

### TO-56 Packaged Laser Diode

High Power Single-Mode and Multi-Mode SemiNex Lasers  
 12xx to 19xx nm  
 Custom Wavelengths Available  
 Lensed Options Available

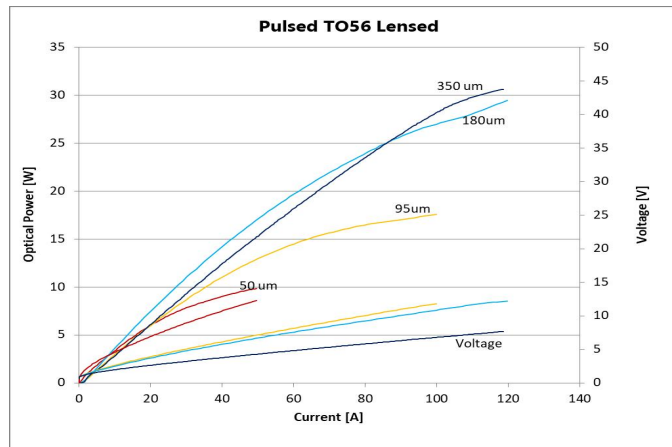
**Applications**

- OEM Medical
- Professional Medical
- LiDAR
- Military / Aerospace
- Illumination

**Features**

- Cost effective
- High Output Power
- High Dynamic Range
- High Efficiency
- Standard Low Cost Package

SemiNex delivers the highest available power at infrared wavelengths between 12xx and 19xx nm. When necessary we will further optimize the design of our InP laser chips to meet our customers' specific optical and electrical performance needs. Diodes, bars and packages are tested to meet customer and market performance demands. Typical results and packaging options are shown. Contact SemiNex for additional details or to discuss your specific requirements.





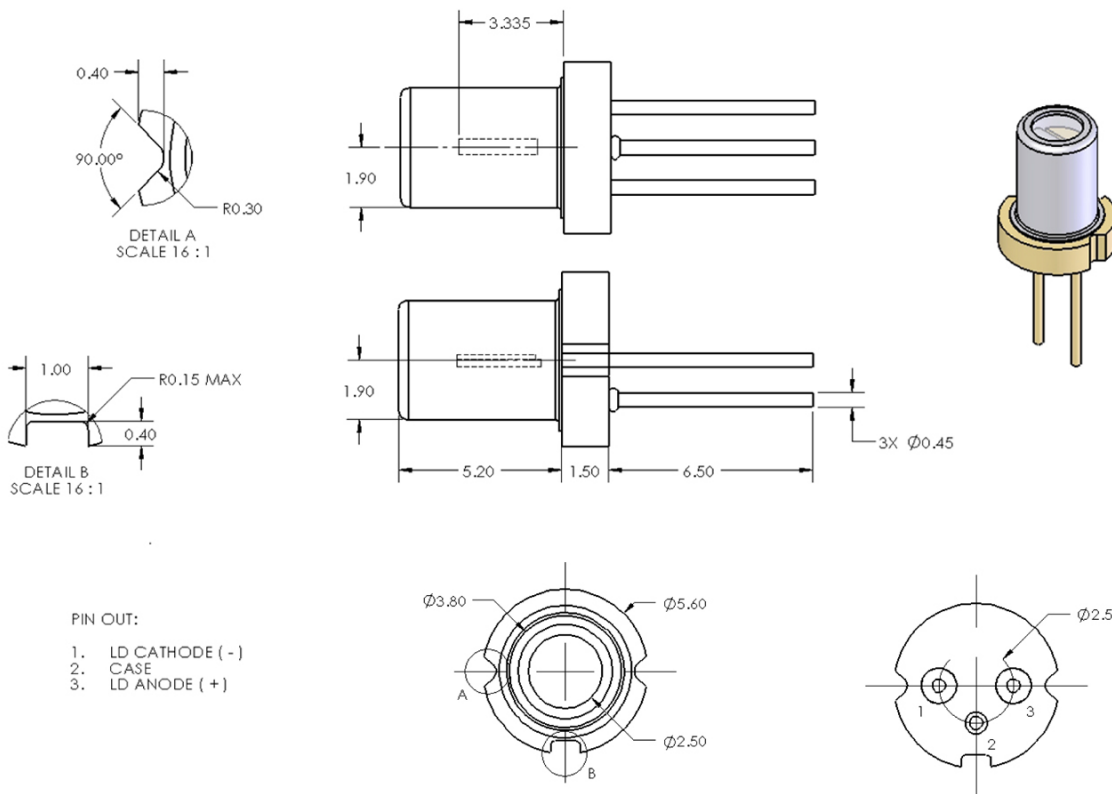


TO56



	Symbol	TO56-102	Units
<b>Optical</b>			
Wavelength	$\lambda_c$	1550	nm ( $\pm 20$ )
Output Power (<10ns)	$P_{<10}$	20.00	watts ( $\pm 10\%$ )
Output Power (150ns)	$P_{150}$	14.00	watts ( $\pm 10\%$ )
Cavity Length (typ.)	CL	2500	$\mu\text{m}$
No. of Junctions		1	
Emitter Width	W	95	$\mu\text{m}$
Emitter Height	H	1	$\mu\text{m}$
Operating Current (<10ns)	$I_{op}$	100	A
Operating Current (150ns)	$I_{op}$	50	A
Operating Voltage	$V_{op}$	6.2	V
Threshold Current	$I_{th}$	0.5	A
<b>Specifications</b>			
Spectral Width	$\delta\lambda$	15	nm 3dB
Fast Axis Div.	$\Theta_{\text{perp}}$	28	deg FWHM
Slow Axis Div.	$\Theta_{\text{parallel}}$	14	deg FWHM
Pulse Width	PW	150	ns
Duty Cycle	DC	0.1	%
<b>Mechanical</b>			
Weight		0.5	g
Operating Temp.**		-40 to 60	$^{\circ}\text{C}$
Storage Temp.		-40 to 80	$^{\circ}\text{C}$

Specified values are rated at a constant heat sink temperature of 20°C. \*\*Specified operating conditions are based on 20C heat sink temperature. High temperature operation will reduce performance and MTTF. Unless otherwise indicated all values are nominal. All TO56 products are capped. Capped TO56 specifications assume heatsinking only on flat surface where pins extend.



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