

PD-LD Inc. offers a variety of packaging options for its' Near Infra Red Series of laser diodes. These units are available in ready-to-use, fiber-coupled packages, including FC, ST, and SC receptacles, as well as fiber-pigtailed units.

The laser diodes offered by PD-LD are of proven design and manufacture; the standard wavelengths are centered at 780nm, 830nm and 980nm. Fiber-coupled CW (continuous-wavelength) output powers range from 0.1 - 10 mW, depending on the fiber type and desired performance level. Devices may be optimized for coupling to sensor or telecommunication size optical fiber, from 5um to 200um core.

Optional board- or panel -mount flanges are available for pigtailed devices; contact PD-LD Sales. Also, PD-LD Inc. will package non-standard lasers or parts specified by a customer using standard or custom receptacle or pigtailling techniques. Both receptacle and pigtail packages are made using an active micro-positioning system and proven packaging techniques. Reliable and efficient devices are produced.

In many cases several different pin-out options are available for similar wavelength lasers.



Applications

- Fiber optic communications
- Optical Sensing
- Process Control
- Test and Measurement Equipment
- Optical Alignment Systems
- Medical Apparatus
- Imaging and Scanning Systems
- EDFA Modules

Fiber Size and Coupling Efficiency

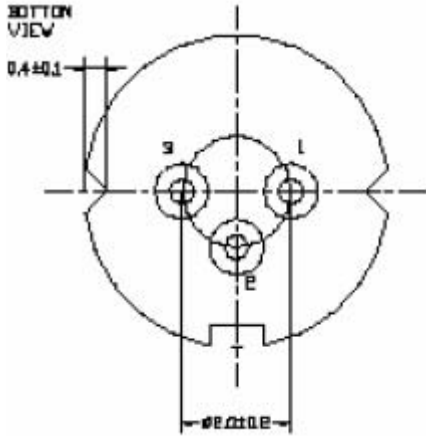
- 5/125um 8~15%
- 9/125um 15~20%
- 50/125um 25~30%
- 62.5/125um 30~40%
- 100/140um 40~50%

PD-LD Part No. ¹	Wavelength (nm)			Min. Fiber Coupled Power (mW)	Pin-out TO Dia (mm)	Threshold Current (mA)		Operating Current (mA)		Monitor PD Current (mA)	
	Min.	Typ.	Max.			Typ.	Max.	Typ.	Max.	Min.	Typ.
Continuous Wavelength Lasers @ 25C											
PL78C0.51FCB-T-0-01	770	785	810	0.5mW into 9/125 SMF	M 5.6	35	60	45	70	0.1	0.6
PL78H0037FCD-U-0-01	775	785	795	3mW Into 5/125 MMF	N 9.0	45	70	140	170	0.025	0.15
PL78M001FC11-T-0	770	780	800	1 mW into 9/125 SMF	P 9.0	25	40	40	70	0.45	0.9
PL78R0012STA-0-0-01	770	785	795	1 mW ST Receptacle	N 5.6	25	45	45	65	0.3	0.55
PL78T040FC2D-T-0	780	785	800	40 mW into 105/125 MMF	P 5.6	30	50	100	140	0.1	0.25
PL85B0023FCA-0-0-01	830	850	870	2mW 62.5/125/900um MMF	P 5.6	5	20	30	45	0.2	0.6
PL83H0103FCA-0-0-01	820	830	840	10mW into 62.5/125/900um MMF	P 9.0	40	70	80	120	0.04	0.13
PL98A0038FAA-0-0-01	965	980	995	3 mW into 6/125 SMF	N 5.6	5	11	80	100	0.2	0.4

¹Examples only; most device/package combinations available. Changes to specifications may be made without notice. 7-09 Near Infra Red series. Rev.F

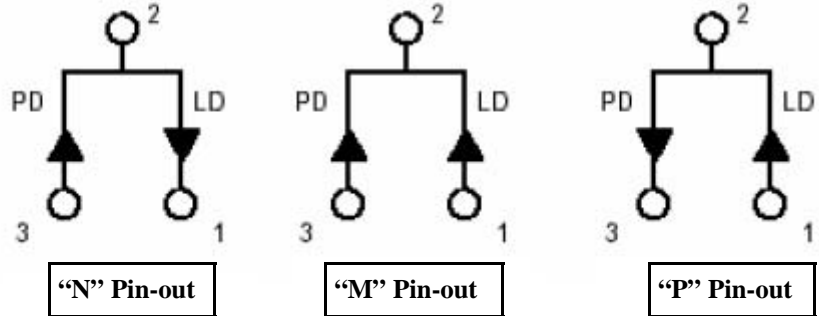
Laser Diode Pin-Out Styles

Bottom View



Pin Configuration

“N” Pin-out	Laser Diode Anode + Photodiode Cathode
“M” Pin-out	Laser Diode Cathode + Photodiode Cathode
“P” Pin-out	Laser Diode Cathode + Photodiode Anode



Ordering Information

Lasers Pigtailed

PLWWWPPPFCCB-0-V-LL

L = Laser
WWW=Wavelength and Pin-out
 780nm: 78C,78D,78E, 78H,78M, 78Q,
 78R, 78S, 78T
 830nm: 83H, 83S
 850nm: 85R
 980nm: 98D, 98E

