



# PL 63/65/67 Visible Series Laser Diode Modules

PD-LD Inc. offers a variety of packaging options for its' Visible 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.

Standard wavelengths are centered at 630nm, 650nm and 670nm. 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 3um to 200um core.



## Applications

- Fiber optic communications
- Optical Sensing
- Process Control
- Test and Measurement Equipment
- Optical Alignment Systems

## Fiber Size and Coupling Efficiency

- 3/125um 8~10
- 5/125um 10~15%
- 9/125um 15~20%
- 50/125um 25~30%
- 62.5/125um 30~40%

## Performance Specifications (Examples; other options available)

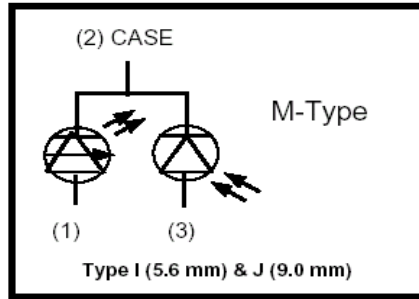
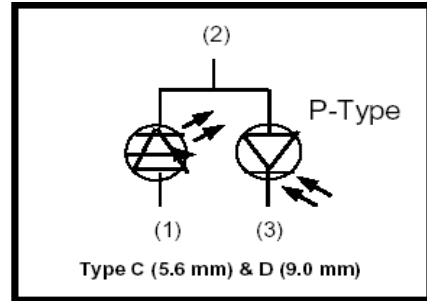
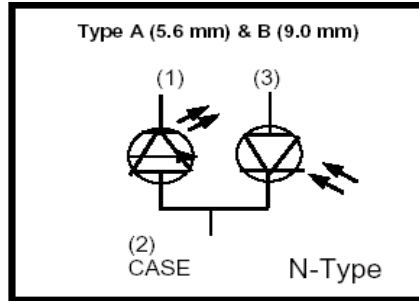
| PD-LD Part No. <sup>1</sup>        | Wavelength (nm) |      |      | Min. Fiber Coupled Power (mW) | Threshold Current (mA) |      | Operating Current (mA) |      | Monitor PD Current (mA) |      |
|------------------------------------|-----------------|------|------|-------------------------------|------------------------|------|------------------------|------|-------------------------|------|
|                                    | Min.            | Typ. | Max. |                               | Typ.                   | Max. | Typ.                   | Max. | Min.                    | Typ. |
| Continuous Wavelength Lasers @ 25C |                 |      |      |                               |                        |      |                        |      |                         |      |
| PL63A001FC11-T-0                   | 630             | 635  | 640  | 1mW<br>Into 9/125 SMF         | 30                     | 50   | 40                     | 60   | 0.02                    | 0.07 |
| PL63C005100A-0-0-01                | 625             | 635  | 640  | 5mW<br>into 9/125 SMF         | 50                     | 75   | 70                     | 95   | 0.05                    | 0.17 |
| PL63K002FC26-T-0                   | 630             | 636  | 642  | 2mW<br>Into 3/125um SMF       | 60                     | 70   | 87                     | 105  | 0.03                    | 0.50 |
| PL63H003300A-0-0-01                | 625             | 635  | 640  | 3mW<br>62.5/125 MMF           | 45                     | 70   | 55                     | 85   | 0.2                     | 0.4  |
| PL65T0.8UN11-T-0                   | 640             | 650  | 660  | 0.8 mW<br>into 9/125 SMF      | 15                     | 20   | 20                     | 22   | 0.05                    | 0.3  |
| PL65Q0.8UN11-T-0                   | 640             | 650  | 660  | 0.8mW<br>Into 9/125 SMF       | 40                     | 70   | 50                     | 80   | 0.10                    | 0.20 |
| PL65T0.36LAD-A-0-01                | 640             | 650  | 660  | 0.3 mW<br>Into 3/125 SMF      | 15                     | 20   | 20                     | 22   | 0.05                    | 0.3  |
| PL65R005FC14-T-0                   | 645             | 655  | 660  | 5mW<br>Into 100/140 MMF       | 25                     | 60   | 35                     | 70   | 0.1                     | 0.5  |
| PL65Q0.8UN11-T-0                   | 645             | 650  | 660  | 0.8mw<br>Into 9/125 SMF       | 30                     | 40   | 40                     | 50   | 0.1                     | 0.5  |
| PL65U005FC11-T-0                   | —               | 655  | 665  | 5mW<br>Into 9/125 SMF         | 40                     | 50   | 80                     | 110  | 0.1                     | 0.3  |
| PL66N0026FCA-0-0-01                | 645             | 658  | 666  | 2.0 mW<br>into 3/125 SMF      | 45                     | 70   | 85                     | 120  | 0.05                    | 0.3  |
| PL66N005100A-0-0-01                | 645             | 658  | 666  | 5 mW<br>into 9/125 SMF        | 45                     | 70   | 85                     | 120  | 0.05                    | 0.3  |



