



Optical and Electrical Characteristics

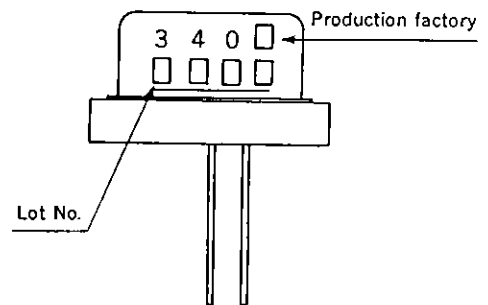
T<sub>c</sub>=15°C

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold current	I <sub>th</sub>			500	700	mA
Operating current	I <sub>OP</sub>	P <sub>o</sub> =900mW		1550	2000	mA
Operating voltage	V <sub>OP</sub>	P <sub>o</sub> =900mW		2.1	3.0	V
Wavelength*	λ <sub>p</sub>	P <sub>o</sub> =900mW	770		840	nm
Monitor current	I <sub>mon</sub>	P <sub>o</sub> =900mW V <sub>R</sub> =10V		1.5		mA
Radiation angle (F. W. H. M)	Perpendicular	θ <sub>⊥</sub>	P <sub>o</sub> =900mW	28	40	degree
	Parallel			θ <sub>∥</sub>	13	17
Positional accuracy	Position	ΔX, ΔY	P <sub>o</sub> =900mW		±50	μm
	Angle	Δφ <sub>⊥</sub>			±3	degree
Slope efficiency	η <sub>D</sub>	P <sub>o</sub> =900mW	0.65	0.85		mW/mA

\*Wavelength Selection Classification

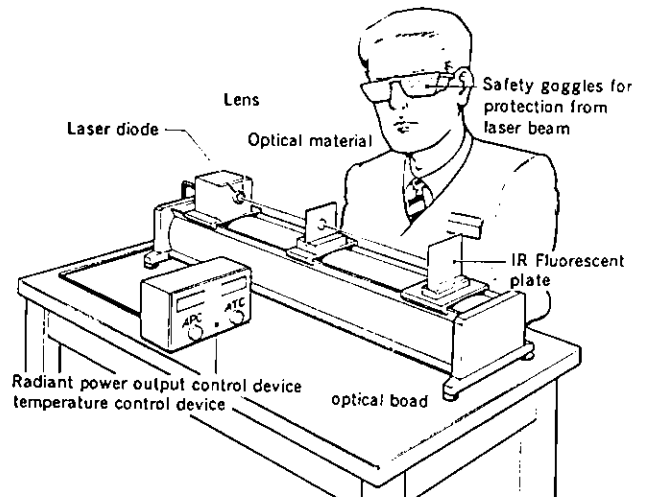
Type	Wavelength (nm)
SLD304V-1	785±15
SLD304V-2	810±10
SLD304V-3	830±10
SLD304V-21	798± 3
-24	807± 3
-25	810± 3