Laser Receptacle

PLWWWPPPRRRF-O-V

PPP = Fiber-Coupled Power
 0.1 = 0.10 mW (100 µW) 0.8 = 0.8 mW (800 µW)
 0.2 = 0.20 mW (200 µW) 001 = 1.0 mW
 0.5 = 0.5 mW (500 µW) 040 = 40.0 mW

F = Fiber Type

- 1 = 9/125 SMF
- 2 = 50/125 MMF
- 3 = 62.5/125 MMF
- 4 = 100/140 MMF
- 7= 5/125 SMF
- 8= 7/125 SMF
- A= 200/240 MMF
- D= 105/125MMF

B = Bracket Type

- A = None
- B = Panel Mount(9mm)
- D = Board Mount(5.6mm)
- E = Panel Mount(5.6mm)

RRR=Receptacle Type

- FC1=FC Panel mount
- FC2=FC Board mount
- SC1=SC Panel mount only
- SC2=SC Panel/board mount
- ST7=ST low profile
- ST8=ST high profile

O=Orientation

- 0=N/A
 - A=Bracket Shipped Loose (pigtailed unit)
- Specify orientation as required

V=Version

- 0=Standard

Unique Codes for specific requirements

LL = Length in meters (01,02,.5 ect.) (pigtailed devices only)

CC = Connector Type (pigtailed devices only)

ST = ST/PC SC = SCPC SA=SC/APC FC = FC/PC FA = FC/APC FU = FC/UPC OO = None

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Near IR Laser Diodes Available from Stock

PD-LD Laser Code	Nominal Wavelength (nm)	TO Package Size	Laser Pinning	Maximum Total Power (mW)*
78A	785+/-10nm +60° Operation	5.6mm	N	35.0
78C	785nm -15/+25nm +80° Operation	5.6mm	M	5.0
78D	785nm -15/+25nm +70° Operation	5.6mm	M	4.0
78E	785nm -15/+25nm +60° Operation	5.6mm	M	5.0
78H	785nm+/-10nm	9.0mm	N	50.0
78M	785+/-15nm +60° Operation	9.0mm	P	5.0
78Q	785nm -15/+25nm +60° Operation	5.6mm	P	5.0
78R	785nm -15/+25nm +60° Operation	5.6mm	N	5.0
78T	785-5/+15nm	5.6mm	P	80.0
83A**	830-/+10nm	9.0mm	M	100
83H	830-/+10nm	9.0mm	P	40.0
83S	830-/+10nm	9.0mm	M	30.0
85B	850-/+20nm	5.6mm	P	5.0
85C	850-/+20nm	5.6mm	M	5.0
85D	850-/+20nm	5.6mm	N	5.0
85E	855+/-10nm	5.6mm	P	40.0
98D	975-/+15nm	5.6mm	N	100.0
98E	975-/+15nm	5.6mm	N	10.0

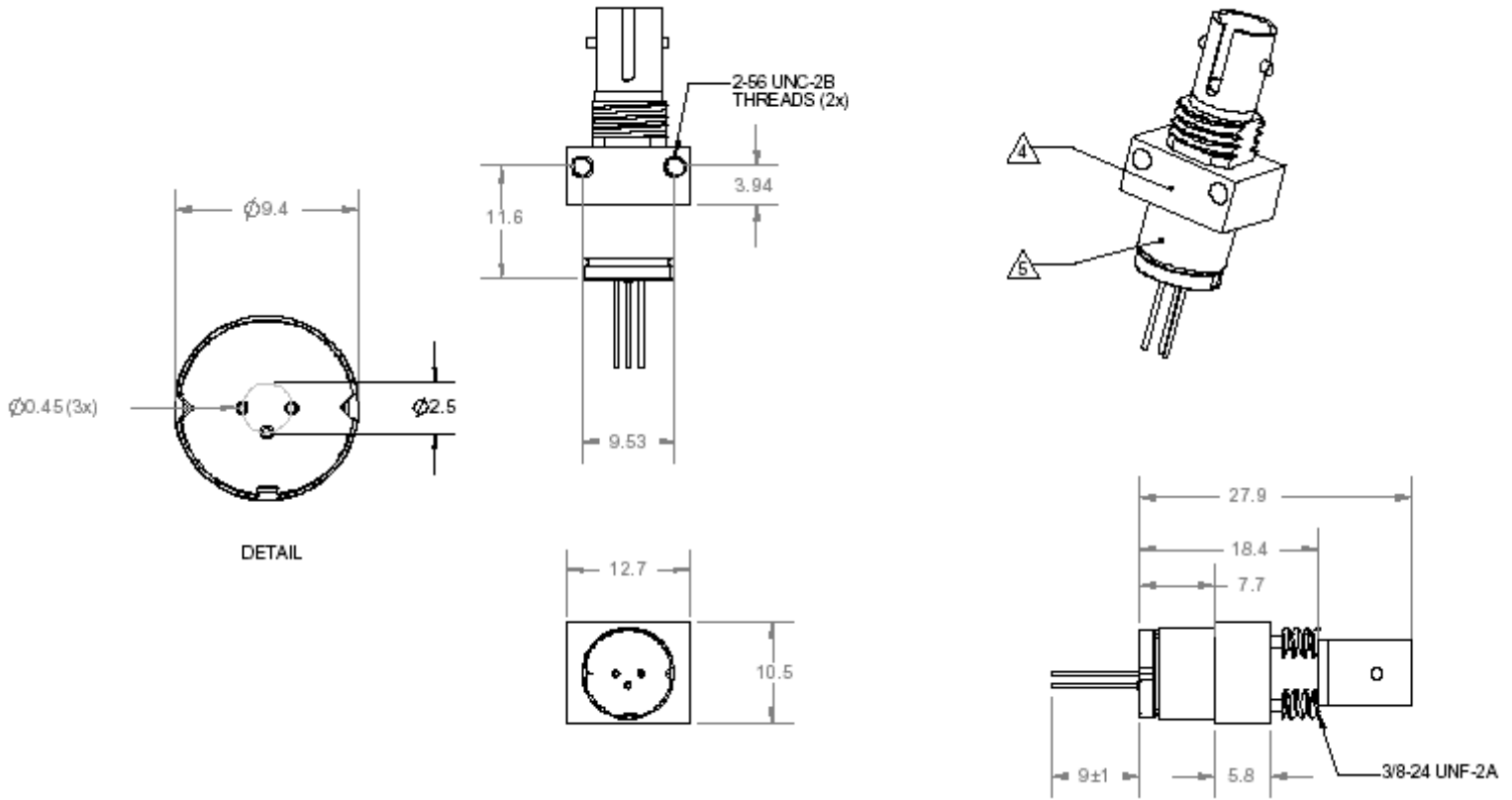
*The power listed is the total light output from the semiconductor laser chip as measured from the discreet TO package. The amount of light coupled into the optical fiber will be dependent on the fiber type.

