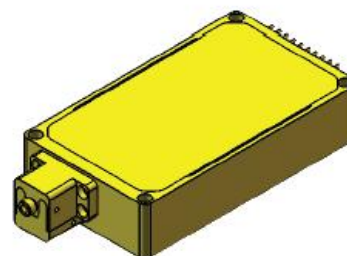
# 638nm Laser Diode

## ■ Features

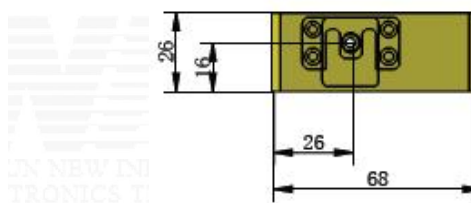
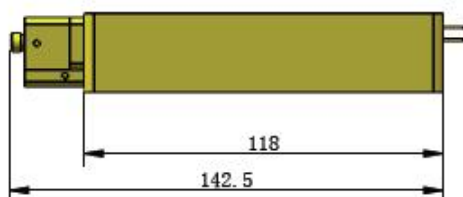
- ◆ High output power of 8W
- ◆ 100 $\mu$ m/0.22NA multimode optical fiber
- ◆ Center wavelength 638 $\pm$ 10nm

## ■ Applications

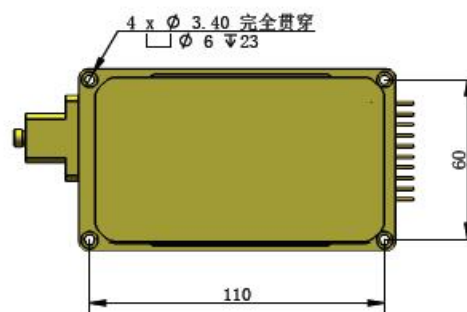
- ◆ Scientific Research
- ◆ Lighting
- ◆ Medical Application



## Outline Dimension (mm) without TEC



Pin-out Assignment	
Pi	Function
1	LD1(+)
2	LD1(-)
3	LD2(+)
4	LD2(-)
5	LD3(+)
6	LD3(-)
7	LD4(+)
8	LD4(-)
9	Thermistor
10	Thermistor
11	Indicating light (+2.7v)
12	Indicating light (0v)
13	PD(N)
14	PD(P)

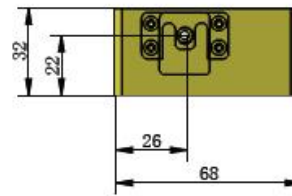
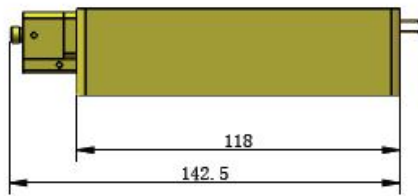


## Typical Device Performance (20°C, without TEC)

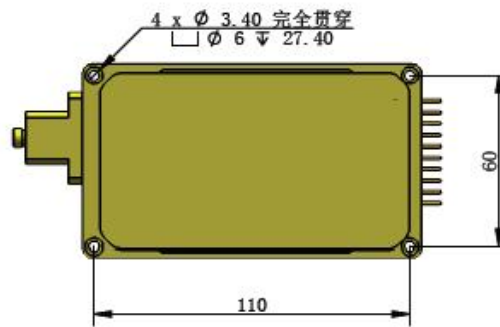
	Min	Typical	Max	Unit
<b>Optical</b>				
CW Output Power	-	8	-	W
Center Wavelength	-	638±10	-	nm
Spectral Width (90% of Power)	-	4.0	-	nm
<b>Electrical*</b>				
Threshold Current	-	-	0.17	A
Operating Current (Simplex)	-	1.1	1.1	A
Operating Voltage (Simplex)	-	10	-	V
<b>Indicating light</b>				
Output Power	-	<3	-	mW
Center Wavelength	-	637±10	-	nm
Operating Current	-	<50	-	mA
Operating Voltage	-	2.7	-	V
<b>Fiber*</b>				
Fiber Core Diameter	-	100	-	μm
Numerical Aperture	-	0.22	-	-
Fiber Length	-	1-5	-	m
Fiber Connector	-	FC/SMA905	-	-
Fiber Armor	-	Optional	-	-
Fiber Minimum Bending Diameter	75	-	-	mm

The power supply mode of the laser has four power supplies.

## Outline Dimension (mm) with TEC



Pin-out Assignment	
Pi	Function
1	LD1(+)
2	LD1(-)
3	LD2(+)
4	LD2(-)
5	Thermistor
6	Thermistor
7	TEC+
8	TEC-
9	Indicating light (+2.7v)
10	Indicating light (0v)
11	PD(N)
12	PD(P)



## Typical Device Performance (20°C, with TEC)

	Min	Typical	Max	Unit
<b>Optical</b>				
CW Output Power	-	8	-	W
Center Wavelength	-	638±10	-	nm
Spectral Width (90% of Power)	-	4.0	-	nm
<b>Electrical*</b>				
Threshold Current	-	-	0.17	A
Operating Current ( Simplex )	-	2.2	2.2	A
Operating Voltage ( Simplex )	-	10	-	V
TEC Current	-	6	-	A
TEC Voltage	-	16	-	V
<b>Indicating light</b>				
Output Power	-	<3	-	mW
Center Wavelength	-	637±10	-	nm
Operating Current	-	<50	-	mA
Operating Voltage	-	2.7	-	V
<b>Fiber*</b>				
Fiber Core Diameter	-	100	-	μm
Numerical Aperture	-	0.22	-	-
Fiber Length	-	1-5	-	m
Fiber Connector	-	FC/SMA905	-	-
Fiber Armor	-	Optional	-	-
Fiber Minimum Bending Diameter	75	-	-	mm

The power supply mode of the laser has two power supplies.

## Absolute Rating

	Min	Max	Unit
Operating Temperature	15	35	°C
Operating Relative Humidity	-	75	%
Storage Temperature	-20	80	°C
Storage Relative Humidity	-	90	%
Lead Soldering Temperature (10 s max)	-	250	°C

\* Measuring specifications.

All figures in this specification are measured by CNI's method and may contain measurement deviations.

The above specifications are for reference purpose only and subjected to change without prior notice.



---

**Changchun New Industries Optoelectronics Tech. Co., Ltd**  
<http://www.cnilaser.com>

◆ CONTACT

No.888, JinHu Road, High-tech zone, Changchun  
130103, R.P. China

Phone: 0086-431-85603799

Fax: 0086-431-87020258