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## Packaging Options

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



## Pin Connection

- A & B:** N-Type = LD (+) Anode & PD (-) Cathode Case Common
- C & D:** P-Type = LD (-) Cathode & PD (+) Anode Case Common
- I & J:** M-Type = LD (-) Cathode & PD (-) Cathode Case Common

## Absolute Maximum Ratings ( $T_c=25^\circ\text{C}$ )

| Parameter             | Symbol       | Value     | Unit                             |
|-----------------------|--------------|-----------|----------------------------------|
| LD Reverse Voltage    | $V_{R(LD)}$  | 2         | V                                |
| PD Reverse Voltage    | $V_{R(PD)}$  | 30        | V                                |
| Operating Temperature | $T_{OPR}$    | -10 to 60 | $^\circ\text{C}$                 |
| Storage Temperature   | $T_{STR}$    | -40 to 85 | $^\circ\text{C}$                 |
| Soldering Temperature | $T_{Solder}$ | 260       | $^\circ\text{C}$ (5 seconds max) |



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| <b>Visible Laser Diodes Available from Stock</b> |                                    |                            |                          |                                      |
|--|------------------------------------|----------------------------|--------------------------|--------------------------------------|
| <b>PD-LD<br/>Laser Code</b>                      | <b>Nominal Wavelength<br/>(nm)</b> | <b>TO Package<br/>Size</b> | <b>Laser<br/>Pinning</b> | <b>Maximum Total<br/>Power (mW)*</b> |
| 63A  | 635nm +/-5nm                       | 5.6mm                      | N                        | 5.0                                  |
| 63C  | 635nm -10/+5nm                     | 9.0mm                      | N                        | 10.0                                 |
| 63K  | 636nm +/-6nm                       | 5.6mm                      | N                        | 20.0                                 |
| 63H  | 633nm+/-8nm                        | 9.0mm                      | N                        | 5.0                                  |
| 65A  | 655nm+/-5nm                        | 5.6mm                      | P                        | 7.0                                  |
| 65P  | 655nm+/-10nm                       | 5.6mm                      | P                        | 7.0                                  |
| 65Q  | 650nm+/-10nm                       | 5.6mm                      | P                        | 7.0                                  |
| 65R  | 655nm+5nm/-10nm                    | 5.6mm                      | M                        | 10.0                                 |
| 65S  | 658nm+/-10nm                       | 5.6mm                      | N                        | 45                                   |
| 65T  | 650nm+/-10nm                       | 5.6mm                      | N                        | 5.0                                  |
| 65U  | 658nm+/-8nm                        | 5.6mm                      | N                        | 40.0                                 |
| 65V  | 655nm +5/-10nm                     | 5.6mm                      | P                        | 5.0                                  |
| 66B  | 658nm +/-4nm                       | 5.6mm                      | N                        | 100.0                                |
| 66N  | 658nm+7nm/-13nm                    | 5.6mm                      | P                        | 35.0                                 |
| 67G  | 690nm+5/-10nm                      | 5.6mm                      | P                        | 30.0                                 |
| 67T  | 670nm+/-10nm                       | 5.6mm                      | N                        | 12.0                                 |

