High Power Laser Diode TO-Cans

Part Number: TO9-140

High Power TO9 Package
Single-Mode Fabry-Perot
CW Wavelength at 1650nm
Lensed Options Available

Features

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

Application

- Telecom OTDR
- Optical Comm

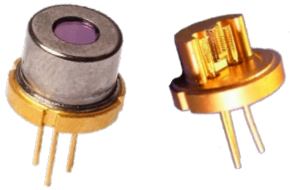
SemiNex delivers the highest available power at infrared wavelengths between 12xx and 19xx nm. When necessary, we will further optimize the design of our InP & GaSb laser chips to meet our customers' specific optical and electrical performance needs. Diodes, bars and packages are tested to meet customer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

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

High Power Laser Diode TO-Cans

Specification

TO9-140



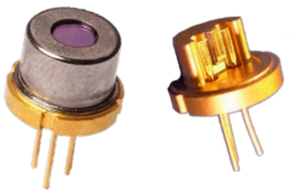
Optical	Symbol	Typ.	Units
Center Wavelength	λ_c	1650	nm (±20)
Output Power (CW)*	P_{out}	0.24	watts (±10%)
Emitter Width	W	5	µm
Spectral Width FWHM	$\Delta\lambda$	10	nm
Slope Efficiency	η	0.35	W/A
Fast Axis Div.	$\Theta_{\perp}$	30	deg FWHM
Slow Axis Div.	$\Theta_{\parallel}$	10	deg FWHM
Electrical	**Symbol**		**Units**
Power Conversion Eff.	η	17	%
Threshold Current	I_{TH}	0.05	A
Operating Current	I_{op}	0.65	A
Operating Voltage	V_{op}	2.2	V
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

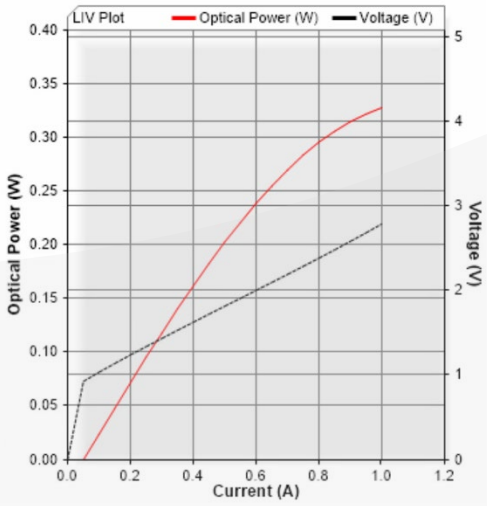
Part Number	Description
TO9-140	TO9 Uncapped
TO9-140-114	TO9 Cap, 4.6mm Tall
TO9-140-115	TO9 5.8mm Tall Cap, Lens Collimated<5mrad f=590um,5mm lg
TO9-140-140	TO9 5.8mm Tall Cap, Lens Matched f=171um, 5.0 lg
TO9-140-161	TO9 Cap 5.8mm Tall

