High Power Laser Diode TO-Cans

Part Number: TO9-267

High Power Triple Junction TO9 Package
Multi-Mode Fabry-Perot
Pulsed Wavelength at 1550nm
Lensed Options Available

Features

- High Output Power
- High Dynamic Range
- High Efficiency
- Standard TO9
- Cost Effective

Application

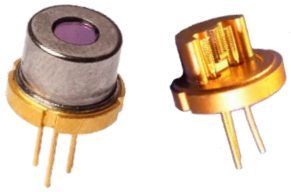
- Professional Medical
- Home Use Medical
- Laser Range Finder
- Target Illumination
- Military Systems
- TOF LiDAR for Automotive and Drones
- Telecom OTDR
- Optical Comm

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 & GaSb 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.

High Power Laser Diode TO-Cans

Specification

TO9-267



Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1550	nm (±20)
Output Power (<10ns)*	P_{out}	100	Watts (±10%)
Output Power (150ns)*	P_{out}	75	Watts (±10%)
Emitter Width	W	350	µm
Spectral Width FWHM	$\Delta\lambda$	22	nm
Slope Efficiency	η	1	W/A
Fast Axis Div.	$\Theta_{\perp}$	28	deg FWHM
Slow Axis Div.	$\Theta_{\parallel}$	12	deg FWHM
Electrical	**Symbol**		**Units**
Power Conversion Eff.	η	9	%
Operating Current (<10ns)	I_{op}	100	A
Operating Current (150ns)	I_{op}	75	A
Threshold Current	I_{TH}	2	A
Operating Voltage	V_{op}	11	V
Duty Cycle	DC	0.1	%
Mechanical	**Symbol**	**Range**	**Units**
Operating Temp.**		-40 to 60	°C
Storage Temp.		-40 to 80	°C

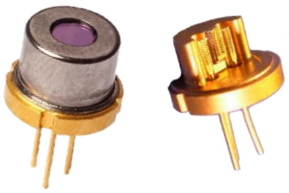
*Specified values are rated at a constant heat sink temperature of 20°C.
**High temperature operation will reduce performance and MTTF.
Unless otherwise indicated all values are nominal.

*Available Lenses & Caps

Part Number	Description*
TO9-267	TO9 Uncapped, Fast Axis: 30° FWHM, Slow Axis: 10° FWHM
TO9-267-140	TO-9 5.8mm Tall Cap, Lens Matched f=171um, 5.0mm Lg, Fast Axis: 10°, Slow Axis: 10° FWHM
TO9-267-161	TO9 5.8mm Tall Cap, Fast Axis: 30° FWHM, Slow Axis: 10° FWHM
TO9-267-181	TO9 5.8mm Tall Cap, FAC Lens Collimated<5mrad f=1.2mm, 5mm lg, Fast Axis: 0.3°, Slow Axis: 10° FWHM

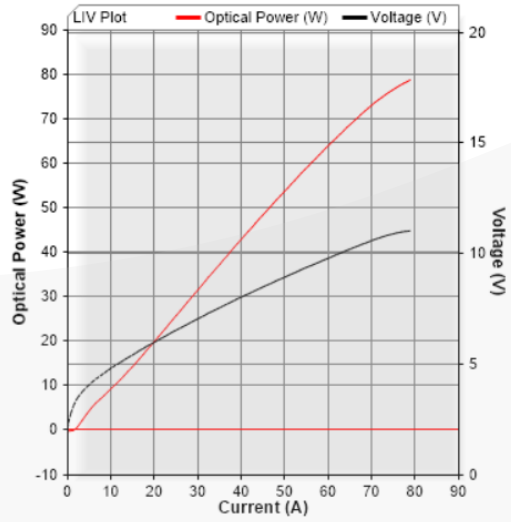
*Lensing specifications are typical values provided based on best-effort measurements.