\* 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

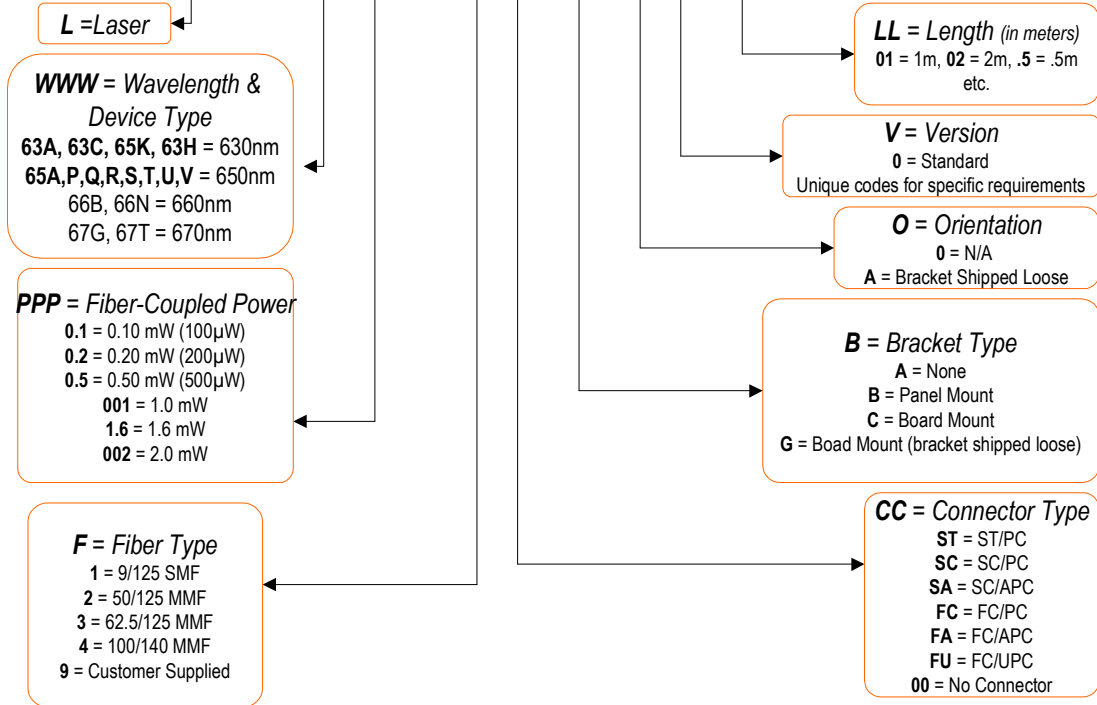
Please contact PD-LD Sales to discuss wavelength, pinning and power requirements not



# PL 63/65/67 Visible Series Laser Diode Modules

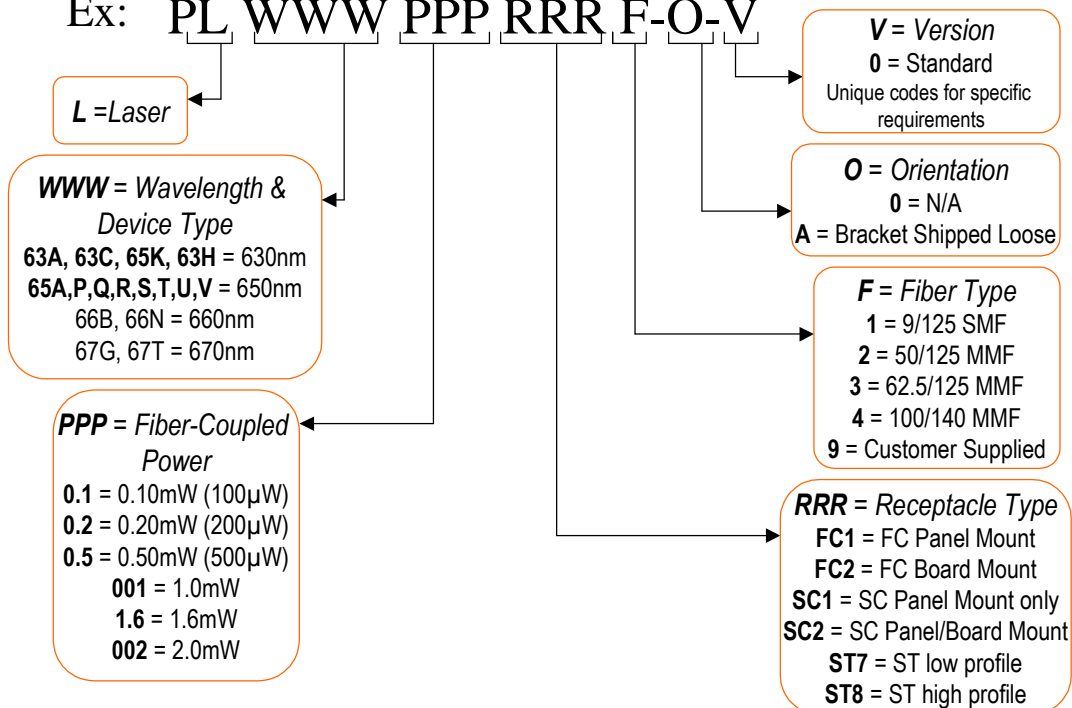
## Data Legend: Pigtailed Visible Lasers