SemiNex Laser Diodes TO9-140

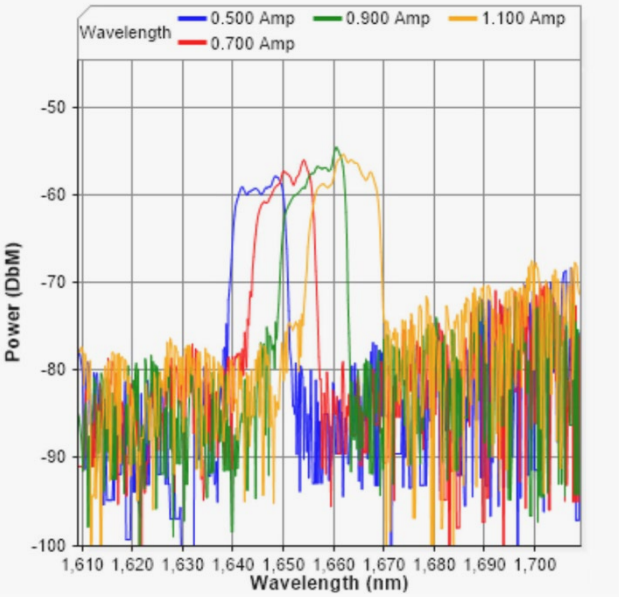


Graphs & Data

Typical TO9 L-I-V Characteristics

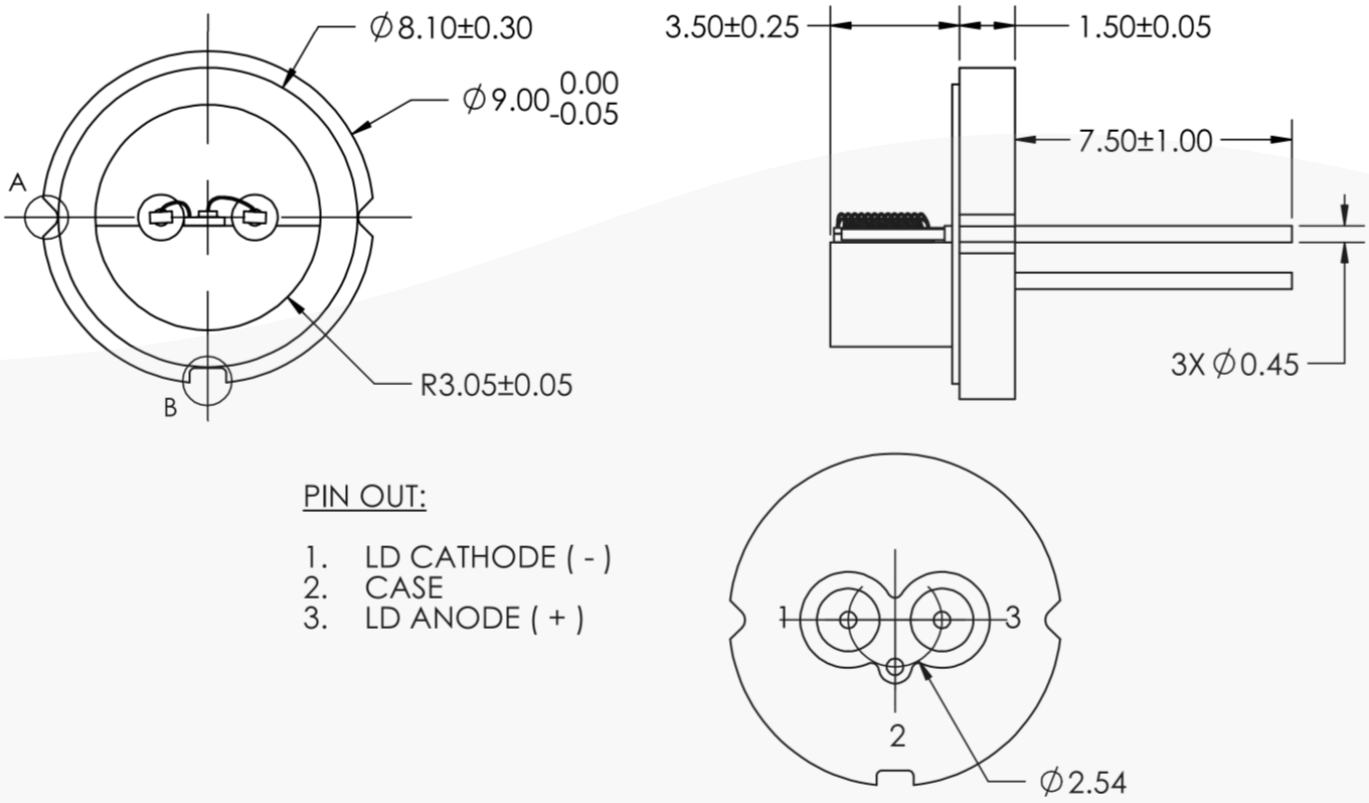


