

LT1000-1.5W

Power Series™



Unmounted Laser Diode Chips

1.5 Watts CW

808, 830 and 915 nm

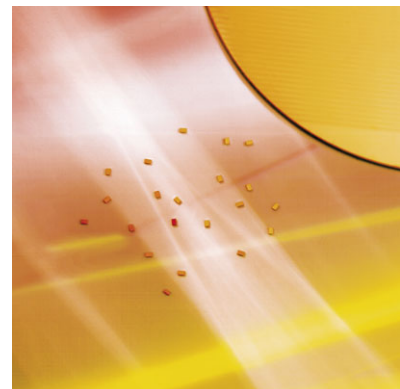
LT1000-1.5W Features

- ▶ State-of-the-art MBE technology
- ▶ Enhanced optical output power
- ▶ TE or TM polarization
- ▶ Long diode lifetime
- ▶ High reliability

LT1000-1.5W Applications

Graphics
Industrial
Defense
Medical
Telecom

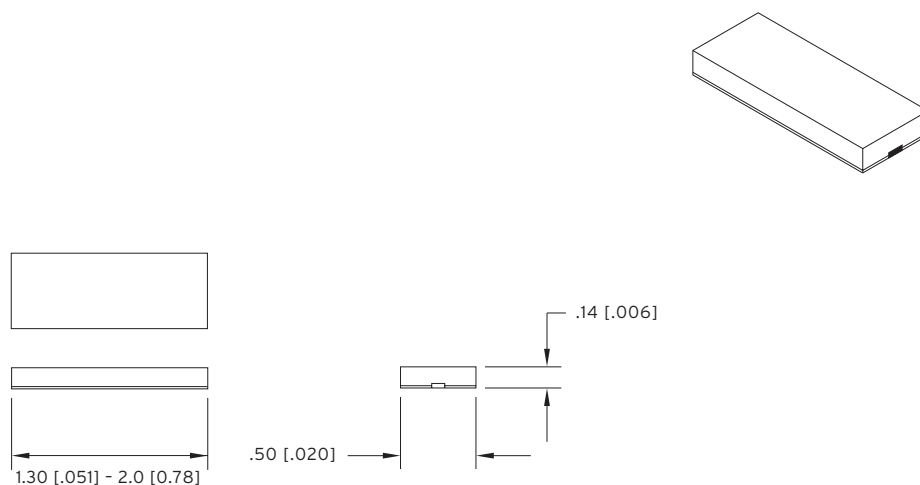
The industry leader in high-power chips. Lasertel's Power Series delivers reliable power. These LT1000-1.5W unmounted chips are ideal for a diverse base of customers. Lasertel's partnering spirit and "one-stop shopping" offer end users with in-house mounting and packaging capabilities – a unique opportunity to define and meet their own customer specifications. At an output power of 1.5 Watts CW, the LT1000-1.5W chips feature wavelengths from 808 to 915 nm. Typical emitted beam divergence is 34 degrees in the fast axis and 8 degrees in the slow axis (FWHM), making the lasers especially useful for both commercial and solid-state pumping applications. For large OEM users, the Power Series offers options for custom-designed heat sink packaging, diode mounting platforms, and special lensing to boost beam quality. Please contact us at 520-744-5700 or email sales@lasertel.com to discuss your application.



LT1000-1.5W

Dimensions

Dimensions in mm, followed by [inches].



LASERTEL, INC.

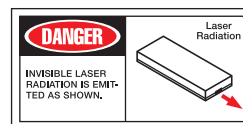
TUCSON, ARIZONA 85743 U.S.A.

MODEL:

S/N:

MANUFACTURED:

This laser product complies with 21 CFR 1040 as applicable.



CFR Regulation

These labels adhere to Lasertel shipping packages due to product's tight dimensions. By noting them here, Lasertel meets compliance standards for 21 CFR 1040.10 as applicable under the radiations control for health and safety act of 1968.

Unmounted Laser Diode Chips

1.5 Watts CW

808, 830 and 915 nm

LT1000-1.5W Characteristics

	Symbol	808 nm Typical	830 nm Typical	915 nm Typical	Units
Optical ($T_c=25^\circ\text{C}$)					
CW Output Power	P_o	1.5	1.5	1.5	W
Center Wavelength	λ_c	808	830	915	nm
Center Wavelength Tolerance		± 5	± 5	± 5	nm
Spectral Width (FWHM)	λ	2.0	2.0	3.5	nm
Emitting Dimensions	WxH	100x1	100x1	100x1	μm
Number of Emitters		1	1	1	1
Wavelength Temp. Coefficient		0.3	0.3	0.3	nm/ $^\circ\text{C}$
Beam Divergenc (FWHM)					
Slow Axis	$\theta_{ }$	8	8	8	$^\circ$
Fast Axis	θ_{\perp}	34	34	34	$^\circ$
Polarization	call factory	call factory	call factory	call factory	
Electrical ($T_c=25^\circ\text{C}$)					
Slope Efficiency $P_o/(I_{op}-I_{th})$	η_o	1.1	1.1	1.0	W/A
Conversion Efficiency $P_o/(I_{op} V_{op})$	η	48	48	42	%
Threshold Current	I_{th}	400	400	400	mA
Operating Current	I_{op}	1.6	1.6	1.9	A
Operating Voltage	V_{op}	1.8	1.8	1.9	V
Series Resistance	R_s	0.15	0.15	0.15	Ω
Absolute Maximum Ratings					
Reverse Voltage	V_r	2.0	2.0	2.0	V
Storage Temperature	T_{stg}	-40 to 85	-40 to 85	-40 to 85	$^\circ\text{C}$

Notes

- 1) TM or TE polarization available, consult your Lasertel representative.
- 2) Optional mask configurations available, consult factory.
- 3) Center wavelength specification applicable when mounted on Lasertel C or CT submounts.
- 4) Specifications subject to change without notice.

Safety

Caution: Laser light emitted from any diode laser is invisible and 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.

ESD Caution

Handle diode lasers with extreme care to prevent electrostatic discharge, the #1 cause of unexpected diode failure. You can prevent ESD by always wearing wrist straps, grounding all applicable work surfaces, and following extremely rigorous anti-static techniques when handling diode lasers.

Warranty

All Lasertel products are covered by a limited warranty to ensure customer satisfaction. Please see your Lasertel, Inc. product purchase agreement for complete details, or check with your Lasertel sales representative.

Notice

Lasertel continually improves its products to provide customers with the best value, outstanding quality and reliability, and broadest range of choices. Specifications are subject to change without notice.

Lasertel is Driving the Industry

Lasertel was founded with the goal to become one of the top worldwide suppliers of active optical components.

The company's 75,000-square foot facility is dedicated to state-of-the-art design, manufacture and production of high-power semiconductor lasers for a variety of users, including the graphics, telecommunications, industrial, defense and medical industries.

Lasertel is a subsidiary of Presstek, Inc., a leading provider of direct digital imaging technologies to the printing and publishing industry.

Contact us today!

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