

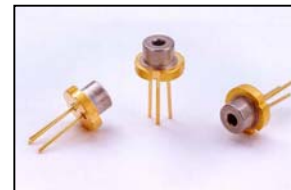
# ROITHNER LASERTECHNIK

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## S808200MG TECHNICAL DATA



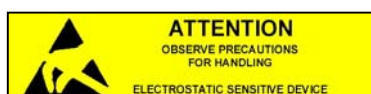
### High Power Infrared Laser Diode

Structure: multi mode, 30 x 1  $\mu\text{m}^2$  emitting aperture

Lasing wavelength: typ. 806 nm

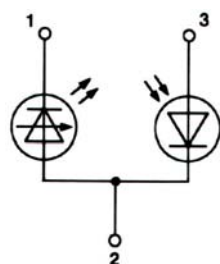
Output power: 200 mW cw

Package: 5.6 mm, TO-18

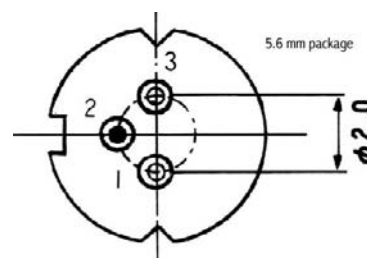


**NOTE!**  
LASERDIODE  
MUST BE COOLED!

#### PIN CONNECTION:



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



#### Absolute Maximum Ratings ( $T_c = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Optical Output Power	$P_o$	250	mW
LD Reverse Voltage	$V_{R(LD)}$	2	V
PD Reverse Voltage	$V_{R(PD)}$	30	V
Operation Case Temperature	$T_c$	-10 .. +40	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 .. +85	$^\circ\text{C}$

#### Optical-Electrical Characteristics ( $T_c = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Threshold Current	$I_{th}$	cw	-	70	110	mA
Operation Current	$I_{op}$	$P_o = 200 \text{ mW}$	-	300	350	mA
Operating Voltage	$V_{op}$	$P_o = 200 \text{ mW}$	-	1.9	2.2	V
Lasing Wavelength	$\lambda_p$	$P_o = 200 \text{ mW}$	803	806	810	nm
Beam Divergence	$\theta_{//}$	$P_o = 200 \text{ mW}$	-	6	-	$^\circ$
Beam Divergence	$\theta_{\perp}$	$P_o = 200 \text{ mW}$	-	32	40	$^\circ$
Parallel Deviation Angle	$\Delta\theta_{//}$	$P_o = 200 \text{ mW}$	-	-	$\pm 3$	$^\circ$
Perpendicular Deviation Angle	$\Delta\theta_{\perp}$	$P_o = 200 \text{ mW}$	-	-	$\pm 3$	$^\circ$
Emission Point Accuracy	$\Delta X, \Delta Y, \Delta Z$	-	-	$\pm 80$	-	$\mu\text{m}$
Slope Efficiency	$\eta$	63 mW – 190 mW	-	0.9	-	mW/mA
Monitor Current	$I_m$	$P_o = 200 \text{ mW}$	1	2.5	6	mA