PL WWW PPP F CC B-O-V-LL



## Data Legend: Receptacle Visible Laser Diodes

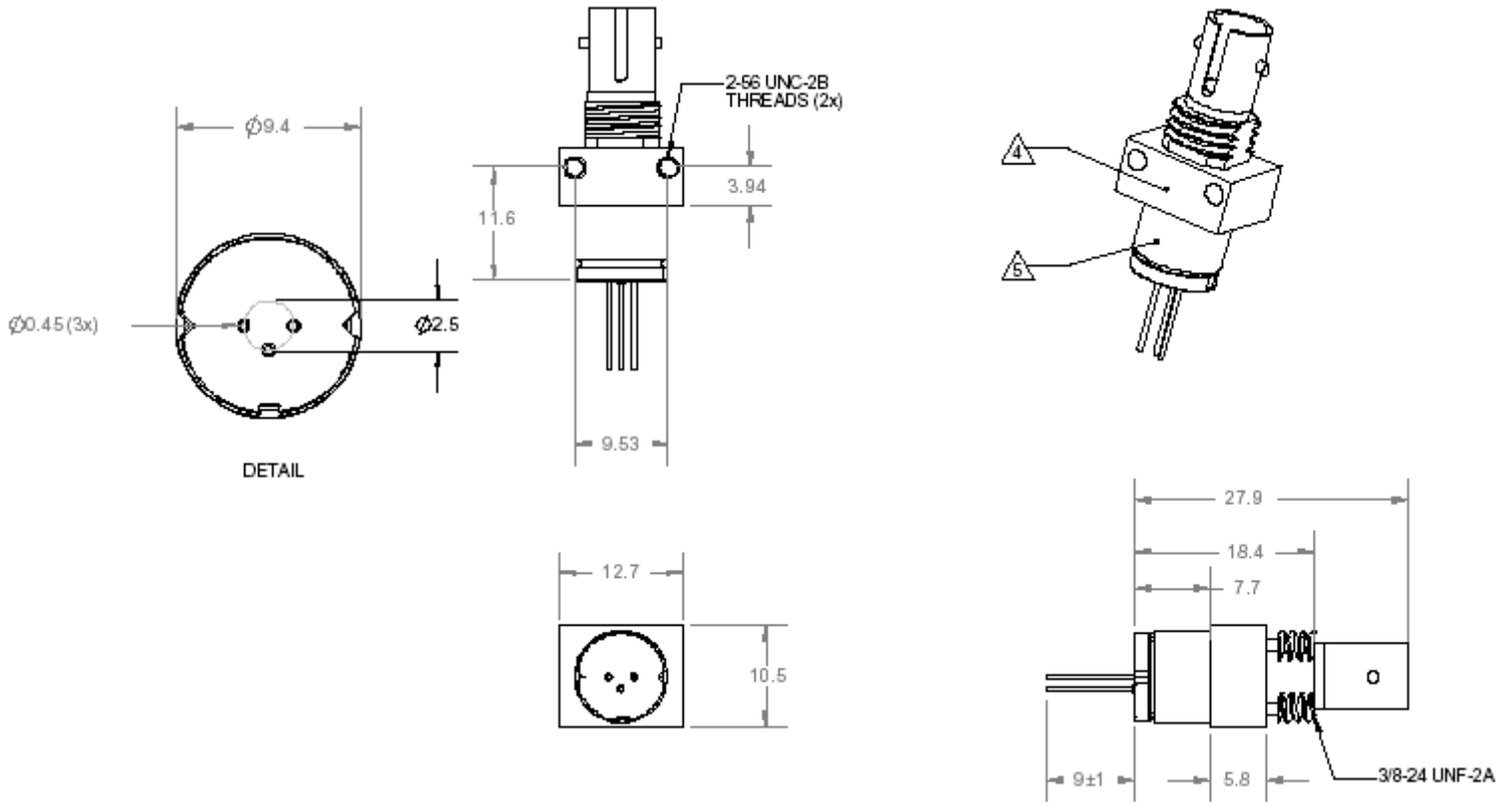
Ex: PL WWW PPP RRR F-O-V



