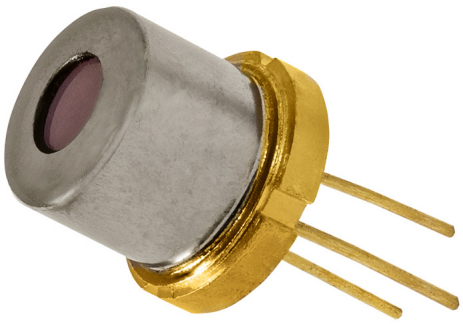
Preliminary Data Sheet



Triple Junction TO-9

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

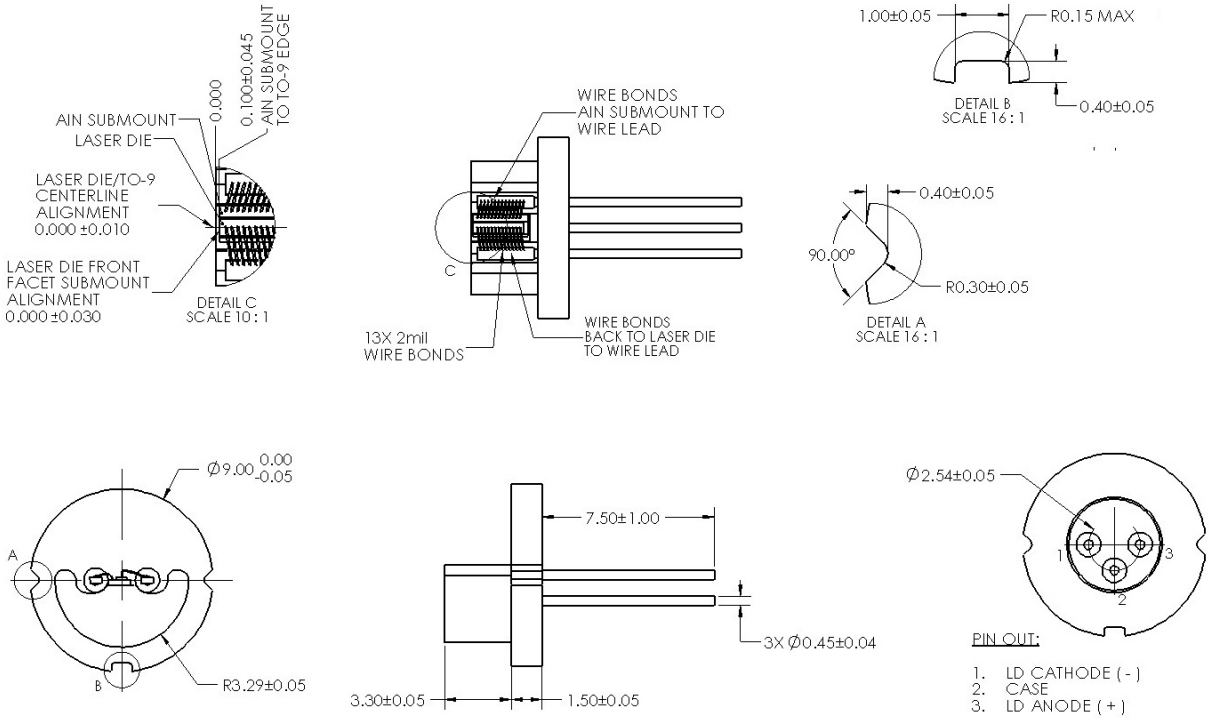
SemiNex delivers the highest available power at infrared wavelengths between 12xx and 19xx nm. When necessary we will further optimize the design of our InP laser chips to meet our customers' specific optical and electrical performance needs. Diodes, bars and packages are tested to meet customer and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

SemiNex LASER DIODES

Triple Junction TO9

	Symbol	TO9-265	Units
Optical			
Wavelength	λ_c	1550	nm (±20)
Output Power (<10ns)	P_o	50.00	watts (±10%)
Output Power (150ns)	P_o	35.00	watts (±10%)
Chip Cavity Length	CL	2500	µm
No. of Junctions		3	
Emitter Width	W	95	µm
Emitter Height	H	10	µm
Spectral Width	δλ	22	nm 3dB
Slope Efficiency	η_e	0.90	W/A
Fast Axis Div.*	Θ_perp	28	deg FWHM
Slow Axis Div.	Θ_parallel	12	deg FWHM
Electrical			
Power Conversion Eff.	η	8	%
Operating Current (<10ns)	I_{op}	50	A
Operating Current (150ns)	I_{op}	40	A
Threshold Current	I_{th}	2	A
Operating Voltage	V_{op}	10	V
Mechanical			
Weight		0	g
Operating Temp.**		-40 to 85	°C
Storage Temp.		-40 to 85	°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.
Uncapped TO9 specifications assume heatsinking underneath laser chip.
Capped TO9 specifications assume heatsinking only on flat surface where pins extend.



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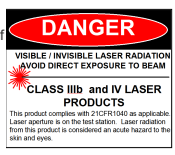

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