• Please contact PD-LD Sales to discuss wavelength, pinning and power requirements not listed above.

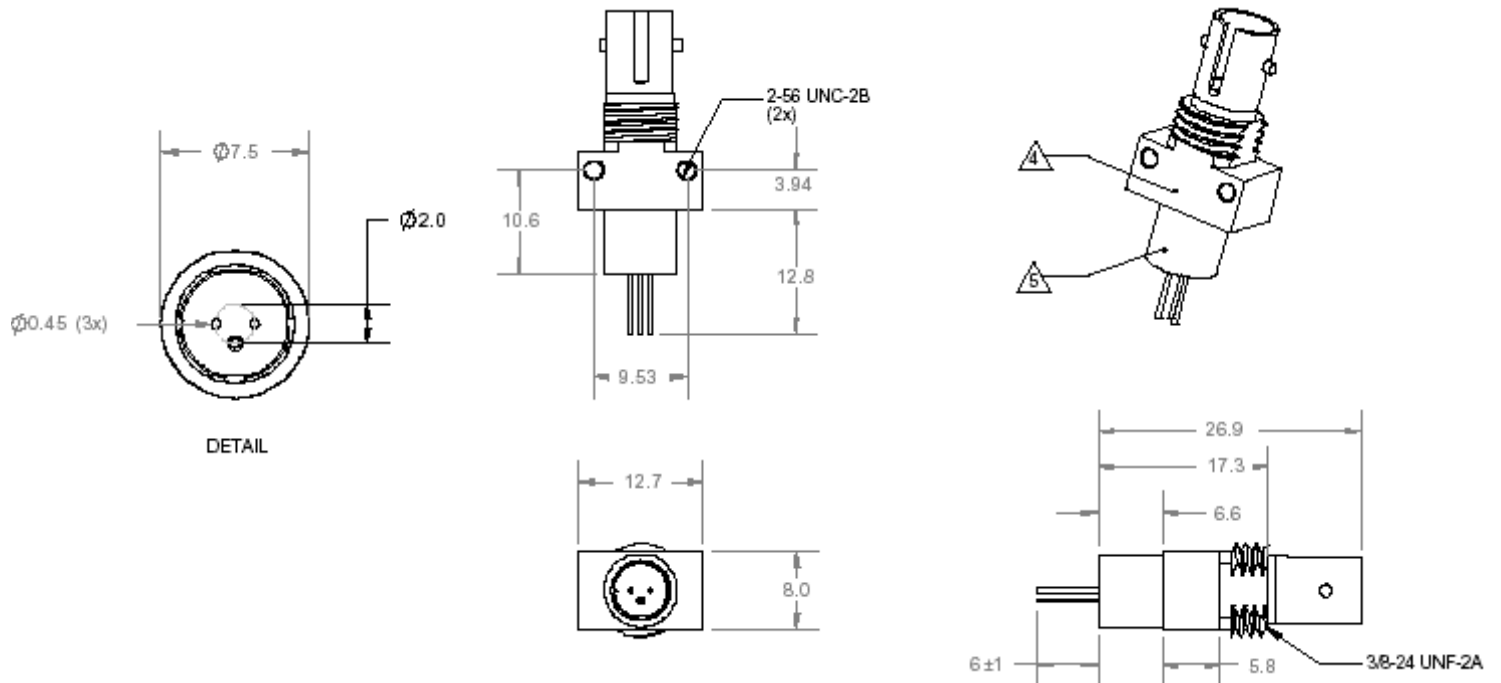
** The 83A is a Super Luminescent Diode with a 15nm spectral width and 50um coherence length.

