

# ROITHNER LASERTECHNIK

A-1040 VIENNA, SCHOENBRUNNER STRASSE 7, AUSTRIA

TEL: +43 -1- 586 52 43-0 FAX: +43 -1- 586 52 43-44

e-mail: office@roithner-laser.com http://www.roithner-laser.com

## RLT91500G TECHNICAL DATA



### High Power Infrared Laserdiode

Structure: **AlGaAs quantum well**

Lasing wavelength: **915 nm typ., multimode**

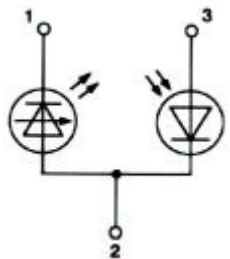
Optical power: **500 mW, 1 x 50  $\mu\text{m}^2$  aperture**

Package: **9 mm**

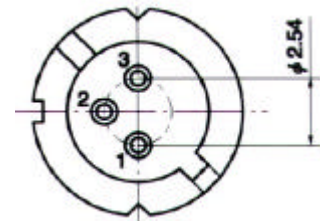
**NOTE!**  
LASERDIODE  
MUST BE COOLED!



#### PIN CONNECTION:



- 1) Laser diode cathode
- 2) Laser diode anode and photodiode cathode
- 3) Photodiode anode



#### Maximum Ratings (T<sub>c</sub>=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Optical Output Power	P <sub>o</sub>	500	mW
LD Reverse Voltage	V <sub>R(LD)</sub>	2	V
PD Reverse Voltage	V <sub>R(PD)</sub>	30	V
Operating Temperature	T <sub>C</sub>	-40 .. +50	°C
Storage Temperature	T <sub>STG</sub>	-70 .. +85	°C

#### Optical-Electrical Characteristics (T<sub>c</sub> = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Optical Output Power	P <sub>o</sub>	cw		500		mW
Threshold Current	I <sub>th</sub>	cw	80	100	120	mA
Operation Current	I <sub>op</sub>	P <sub>o</sub> = 500 mW	500	600	700	mA
Operation Voltage	U <sub>op</sub>	P <sub>o</sub> = 500 mW	1.6	1.8	2.0	V
Lasing Wavelength	$\lambda_p$	P <sub>o</sub> = 500 mW	910	915	920	nm
Spectral Width FWHM	$\Delta\lambda$	P <sub>o</sub> = 500 mW		10		nm
Beam Divergence	$\theta_{//}$	P <sub>o</sub> = 500 mW		8		°
Beam Divergence	$\theta_{\perp}$	P <sub>o</sub> = 500 mW	35	40	45	°
Differential Efficiency	dP <sub>o</sub> /dI <sub>op</sub>	P <sub>o</sub> = 500 mW	0.8	1.0	1.2	mW/mA
Monitor Current	I <sub>m</sub>	P <sub>o</sub> = 500 mW	150	350	800	$\mu\text{A}$