Marking

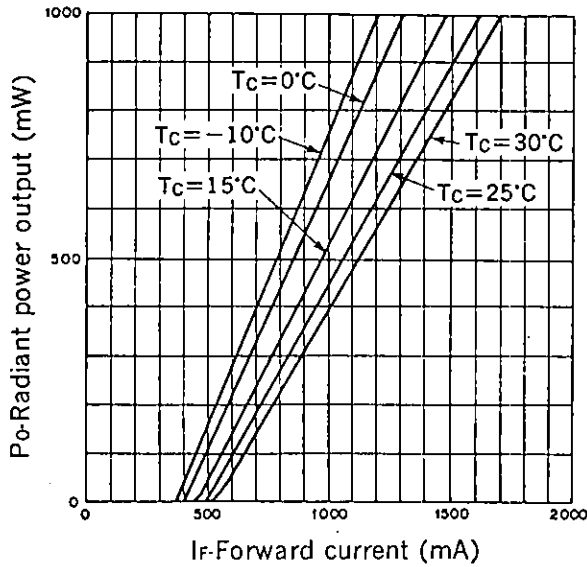


Precautions

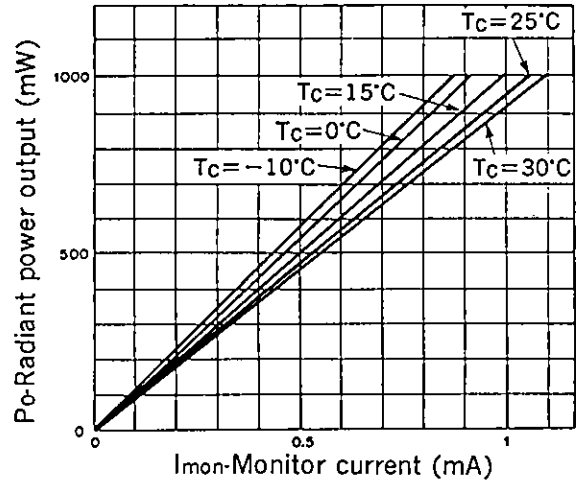
Eye protection against laser beams  
 The optical output of laser diodes ranges from several milliwatts to one watt. However the optical density of the laser beam at the diode chip reaches 1 megawatt per square centimeter. Unlike gas lasers, since laser diode beams are divergent, uncollimated laser diode beams are fairly safe at a laser diode. For observing laser beams, ALWAYS use safety goggles that block infrared rays. Usage of IR scopes, IR cameras and fluorescent plates is also recommended for monitoring laser beams safely.



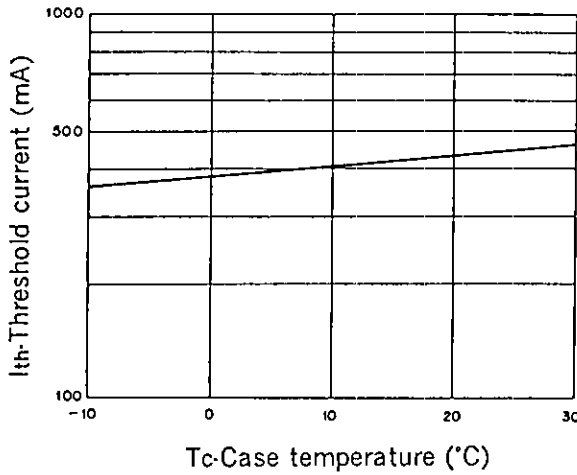
**Radiant power output vs. Forward current characteristics**



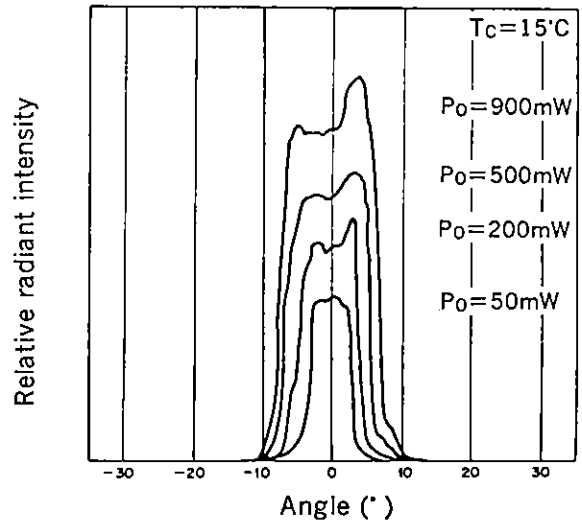
**Radiant power output vs. Monitor current characteristics**



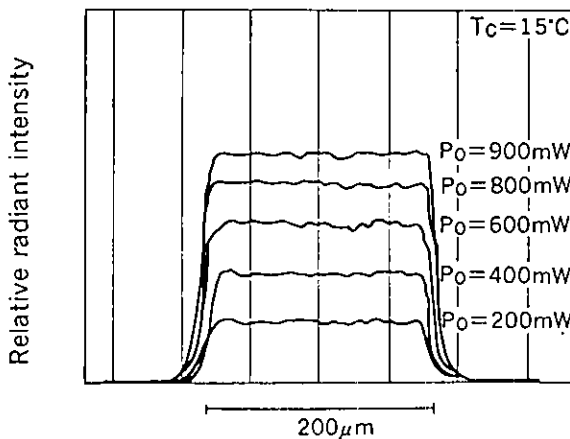
**Threshold current vs. Temperature characteristics**



