



100mW 520nm Laser Diode

GLD-520-100



Absolute maximum ratings

Parameter	Symbol	Values		Unit
		min.	max.	
Operating Current	I_f		300	mA
Operating Temperature	T_{case}	-20	+60	°C
Storage Temperature	T_{stg}	-40	+85	°C
Reverse Voltage	V_R		2	V
Soldering Temperature max. 10 sec.	T_{solder}		260	°C
Junction Temperature	T_j		120	°C

- Single mode
- CW and pulsed operation
- Miniaturized
- isolated against package
- TO38

Laser Characteristics

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Emission Wavelength	λ_{peak}	515	520	530	nm
Output Power	P_{out}	-	100	-	mW
Spectral Width (FWHM)	$\Delta\lambda$	-	2	-	nm
Threshold Current	I_{th}	-	40	70	mA
Operating Current	I_F	-	200	240	mA
Operating Voltage	V_F	-	6.4	8.0	V
Beam Divergence (FWHM)	$\theta_{II} \times \theta_T$	5.0 x 18.0	6.3 x 22.5	7.5 x 25.0	deg
Polarization	P_{gr}	-	100:1	-	
Modulation Frequency	f	-	>100	-	MHz
Thermal resistance (junction to case)	R_{th}	-	38	-	K/W

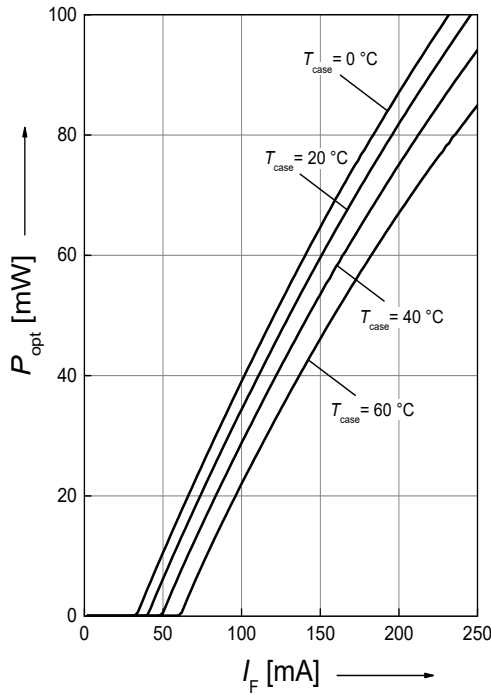


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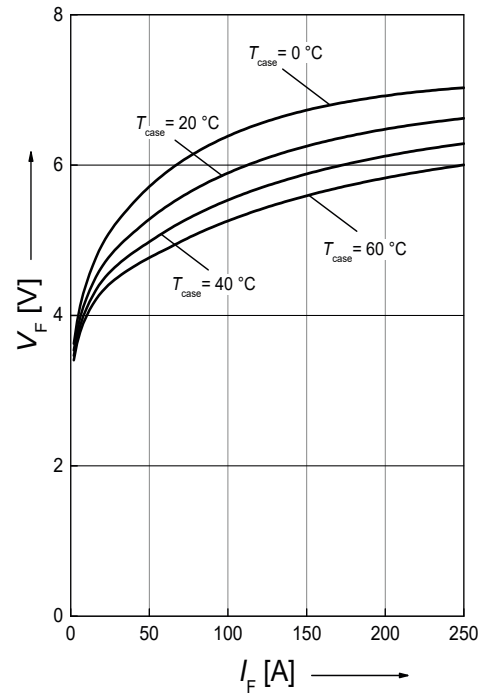
Optical Output Power

