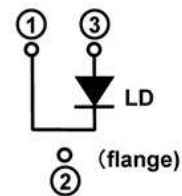


642nm/200mW/High temperature operation Laser Diode

Internal Circuit



- AR Head Up Display
- Interior/Exterior projection
- Sensor
- Light source of optical equipment

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Optical output power ^{Note1)}	P _o	210	mW
LD reverse voltage	V _{R(LD)}	2	V
Operating temperature ^{Note1),2),3)}	T _{opr}	-40 ~ +85	°C
Storage temperature	T _{stg}	-40 ~ +105	°C

Note1) The relation of operating temperature vs optical output power and operating current are based on Fig.1, 2.

Note2) Operating temperature is defined by Case temperature "Tc". High increase in temperature of LD chip itself is expected during operation due to high current density. Thus, without proper heat dissipation, it is observed that no specific output power is achieved or it results to LD degradation. It is advised that sufficient measure of heat dissipation should be taken so that LD's maximum operating temperature is not exceeded during actual operation.

Note3) No condensation.

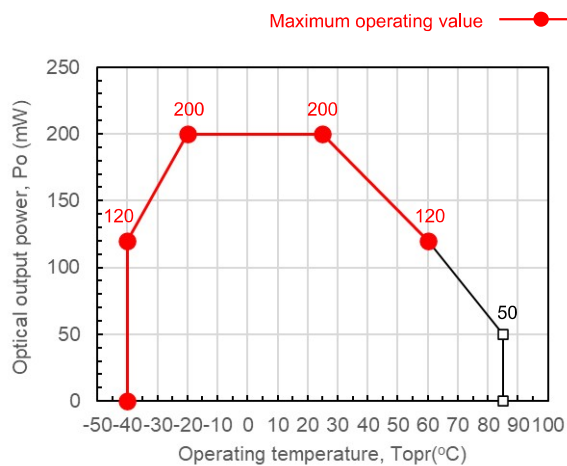


Fig.1 The relation of Operating temperature vs Optical output power

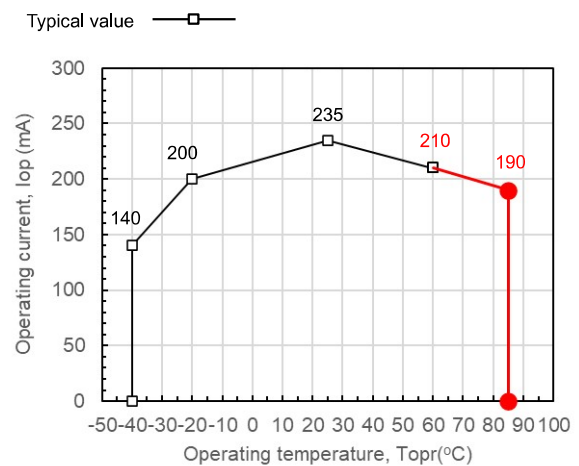
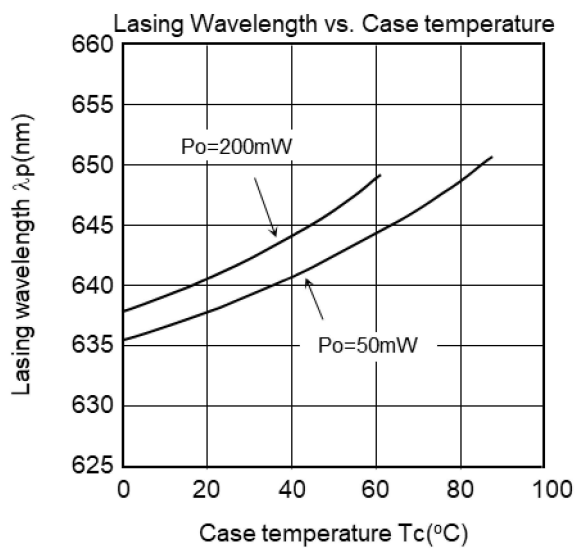
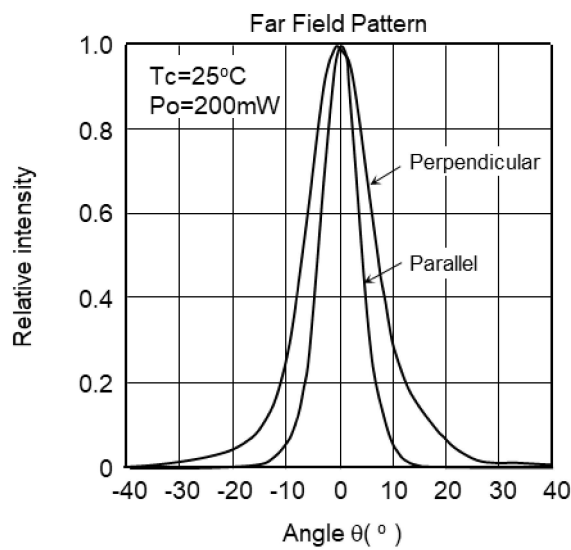
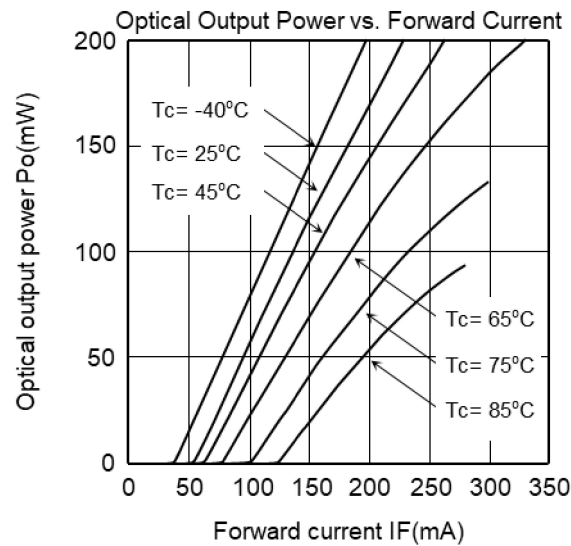


Fig.2 The relation of Operating temperature vs Operating current

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold current	I _{th}	-	55	80	mA	-
Operating current	I _{op}	-	235	280	mA	P _o =200mW
Operating voltage	V _{op}	-	2.7	3.0	V	P _o =200mW
Beam divergence Parallel to the junction	θ _{//}	5	8	13	°	P _o =200mW, FWHM
Beam divergence Perpendicular to the junction	θ _⊥	11	15	19	°	P _o =200mW, FWHM
Lasing Wavelength	λ _p	638	642	647	°	P _o =200mW

Example Characteristic Curves



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