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9mm Diameter Laser Mounted in High Profile ST8 Receptacle

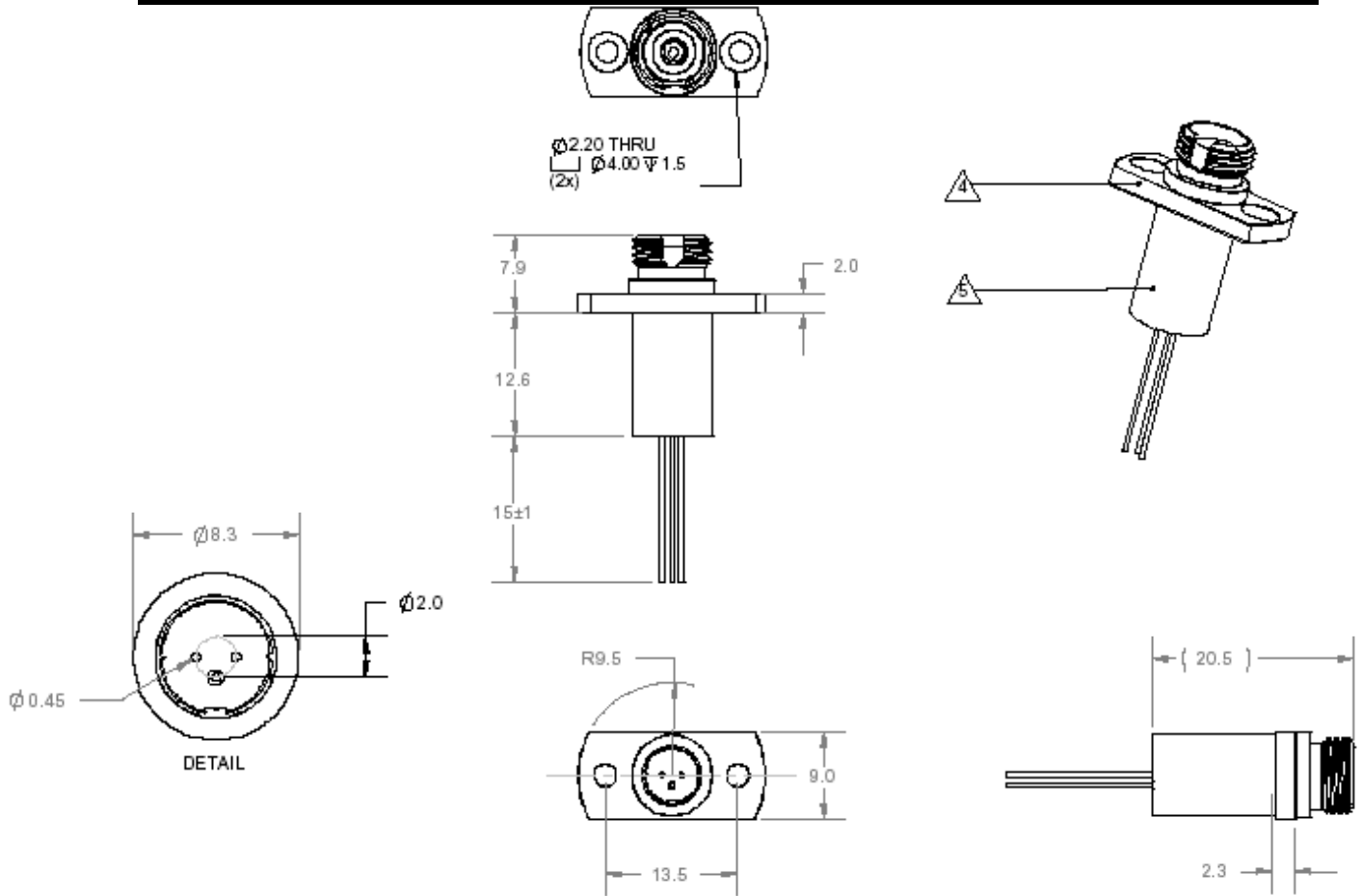


5.6mm Diameter Laser Mounted in Low Profile ST7 Receptacle

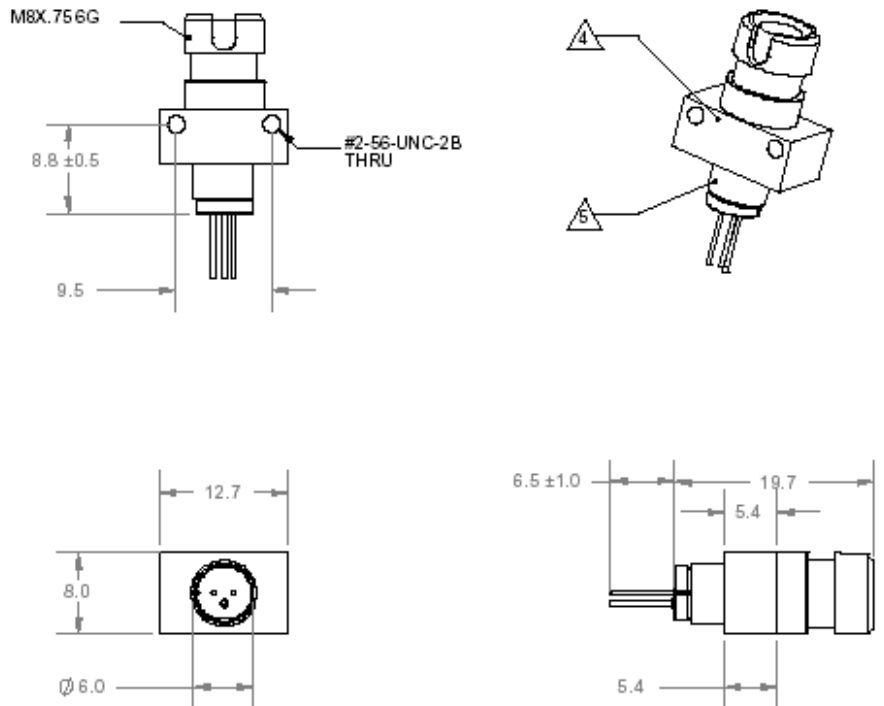


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5.6mm Diameter Laser In FC Panel Mount Receptacle



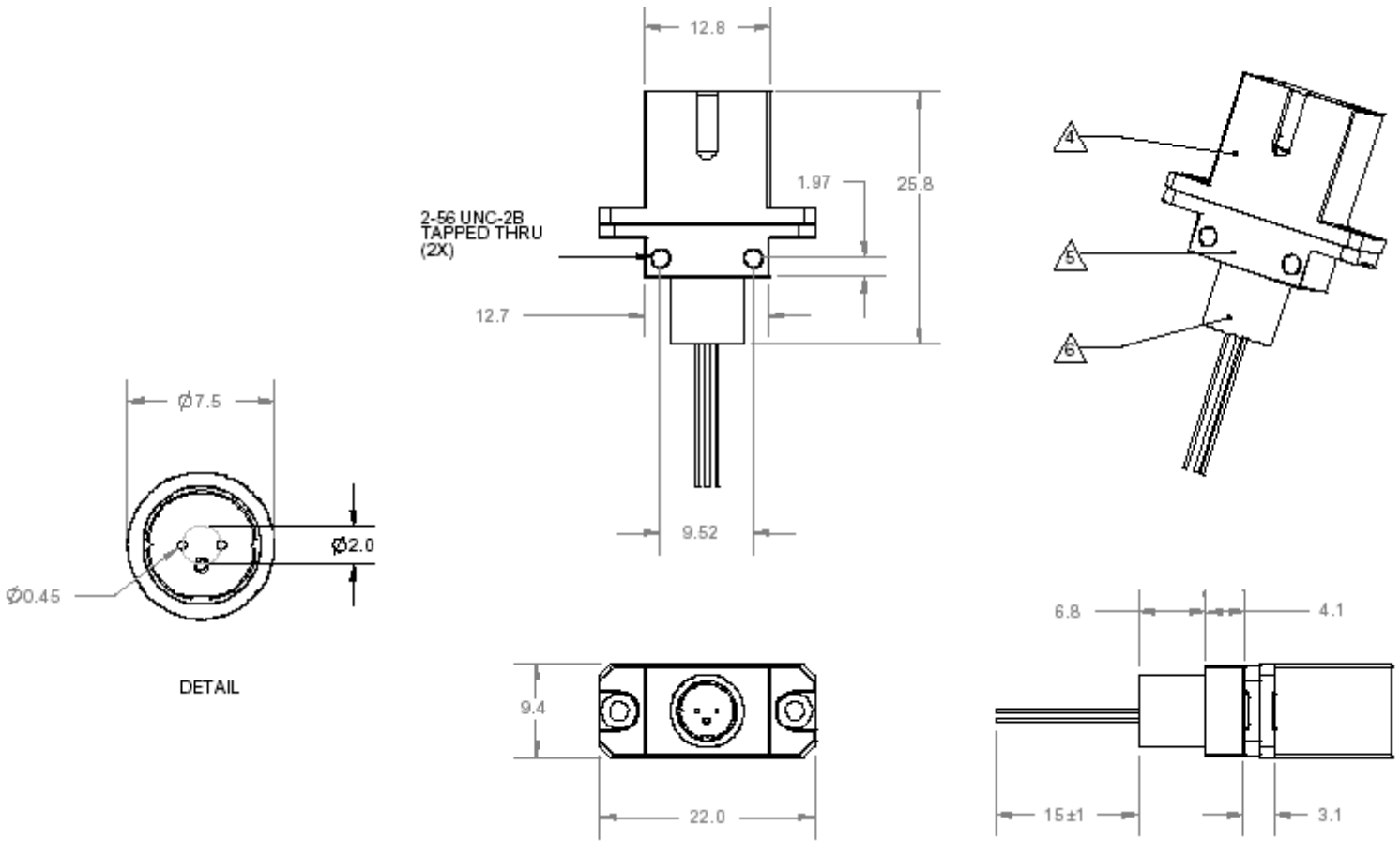
5.6mm Diameter Laser in FC Board Mount Receptacle



