ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44 OFFICE@ROITHNER-LASER.COM

RLT8085000TF

- **IR Laser Diode**
- **808 nm, 5 W**
- **Multi Transvers Mode**
- **Fast Axis Collimator Lens**
- **TO3 package**

Description

RLT8085000TF is a high power single emitter Fabry-Perot cavity IR laser diode, emitting at typical 808 nm with a rated output power of 4.5 W. It comes in a hermetically sealed TO3 package with containing fast axis collimator lens.

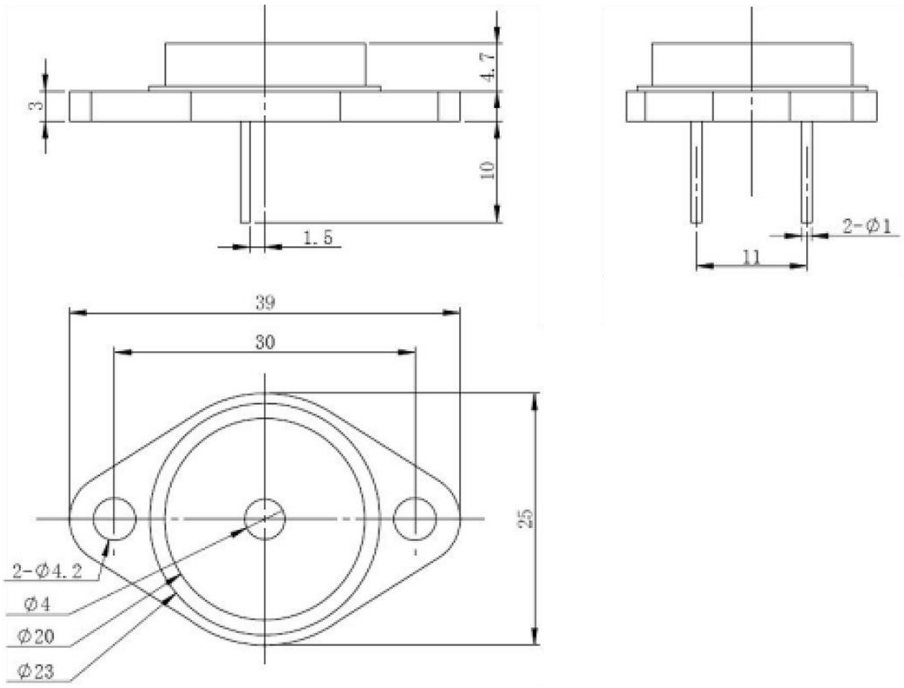
Maximum Rating

Parameter	Symbol	Values		Unit
		Min.	Max.	
Reverse Voltage	V_R			V
Reverse Current	I_R			µA
Operating Temperature	T_{CASE}	15	+ 30	°C
Storage Temperature	T_{STG}	- 40	+ 60	°C
Soldering Temperature (max. 3s)	T_{SOL}		260	°C

Electro-Optical Characteristics (T_{CASE} = 25°C)

Parameter		Symbol	Values			Unit
			Min.	Typ.	Max.	
Dominant Wavelength		**λ_P**	**803**	**808**	**813**	**nm**
Spectral Width		$\Delta\lambda$			3	nm
Emitting Area				200		µm
Optical Output Power		P_O		4.5		W
Operating Voltage		V_F			2.0	V
Threshold Current		I_{th}			1.1	A
Operating Current		I_{OP}			5.5	A
Slope Efficiency		η	1.0			W/A
Beam Divergence (FWHM)	parallel	$\Theta_{\parallel}$			10	deg.
	perpendicular	$\Theta_{\perp}$			10	deg.
Temperature Coefficient		T_{COEF}		0.3		nm/K

Outline Dimensions



All dimensions in mm

Precautions

Safety

Caution: Laser light emitted from any laser diode may be **harmful to the human eye**. Avoid looking directly into the laser diode's aperture when the diode is in operation.

Note: The use of optical lenses with this laser diode will increase eye hazard.

ESD caution

Always do handle laser diodes with extreme care to **prevent electrostatic discharge**, the primary cause of unexpected diode failure. To prevent ESD related failures, it is strongly advised to always **wearing wrist straps**, and **grounding all applicable work surfaces**, when handling laser diodes

Operating Considerations

It is strongly advised to only operate this laser diode with a current source. The current of a laser diode is an exponential function of the voltage across it. **Usage of current regulated drive circuits is mandatory.**

Laser diodes may be damaged by excessive drive currents or switching transients.

It is advised, to operate the laser diode at the lowest temperature possible, and to never exceed maximum specifications as outlined in the datasheet. Device degradation will accelerate with increased temperature. **Proper heat sinking will greatly enhance stability and life time of the laser diode**