

Datasheet of 980-100mW Laser Diode in $\Phi 5.6\text{mm}$, TO18 package

1.1 Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit	Remark
Storage Temperature	T_{stg}	-10	80	$^\circ\text{C}$	
Operating Temperature	T_{op}	0	40	$^\circ\text{C}$	
Optical Output Power	P_o		100	mW	
LD Reverse Voltage	V_R		2	V	
Lead Soldering Temperature/time	T_{slid}/t		250/5	$^\circ\text{C}/s$	

1.2 Electrical Optical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Peak Emission Wavelength	λ_c	970	980	990	nm	
Continuous Output Power	P_o		100		mW	
Threshold Current	I_{th}		30	40	mA	
Operation Current	I_{op}		180	200	mA	$P_o = 100\text{mW}$
Operation Voltage	V_F		1.8	<2.2	V	
Spectral Width	$\Delta\lambda$		2.5	3	nm	$P_o = 100\text{mW}$
$\Delta x \Delta y$,				± 80	μm	
$\Delta\theta$				± 2	$^\circ$	
$\Delta\phi$				± 4	$^\circ$	
Beam Divergence	$\Theta_{\perp} \times \Theta_{\parallel}$ //		35×8	40×10	deg	$P_o = 100\text{mW}$
Wavelength drift under temperature change	$\Delta\lambda_c$		0.3		nm/ $^\circ\text{C}$	
Active Area	S		4×1		$\mu\text{m} \times \mu\text{m}$	
Differential quantum Efficiency	η_{D_0}	0.6	0.7		mW/mA	
Series Resistor	R_s		≤ 5		Ω	
Mode structure		MM				$P_o = 100\text{mW}$

1.3 Package Dimensions:

