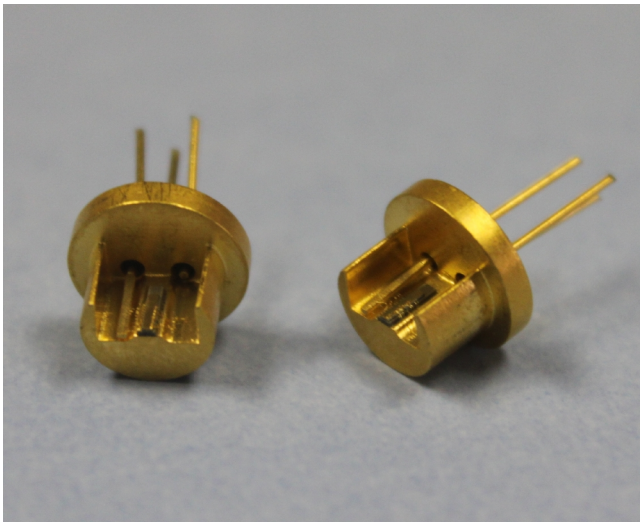
TO9

High Power Multi-Mode SemiNex Lasers
2.5 Watts CW
1470 and 1550 nm standard
Custom Wavelengths Available



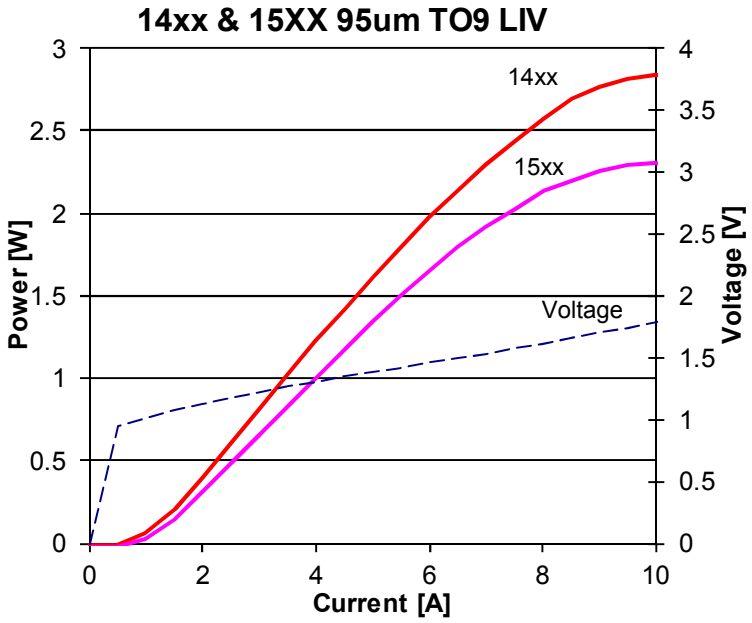
Features

- High output power
- High dynamic power range
- High efficiency
- Standard Low Cost Package

Applications

- Medical laser equipment
- LIDAR
- Free Space Optical Communication
- DPSS pump lasers
- Military / Aerospace

SemiNex delivers the highest available power at infrared wavelengths between 13xx and 17xx 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



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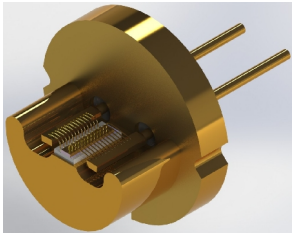
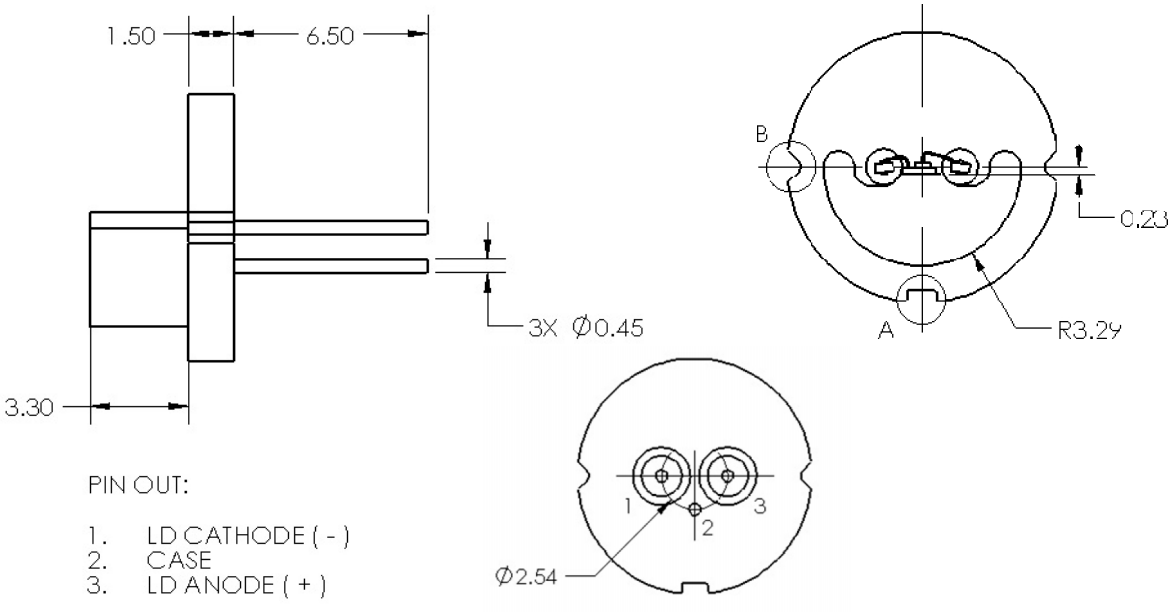


TO9—Uncapped

	Symbol	TO9-110	TO9-102	TO9-118	TO9-116	Units
Optical						
Center Wavelength	λ_c	1455	1475	1540	1550	watts
Output power (CW)	P_o	2.5	2.5	2	2	nm
Emitter Width	W	95	95	95	95	µm
Emitter Height	H	1	1	1	1	µm
Spectral Width	Δλ	10	10	10	10	nm 3dB
Slope Efficiency	η_o	0.4	0.4	0.3	0.3	W/A
Fast Axis Divergence	θ_X	28	28	28	28	deg FWHM
Slow Axis Divergence	θ_Y	9	9	9	9	deg FWHM
Electrical						
Power conversion Efficiency	η	0.2	0.2	0.16	0.16	
Threshold Current	I_{th}	0.5	0.5	0.5	0.5	A
Operating Current	I_{op}	8	8	8	8	A
Operating Voltage	V_{op}	1.6	1.6	1.6	1.6	V
Series Resistance	R_s	0.05	0.05	0.05	0.05	ohm

Specified values are rated at constant heat sink temperature of 20°C



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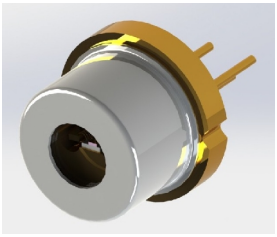
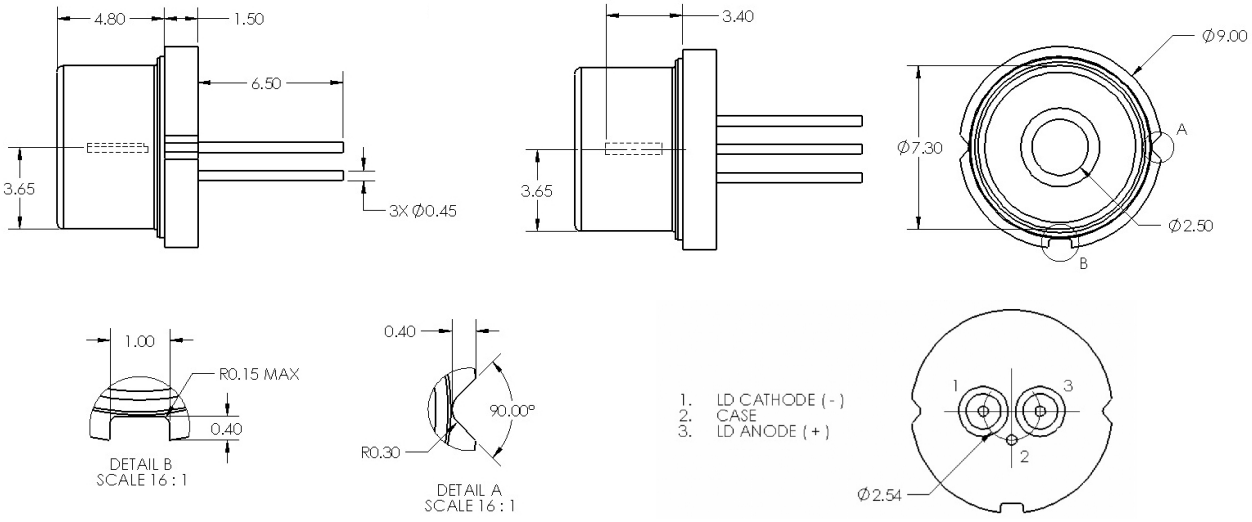


TO9—Capped

	Symbol	TO9-125	TO9-126	TO9-104	TO9-107	Units
Optical						
Center Wavelength	λ_c	1490	1500	1575	1585	nm
Output power (CW)	P_o	2	2	1.7	1.7	watts
Emitter Width	W	95	95	95	95	µm
Emitter Height	H	1	1	1	1	µm
Spectral Width	$\Delta\lambda$	10	10	10	10	nm 3dB
Slope Efficiency	η_o	0.36	0.36	0.3	0.3	W/A
Fast Axis Divergence	θ_X	28	28	28	28	deg FWHM
Slow Axis Divergence	θ_Y	9	9	9	9	deg FWHM
Electrical						
Power conversion Efficiency	η	0.2	0.2	0.17	0.17	
Threshold Current	I_{th}	0.5	0.5	0.5	0.5	A
Operating Current	I_{op}	7	7	7	7	A
Operating Voltage	V_{op}	1.4	1.4	1.4	1.4	V
Series Resistance	R_s	0.05	0.05	0.05	0.05	ohm
Mechanical						
Weight		1.9	1.9	1.9	1.9	g
Operating Temperature		10 to 30	10 to 30	10 to 30	10 to 30	°C
Storage Temperature		-20 to 80	-20 to 80	-20 to 80	-20 to 80	°C



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