

High Power Pulsed Laser Diodes

- High Efficiency / High Reliability
- Stable Output from -40°C to +85°C
- Single and Stacked Devices up to 100Watts
- 850nm and 905nm Wavelengths
- Hermetic Package

• Applications:

Rangefinding / Ceilometers
Weapons Simulation
Optical Fuses
Surveying Equipment



CVD Series Characteristics @ 25°C

Parameters	Symbol	Min	Typ	Max	Units
Peak Wavelength	λ				nm
CVD 60 / 160 Series		895	905	915	nm
CVD 90 / 190 Series		840	850	860	nm
CVD 206 Series		850	860	870	nm
Spectral Width	$\Delta\lambda$		5.0	12	nm
Rise Time - Lasers	T_r		1		ns
Pulse Width = 50% pts	T_{pw}		100	200	ns
Beam Spread	FWHM		10 x35		degrees
Operating Temperature	T_{op}	-40		85	°C
Storage Temperature	T_{stg}	-55		85	°C

CVD 905nm Series Test Conditions: 100ns, 25°C

Parameters	CVD 40	CVD 46	CVD 60	CVD 62	CVD 65	CVD 68	CVD 163	CVD 165	CVD 167	Units
Peak Power	2	3	4	8	13	22	35	60	100	Watts
Number of Diodes	1	1	1	1	1	1	3	3	5	
Emitting Area Typical	40 x 1	62 x 1	76 x 1	152 x 1	254 x 1	381 x 1	254 x 203	381 x 203	381 x 406	um
Peak If	2.6	4	5	10	15	25	15	25	25	Amps
Duty Factor (max)	0.1	0.1	0.1	0.1	0.1	0.1	0.08	0.04	0.04	%

CVD 850nm Test Conditions: 100ns, 25°C

Parameters	CVD 90	CVD 93	CVD 95	CVD 97	CVD 193	CVD 195	CVD 197	CVD 206 ¹	Units
Peak Power	5	10	15	25	40	60	100	40	Watts
Number of Diodes	1	1	1	1	3	3	5	8 ²	
Emitting Area Typical	76 x 1	152 x 1	254 x 1	350 x 1	254 x 203	381 x 203	381 x 406	2134 x 1	um
Peak If	7	14	20	30	20	30	30	60	Amps
Duty Factor (max)	0.1	0.1	0.1	0.1	0.08	0.04	0.04	0.04	%

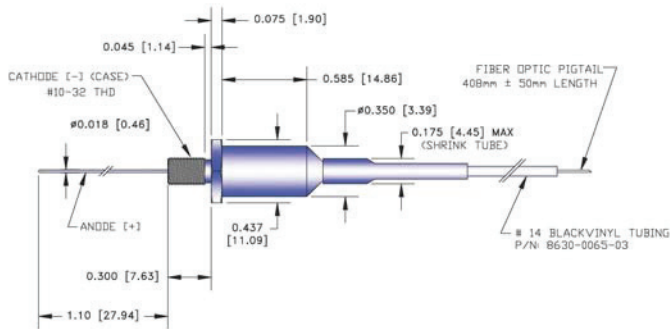
Notes: All devices are supplied case (-), unless otherwise specified

1. Available on TO5T package only; drawing upon request

2. Linear

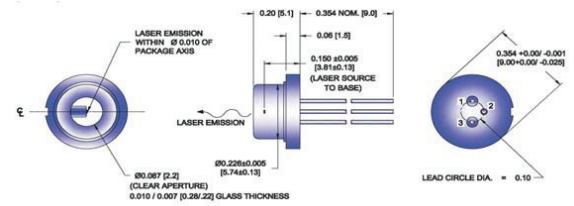
Package Drawings

T05F (Non-Hermetic) Package

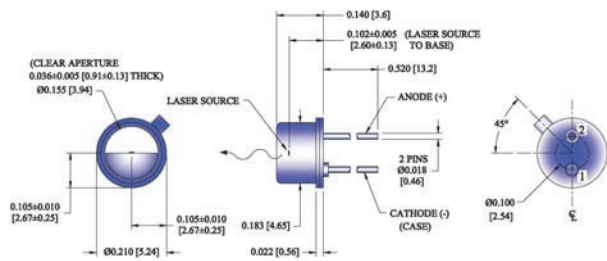


9 mm Package

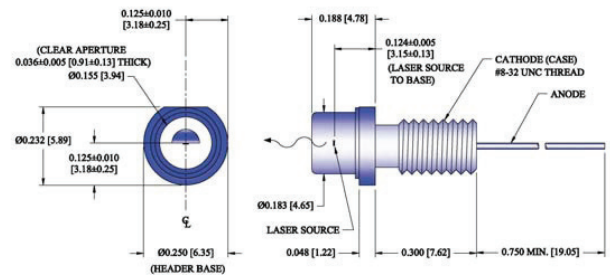
PINOUT		
PIN 1	PIN 2	PIN 3
Laser Anode (+)	Laser Cathode (-)	No Connection



T018T Package

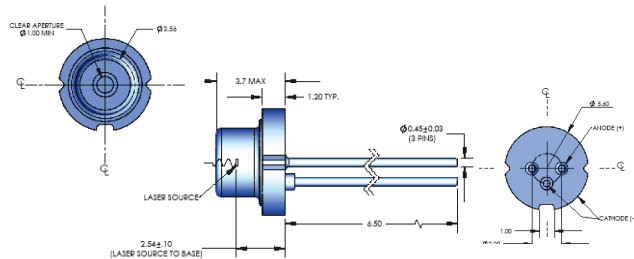


T018C Package



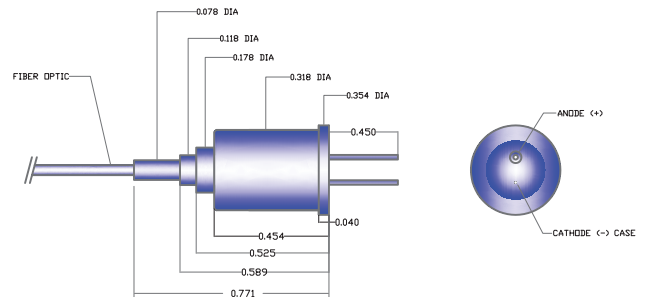
5.6mm Package

Note: Available with Single Chip Only
Not available with CVD 167 or 197



Other package options available. Dimensions: inches (mm)

TO18F Package



Part Numbering Information

When ordering, refer to the information below

CVD		XX
OUTPUT POWER		
905 nm		850 nm
46 = 3 Watt		90 = 5 Watt
60 = 4 Watt		93 = 10 Watt
62 = 8 Watt		95 = 15 Watt
65 = 13 Watt		97 = 25 Watt
68 = 22 Watt		193 = 40 Watt
163 = 35 Watt		195 = 60 Watt
165 = 60 Watt		197 = 100 Watt
167 = 100 Watt		206 = 40 Watt

XXXX
↓
PACKAGE

TO18C = TO18 Coax
TO18F = TO18 Non-Hermetic (fibered)
TO18T = TO18 Twin Lead
TO5C = TO5 Coax
TO5F = TO5 Non-Hermetic (fibered)
TO5T = TO5 Twin Lead
90 = 9mm

Note:

Not all options are available for all packages.
Other power options are available.
Fiber pigtailed versions of all lasers are available.
Fiber length is 1 meter +/- 0.1 meter unless otherwise noted.
Output is typically 50% of rated power for fibered products.

Safety:

Caution: Laser light emitted from any diode laser may be harmful to the human eye. Avoid looking directly into the diode laser aperture when the device is in operation.

ESD Caution:

Handle diode lasers with extreme care to prevent electrostatic discharge. Follow ESD precautions when handling devices.

Warranty:

Please refer to your product purchase agreement for complete details or check with your OSI Laser Diode sales representative.

Notice:

OSI Laser Diode Inc. reserves the right to make changes to the products or information contained herein without notice. No liability is assumed as a result of their use or application.