Typical TO9 Output Spectrum



High Power Laser Diode TO-Cans

Mechanical Drawing
TO9-140



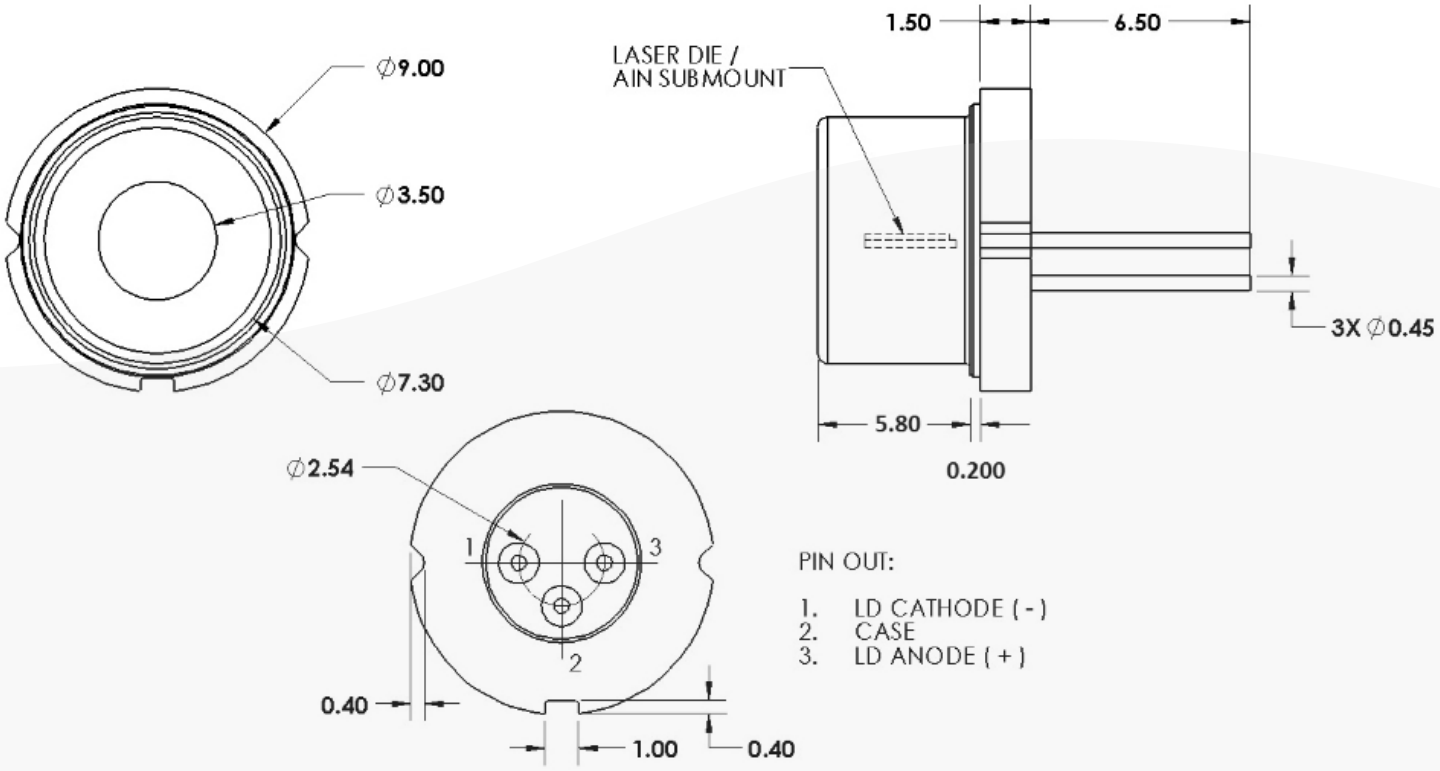
PIN OUT:

