

ROITHNER LASERTECHNIK

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MIL8505MG TECHNICAL DATA



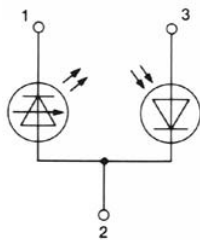
Infrared Laser Diode

Structure: **AlGaAs quantum well structure, MOCVD**
 Lasing wavelength: **850 nm, typ.**
 Max. optical power: **5 mW**
 Package: **5.6 mm (TO-18)**

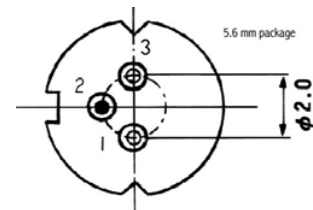
NOTE!
 LASERDIODE
 MUST BE COOLED!

ATTENTION
 OBSERVE PRECAUTIONS
 FOR HANDLING
 ELECTROSTATIC SENSITIVE DEVICE

PIN CONNECTION:



- 1) Laserdiode cathode
- 2) Laserdiode anode and photodiode cathode
- 3) Photodiode anode



Absolute Maximum Ratings (Tc = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Optical Output Power	P _o	7	mW
LD Reverse Voltage	V _{R(LD)}	2	V
PD Reverse Voltage	V _{R(PD)}	30	V
Operating Temperature	T _{op}	-10 .. +60	°C
Storage Temperature	T _{stg}	-40 .. +85	°C

Optical-Electrical Characteristics (Tc = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Optical Output Power	P _o	cw	-	5	-	mW
Threshold Current	I _{th}	cw	5	10	20	mA
Operation Current	I _{op}	P _o = 5 mW	15	20	30	mA
Operation Voltage	V _{op}	P _o = 5 mW	-	1.9	2.5	V
Lasing Wavelength	λ _p	P _o = 5 mW	845	850	855	nm
Beam Divergence	θ _{//}	P _o = 5 mW	8	12	16	°
Beam Divergence	θ _⊥	P _o = 5 mW	25	32	40	°
Beam Angle	Δθ _{//}	P _o = 5 mW	-	-	±2	°
Beam Angle	Δθ _⊥	P _o = 5 mW	-	-	±3	°
Differential Efficiency	η	P _o = 2~5 mW	0.4	0.5	0.9	mW/mA
Monitor Current	I _m	P _o = 5 mW, V _f =5V	0.2	0.4	0.6	mA
Astigmatism	As	cw			15	μm
Chip Placement	ΔX,ΔY,ΔZ	cw	-	-	±60	μm

PACKAGE DIMENSIONS