$$P_{\text{opt}} = f(I_F)$$



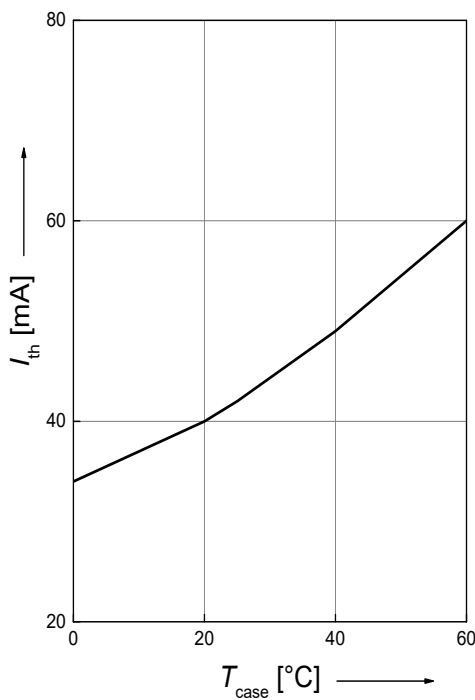
Operating Voltage

$$V_F = f(I_F)$$



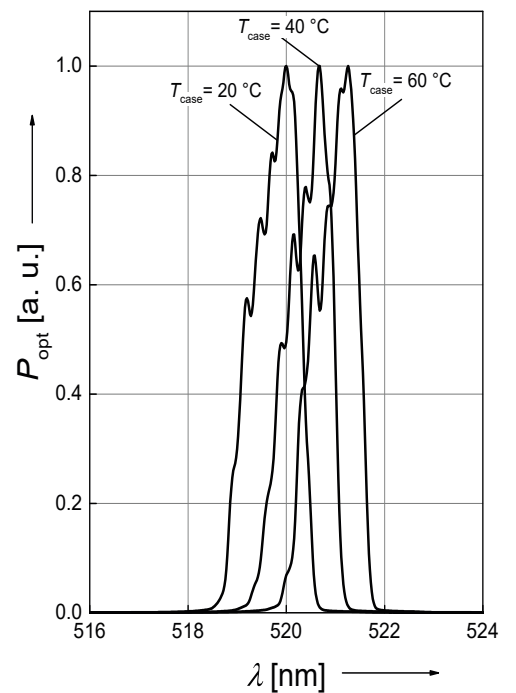
Threshold Current

$$I_{\text{th}} = f(T_{\text{case}})$$



Relative Spectral Emission

$$P_{\text{opt}} = f(\lambda)$$





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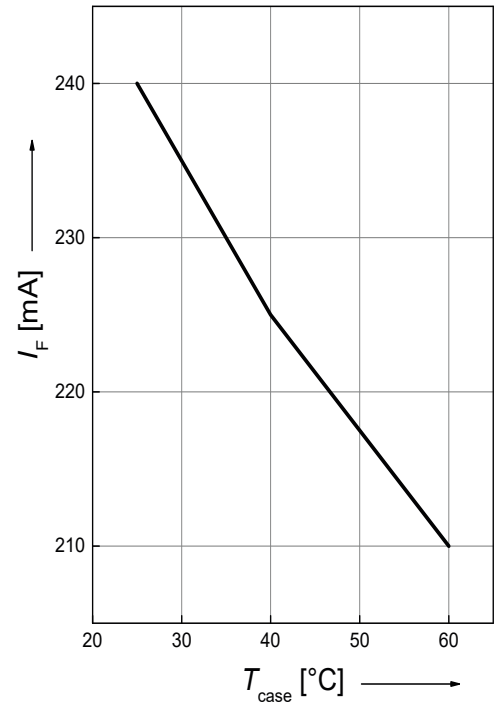
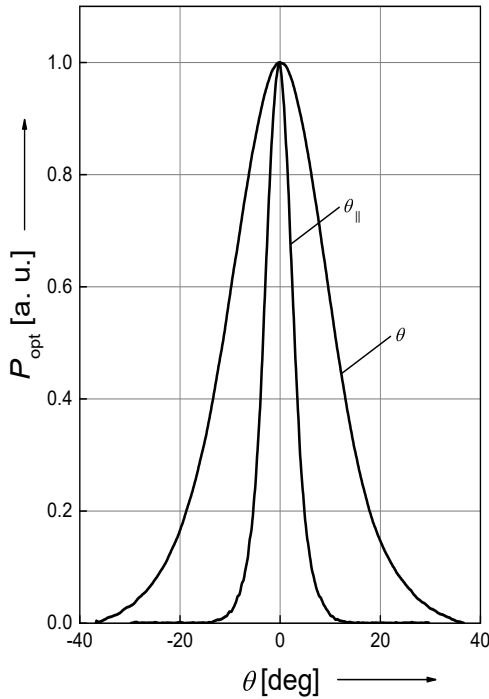
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Beam Divergence

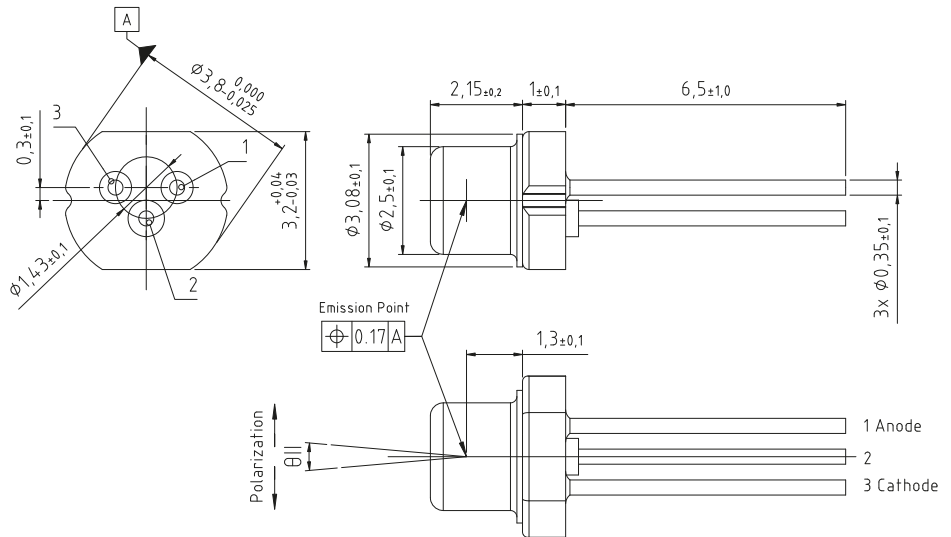
$$P_{opt} = f(\theta), T_{case} = 25^\circ\text{C}$$

Maximum recommended operating current

$$I_F = f(T_{case})$$



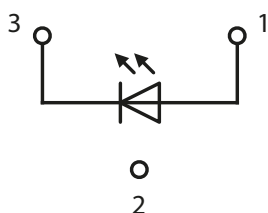
Package Outline



C63062-A4180-A1 -02

Dimensions in mm

Pin Connection



Pin 1: LD Anode
 Pin 2: Case
 Pin 3: LD Cathode