SemiNex Laser Diodes TO9-267

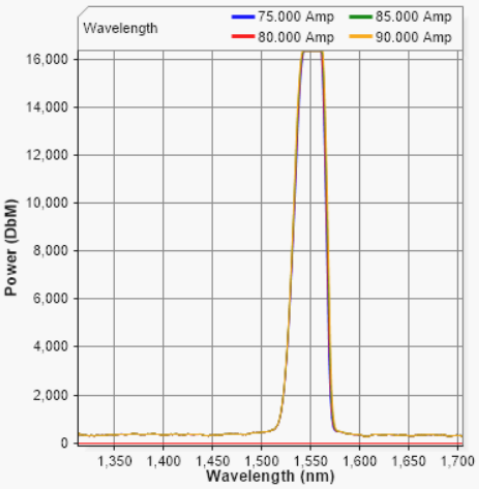


Graphs & Data

Typical TO9 L-I-V Characteristics



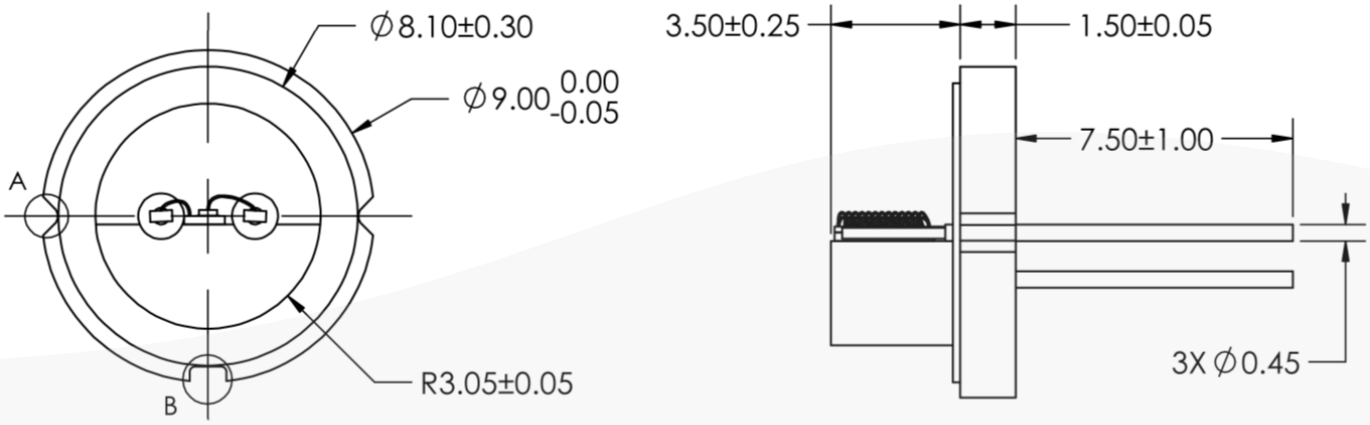
Typical TO9 Output Spectrum



*Tested with 150nsec pulse @ 0.1% Duty Cycle

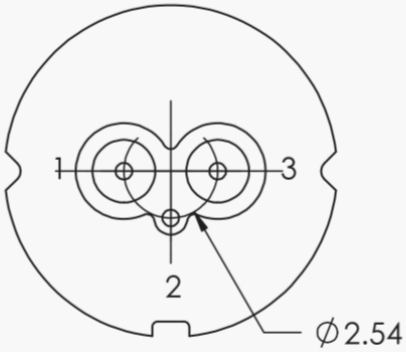
High Power Laser Diode TO-Cans

Mechanical Drawing
TO9-267



PIN OUT:

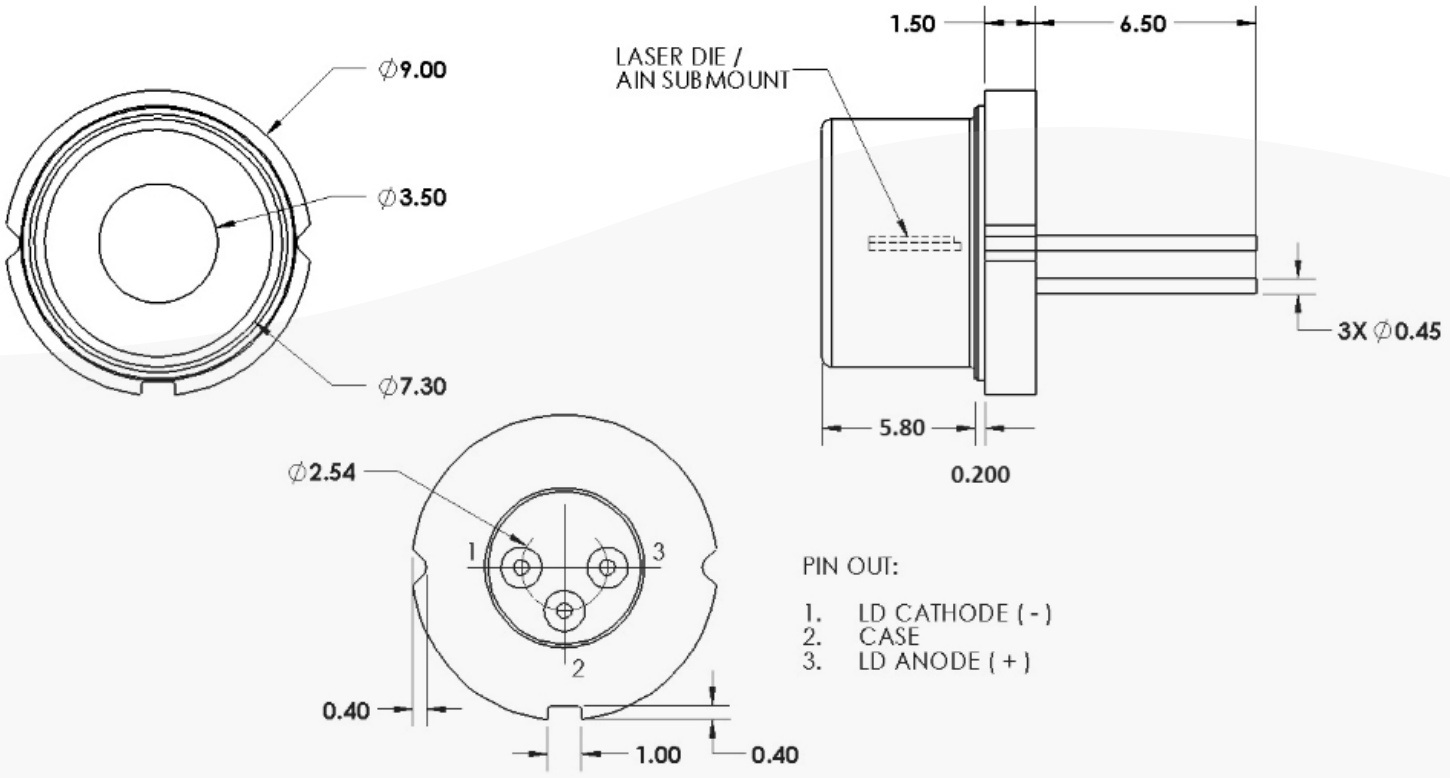
1. LD CATHODE (-)
2. CASE
3. LD ANODE (+)



SemiNex Corporation • 153 Andover Street, Suite 201, Danvers, MA 01923 • 978-326-7700 • sales@seminex.com

High Power Laser Diode TO-Cans

Mechanical Drawing
TO9-267-140
TO9-267-161
TO9-267-181



SemiNex Corporation • 153 Andover Street, Suite 201, Danvers, MA 01923 • 978-326-7700 • sales@seminex.com