“T” Orientation of Leads Shown

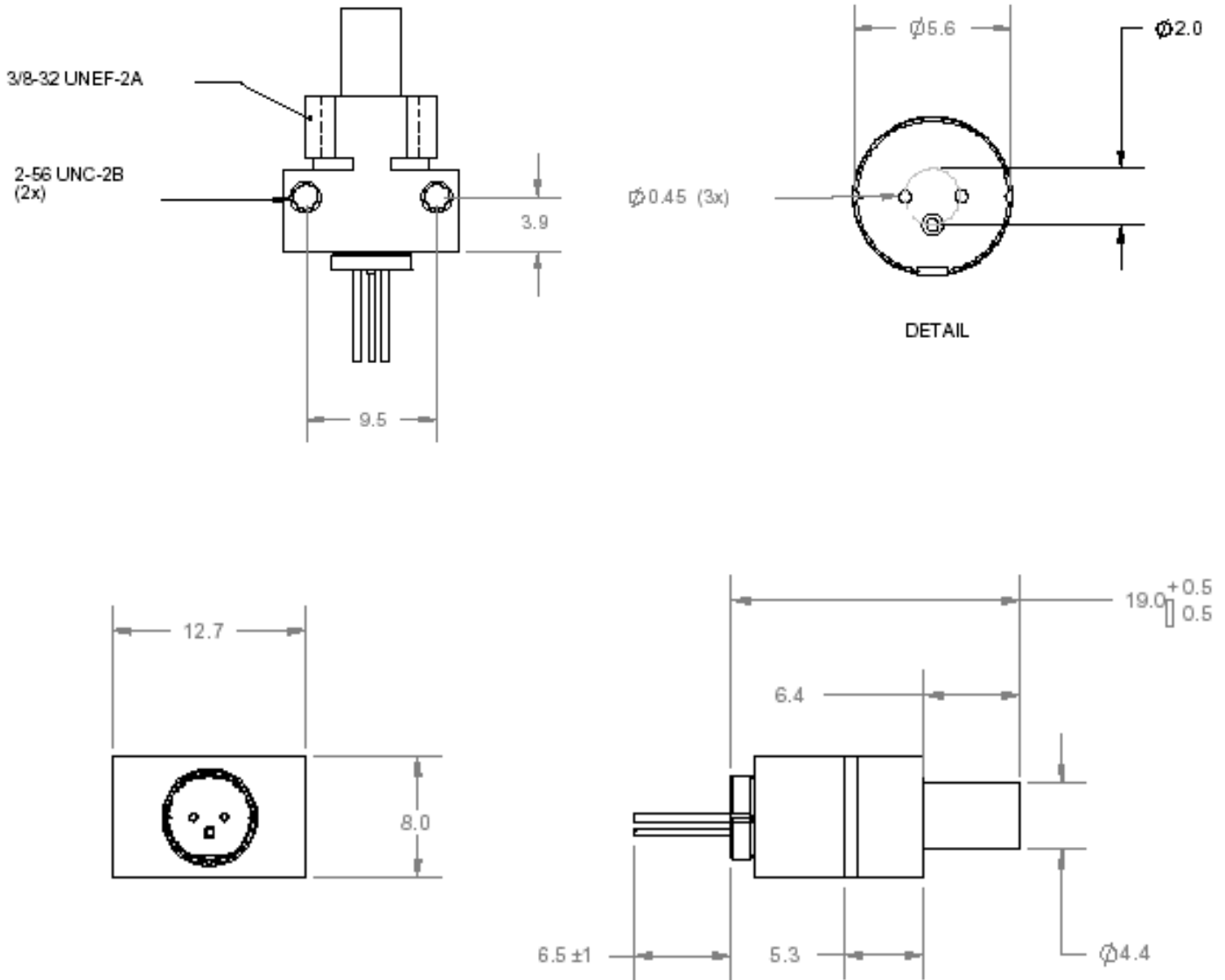
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5.6mm Laser Mounted in SC2 Panel/Board Mount Receptacle



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Universal Receptacle for 2.5mm Ferrule