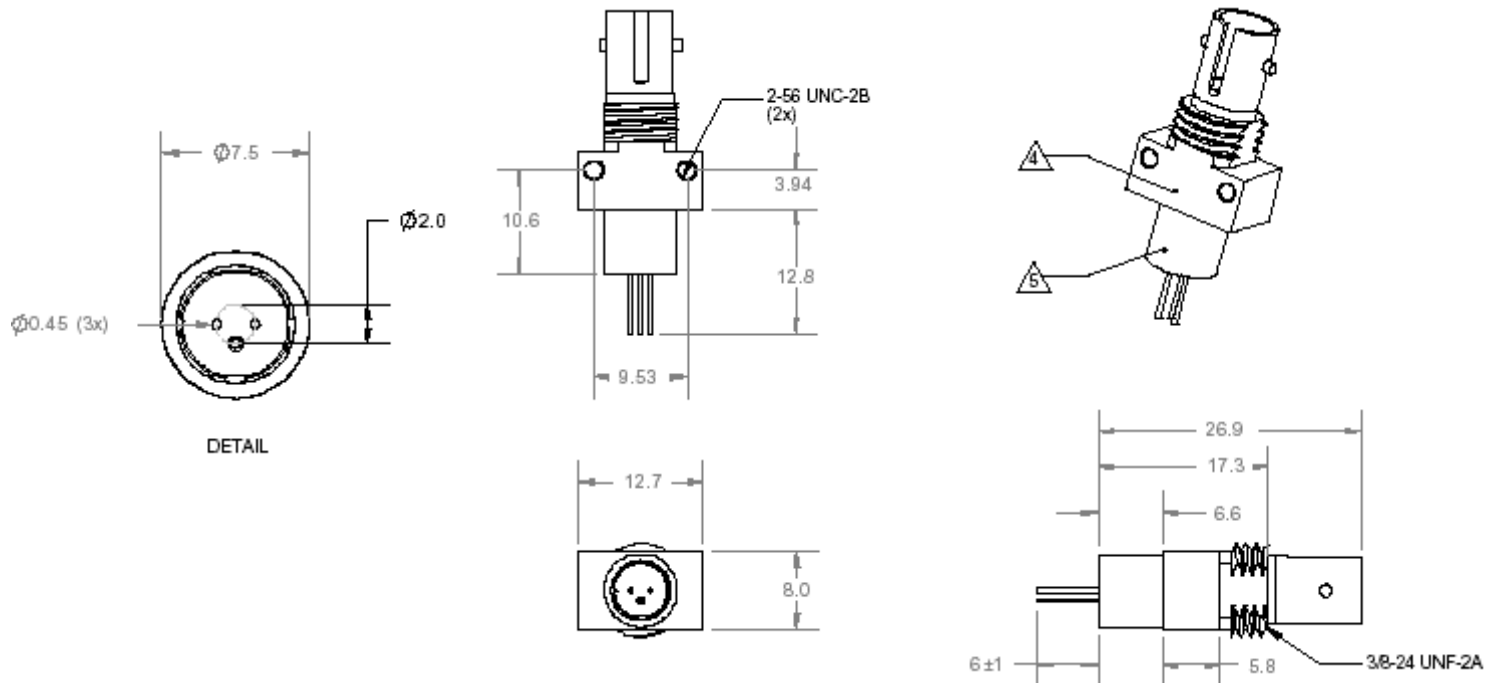


# PL 63/65/67 Visible Series Laser Diode Modules

## 9mm Diameter Laser Mounted in High Profile ST8 Receptacle



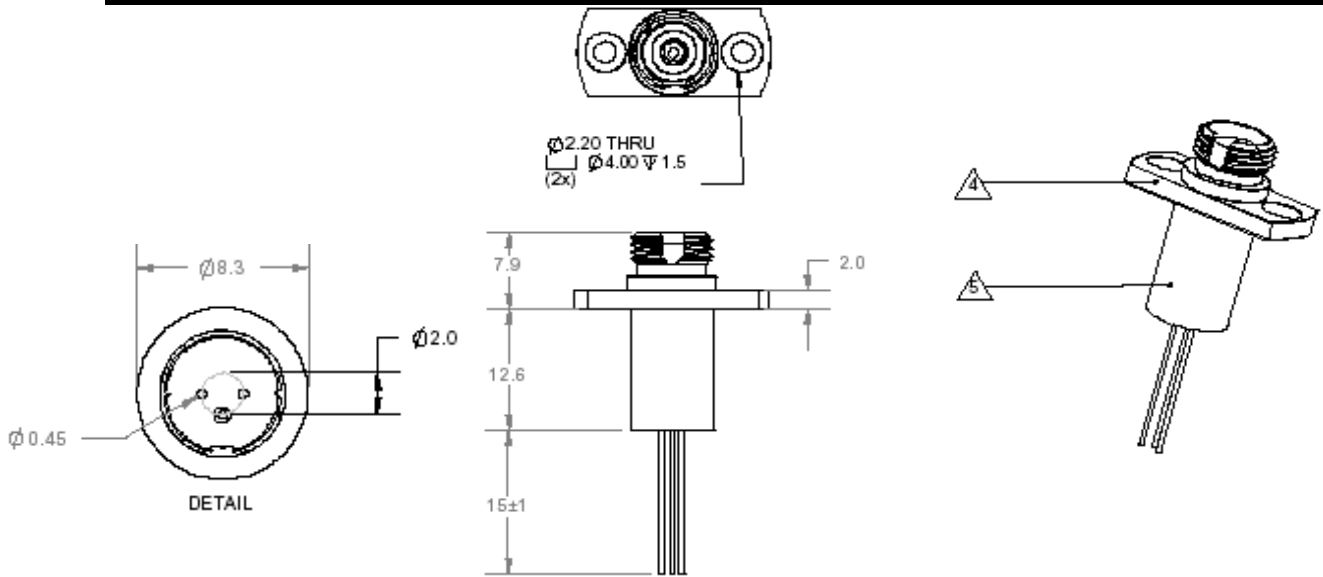