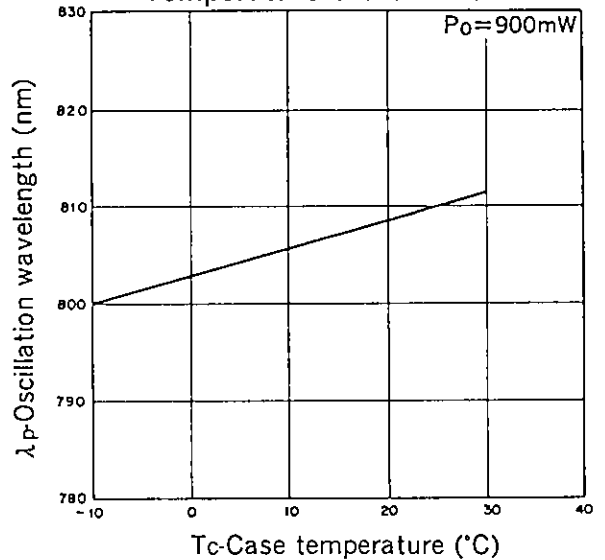
**Power dependence of far field pattern (parallel to junction)**



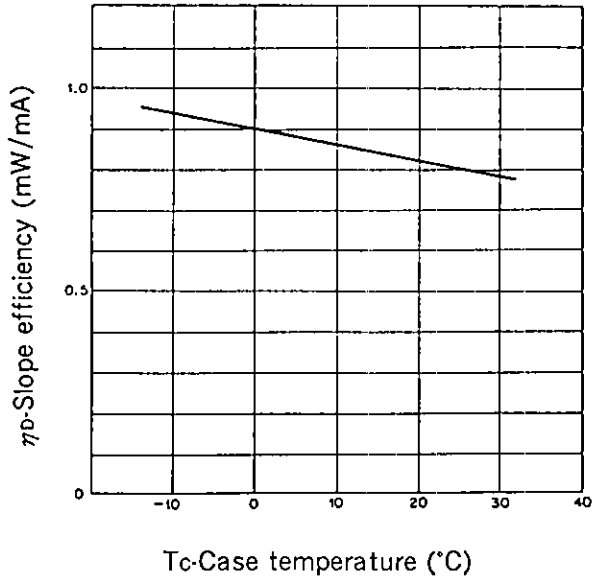
**Power dependence of near field pattern**



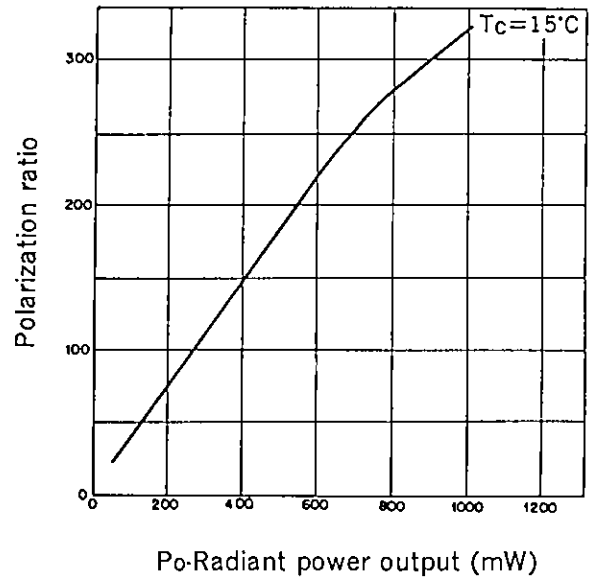
**Oscillation wavelength vs. Temperature characteristics**



