



LASERMATE GROUP, INC.

The Friend of Lasers

Model No. LDP808F4WD48
808nm 4W 85°C Laser Diode in TO-5 Ø9.0mm Package

FEATURES

- 808nm 4W Pulsed Infrared Laser Diode
- Highly reliable
- Higher power
- High efficiency
- Package: TO-5 (dia. 9mm)

APPLICATIONS

- Pumping of solid-state lasers and fiber lasers
- Measuring, scientific and medical systems
- Printing
- Defense and security

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	CONDITION	RATING	UNIT
LIGHT OUTPUT POWER	P_O	Pulse	4	W
REVERSE VOLTAGE (LD)	V_{RL}	-	2	V
CASE TEMPERATURE	T_C	-	-40 to +85	°C
STORAGE TEMPERATURE	T_S	-	-40 to +85	°C

*Case temperature is equal to ambience temperature.

ELECTRICAL AND OPTICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$)

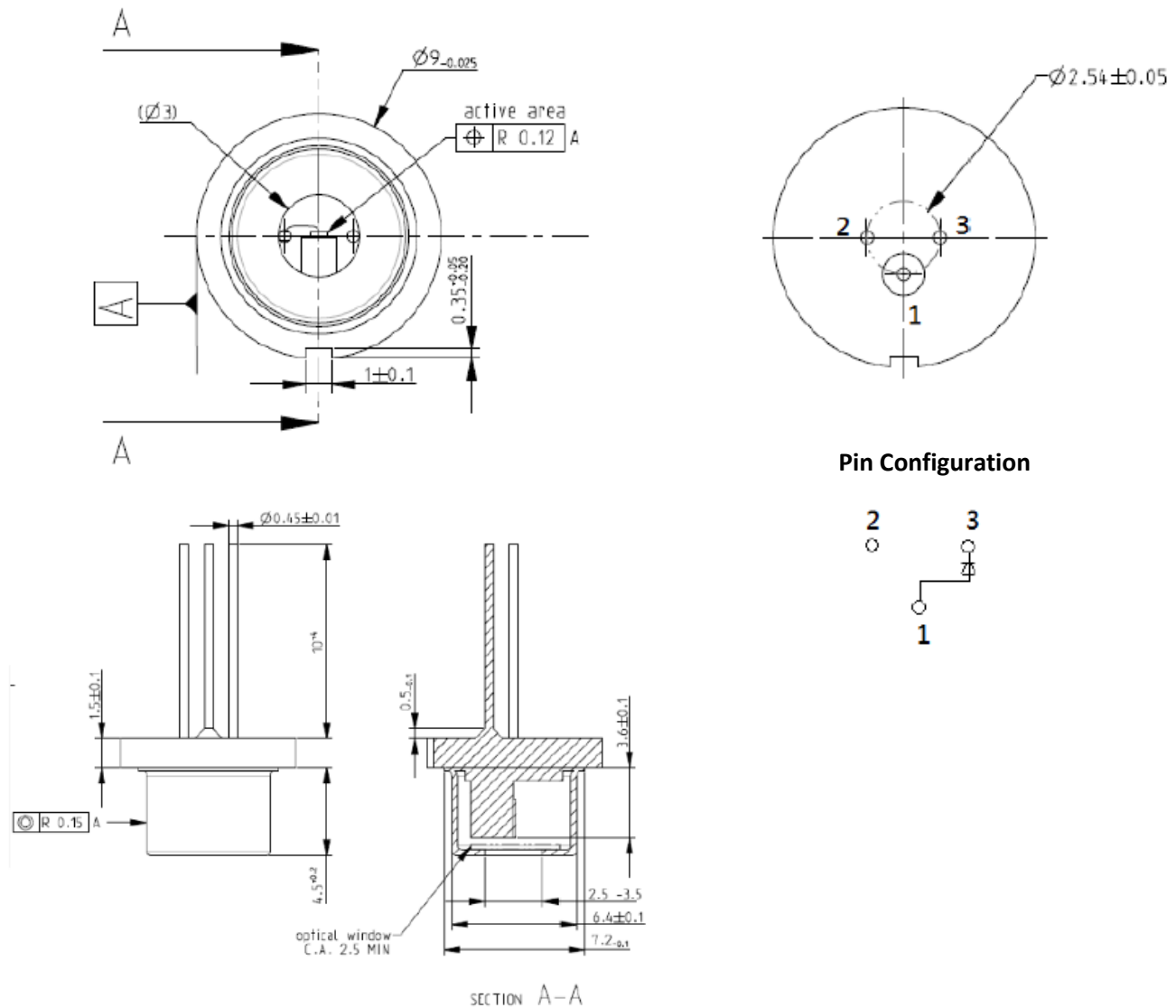
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS
PEAK WAVELENGTH	λ		808		nm	$P_O = 4\text{W}$
THRESHOLD CURRENT	I_{th}		0.42	0.5	A	
OPERATING CURRENT	I_{op}		3.85	4.2	A	$P_O = 4\text{W}$
OPERATING VOLTAGE	V_{op}		2.25	3.0	V	$P_O = 4\text{W}$
DIFFERENTIAL EFFICIENCY	η	0.9	1.1		W/A	$P_O = 3\text{-}4\text{W}$
PARALLEL DIVERGENCE ANGLE	$\Theta_{//}$	7	8.5	12	deg	$P_O = 4\text{W}$
PERPENDICULAR DIVERGENCE ANGLE	$\Theta_{\perp}$	25	29	35	deg	$P_O = 4\text{W}$
PARALLEL FFP DEVIATION ANGLE	$\Delta \Theta_{//}$	-3	0	+3	deg	$P_O = 4\text{W}$
PERPENDICULAR FFP DEVIATION ANGLE	$\Delta \Theta_{\perp}$	-3	0	+3	deg	$P_O = 4\text{W}$
EMISSION POINT ACCURACY	$\Delta x \Delta y \Delta z$	-80	0	+80	um	$P_O = 4\text{W}$

*The specification is measured under pulse operation.