## 5.6mm Diameter Laser Mounted in Low Profile ST7 Receptacle





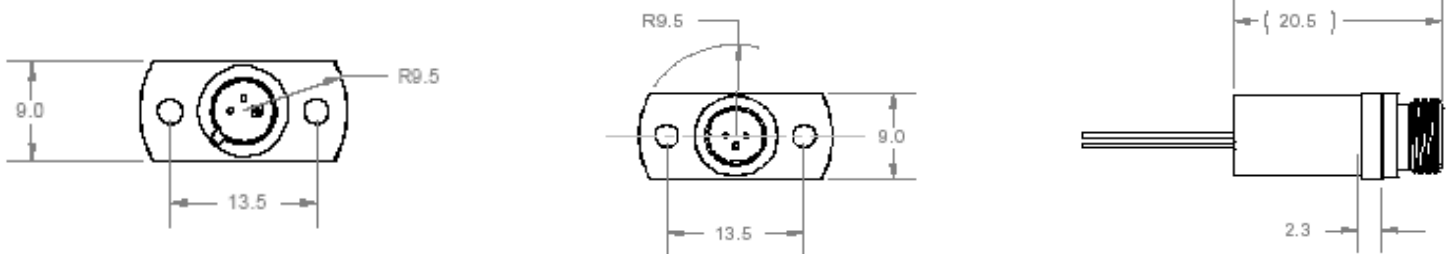
# PL 63/65/67 Visible Series Laser Diode Modules

