

808nm 2W CW Laser Diode

**Preliminary Data** 

## L8828-62

### ■ FEATURES:

High output power & high brightness

- 2W CW Output Power
- 100  $\mu$ m x 1  $\mu$ m Emitting Area

Peak Emission Wavelength 808nm +/- 10nm Multimode High Stability

- Long Life
- Compact
- Compact



### ■ APPLICATIONS:

Printing Medical Instrument Measuring Instrument

## ABSOLUTE MAXIMUM RATINGS

		(Top(c)=25°C)				
Parameter	Symbol	Value	Unit			
Radiant Output Power	Øe	2.2	W			
Reverse Voltage	VR	2	V			
Operating Temperature	Top <sub>(c)</sub>	0 to +30	°C			
Storage Temperature	Tstg	-30 to +80	°C			

#### Unit:mm Output LD Chip ② Cathode Lead 10 5.8 ю 1.8 24 ö (Connection) щ ..... 0 Ŷ 1. 4.6 8.8 c മ Anode ② Cathode Isolator 6 ① Anode Block

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# ELECTRICAL AND OPTICAL CHARACTERISTICS

(Top <sub>@</sub> =25°C)							
Parameter	Symbol	Condition	Value			Lloit	
			Min.	Тур.	Max.	Onic	
Forward Current	ĬF	Øe <b>=2W</b>	-	2.4	2.6	А	
Peak Emission Wavelength	λρ	Øe <b>=2W</b>	798	808	818	nm	
Spectral Radiation Half Bandwidth	Δλ	Øe <b>=2W</b>	-	2	3	nm	
Forward Voltage	VF	Øe <b>=2W</b>	-	2	2.4	V	
Beam Spread Angle : Parallel	θ//	Øe <b>=2W</b>	4	8	12	degree	
: Vertical	$oldsymbol{ heta}_{\perp}$	FWHM	27	32	37	degree	
Lasing Threshold Current	Ith		_	0.6	0.8	A	

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Figure 1: Radiant Output Power vs. Forward Current (Typ.) Figure 2: Emission Spectrum (Typ.)

100

80

60

40

20

0 804

806

808

Wavelength (nm)

810

812

Relative Radiant Output Power (%)



Figure 3: Directivity (Typ.)



## INSTRUCTIONS FOR SAFETY USE

### 1. Heat dissipation

Relability of this LD is deeply correlated with junction temperature. Under higher operating temperature, the reliability deteriorates soon. Heat dissipating device (material: Aluminum, Copper) should be attached to the base of the LD, and cooling devices (air, water, peltier etc.) should be operated with the LD in order to dissipate the heat from the LD, so that the operating temperature is kept within the absolute maximum ratings

### 2. Safety for operators and users

This LD emits invisible laser radiation. It's classified into Class 4 according to the laser product standards of the IEC 60825-1 (Safery of laser products Part 1 : Equipment classification, requirements and user's guide) and/or ANSI Z136.1 (American National Standard for Safe Use of Lasers) etc. Direct or reflected laser beam from this LD may damage eyes or skin by being absorbed by cell. The operator must not stare the emitting area of LD, must avoid direct exposure to the laser beam

### 3. Bare chip type

This LD is bare chip type, vital & fragile part is naked. Dusts, expiration, finger print, sputum, condensation bending, chip off of LD chip, re-forming of wire may leads to degradation of performance of the LD. Please unpack, keep, handle, operate, and drive in air-conditioned clean rooms that the LD is keep away from dust & condensation.



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(Top(c) = 25 °C)

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