Note: The above specifications are subject to change without notice.



MECHANICAL OUTLINE (unit: mm)



PRECAUTIONS

- Do not operate the device above maximum ratings. Doing so may cause unexpected and permanent damage to the device.
- Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- Proper heat sinking of the device assures stability and lifetime. Always ensure that maximum operating temperatures are not exceeded.
- Observing visible or invisible laser beams with human eye directly, or indirectly, can cause permanent damage. Use a camera to observe the laser.
- No laser device should be used in any application or situation where life or property is at risk in the event of device failure.
- Specifications are subject to change without notice. Ensure that you have the latest specification by contacting us prior to purchase or use of the product.

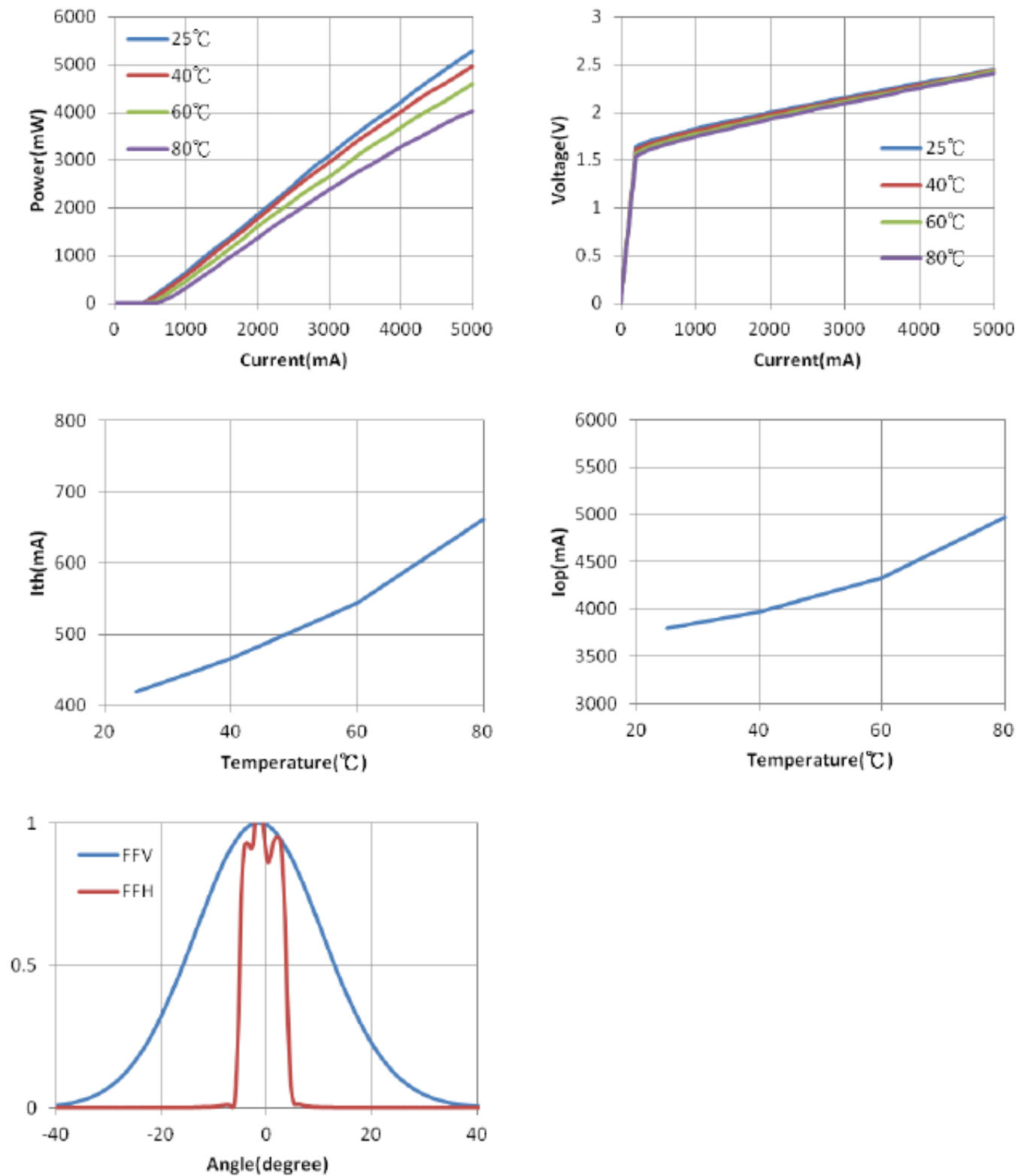
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TYPICAL CHARACTERISTICS



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19608 Camino De Rosa, Walnut, CA 91789, USA | Tel: (909)718-0999 | Fax: (909)718-0998 |
E-mail: info@lasermate.com | URL: <http://www.lasermate.com>