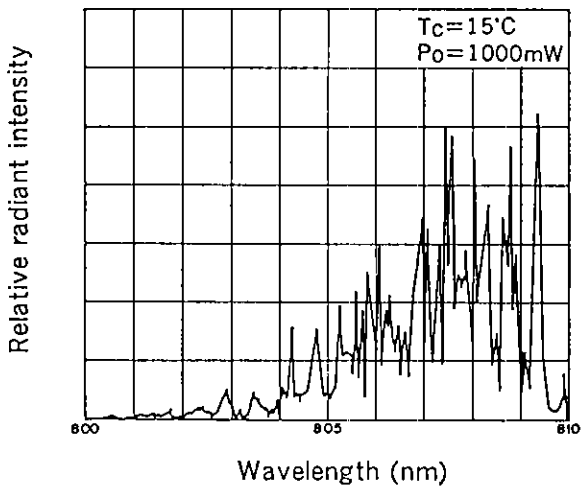
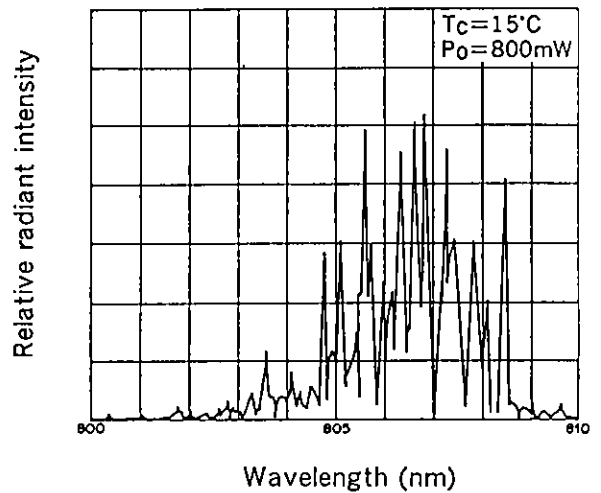
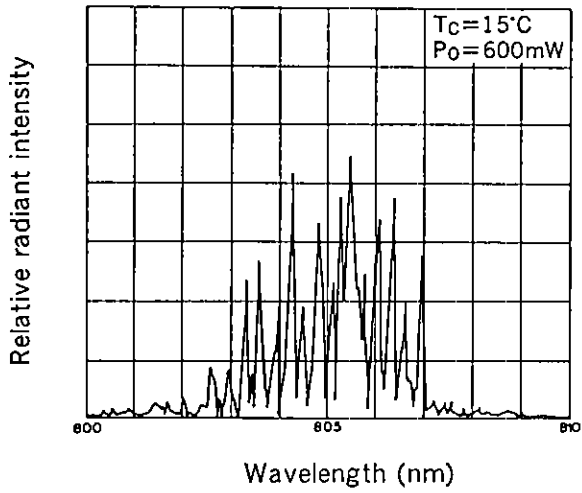
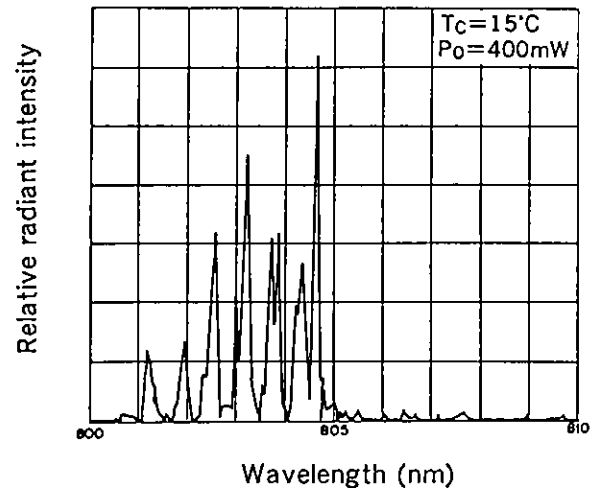
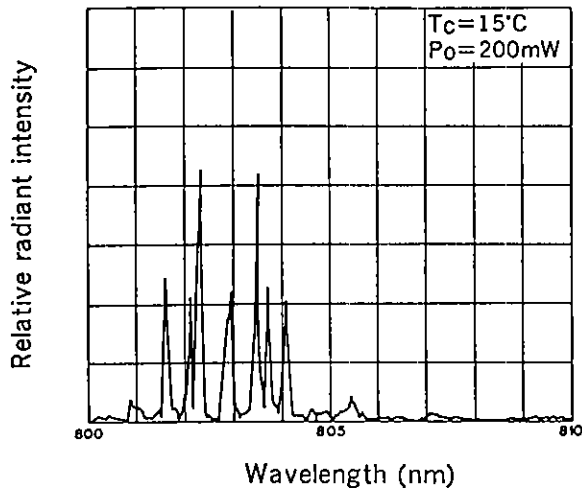
Slope efficiency vs.  
Temperature characteristics



Power dependence of polarization ratio



Power dependence of wavelength



Temperature dependence of wavelength ( $P_o=900\text{mW}$ )