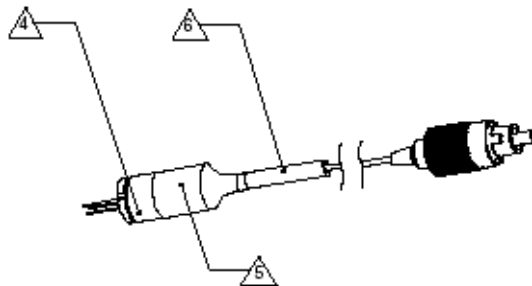
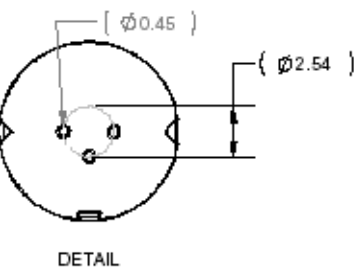
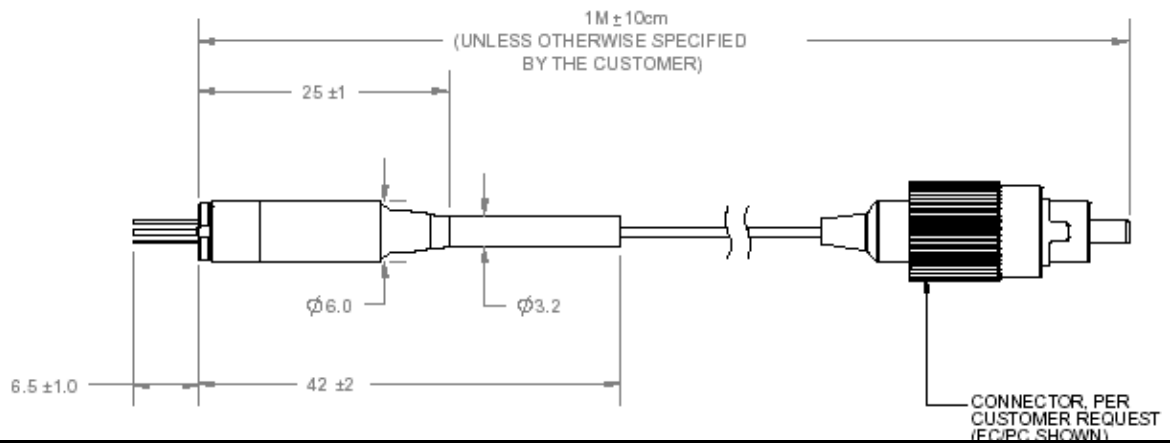
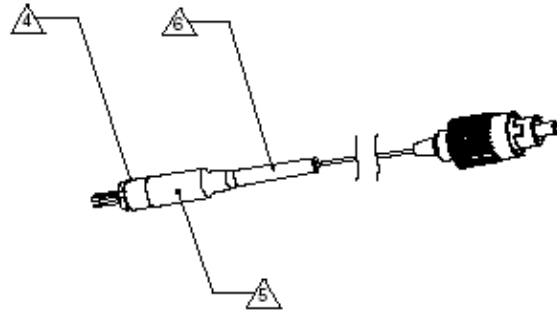
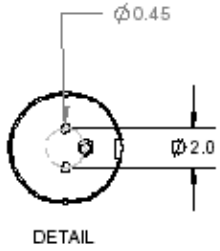
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5.6mm (top) & 9.0mm (bottom) Fiber Pigtailed Laser Diodes

NOTES:

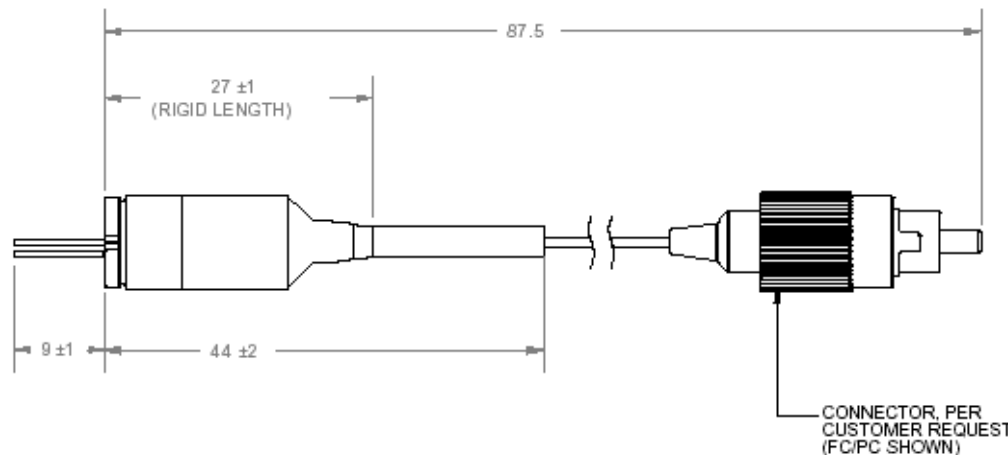
- 1 THESE DEVICES ARE ESD SENSITIVE. ESD PRECAUTIONS ARE ADVISED.
- 2 ALL DEVICES ARE SHIPPED WITH ESD LEAD PROTECTORS AND DUST COVERS.
- 3 ALL DEVICES WILL BE MARKED WITH A PD-LD SERIAL NUMBER.