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

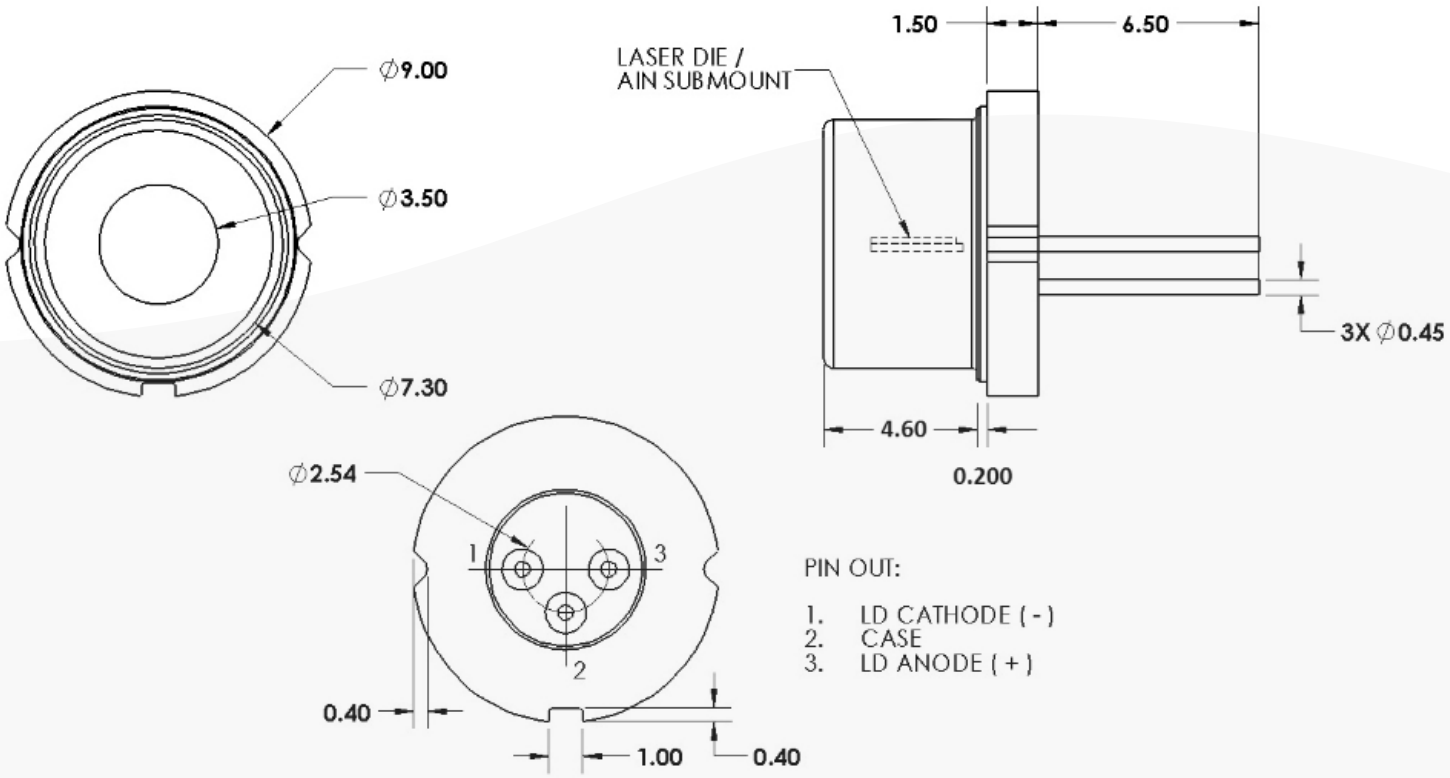
Mechanical Drawing
TO9-140-115
TO9-140-140
TO9-140-161



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

High Power Laser Diode TO-Cans

Mechanical Drawing
TO9-140-114



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