- 4 BRASS
- 5 DELRIN, BLACK
- 6 SILICONE RUBBER, RED



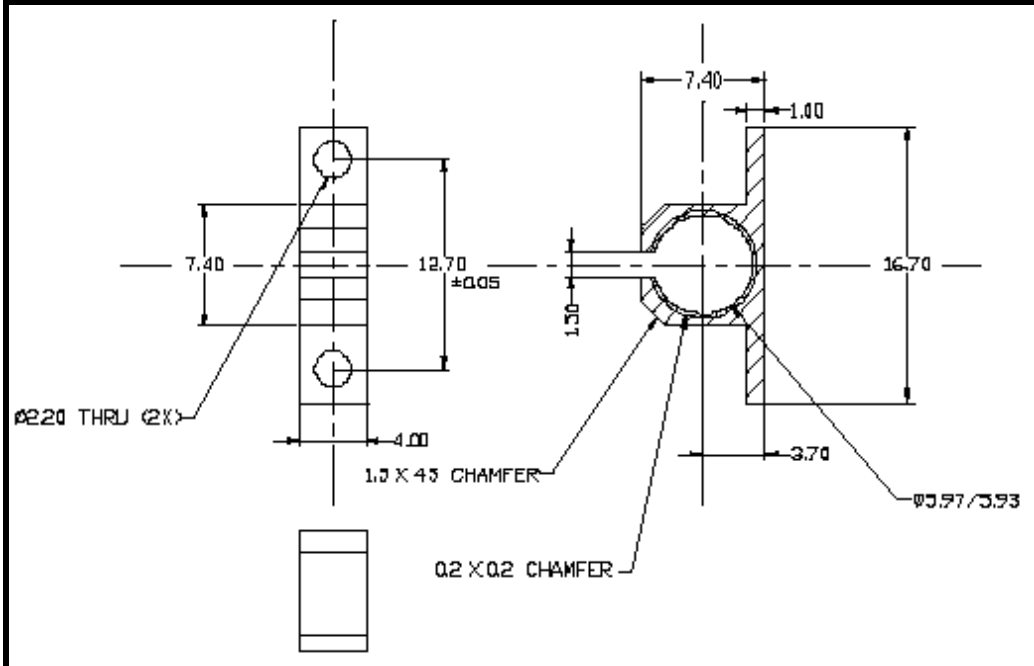
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- 4 BRASS
- 5 DELRIN
- 6 SILICONE RUBBER, RED

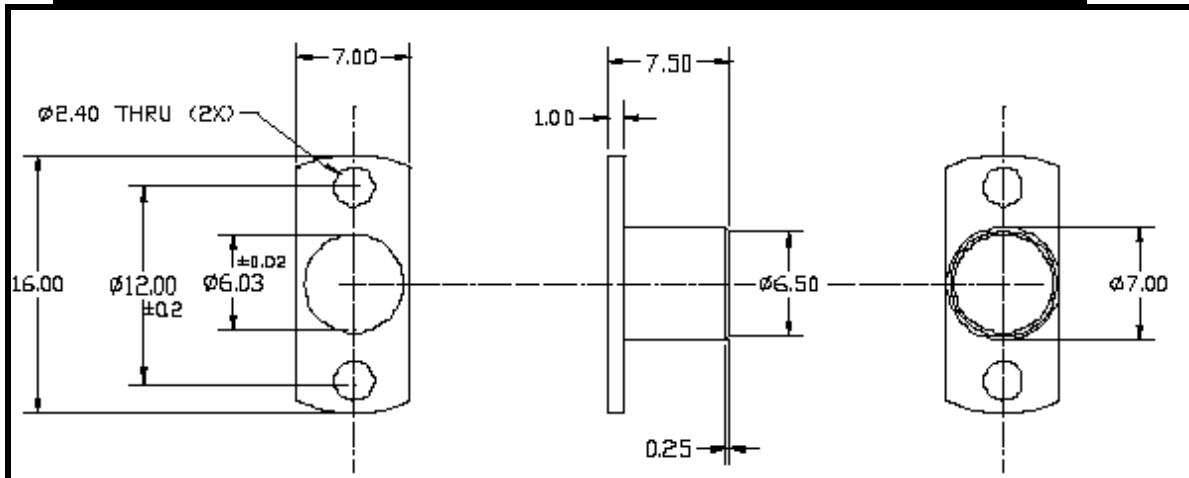


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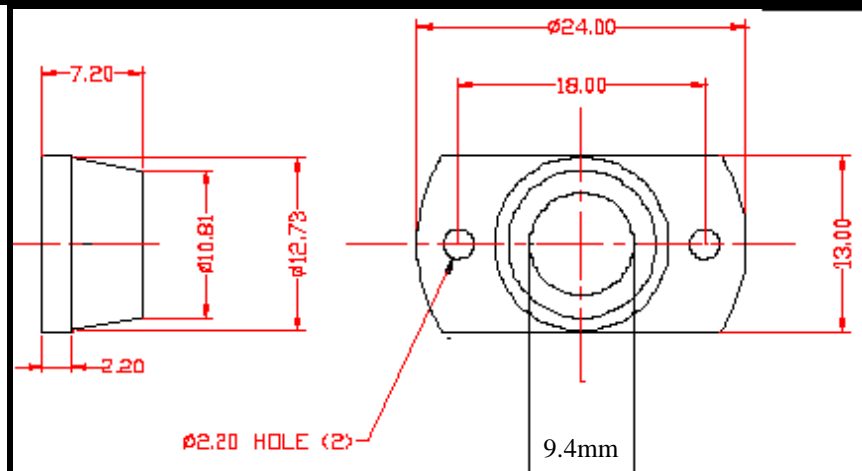
Board Mounting Bracket "D" for 5.6mm Pigtailed Lasers



Panel Mounting Bracket "E" for 5.6mm Pigtailed Lasers



Panel Mount Bracket "B" for 9.0mm Pigtailed Lasers



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