## 5.6mm Diameter Laser In FC Panel Mount Receptacle

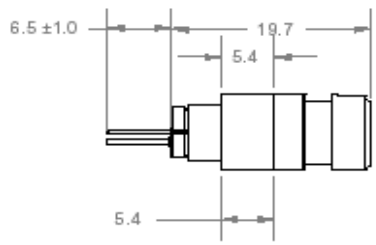
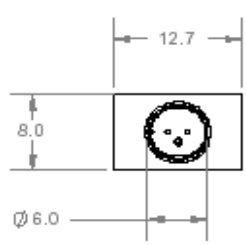
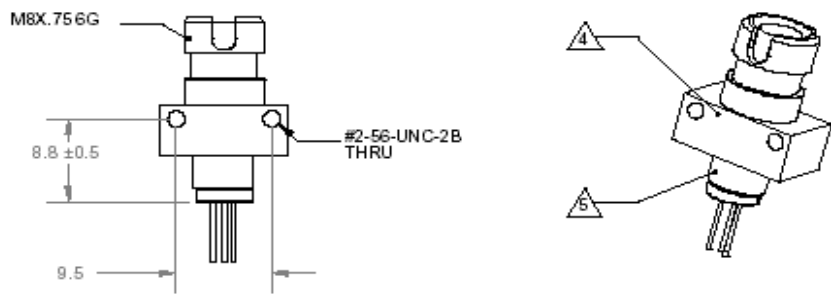


“Z” Style Orientation

“T” Style Orientation



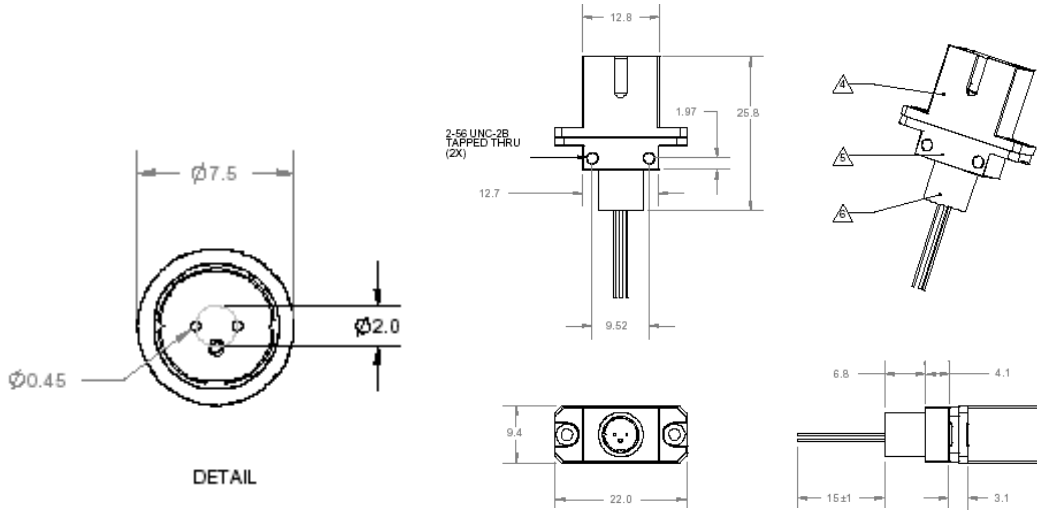
## 5.6mm Diameter Laser in FC Board Mount Receptacle



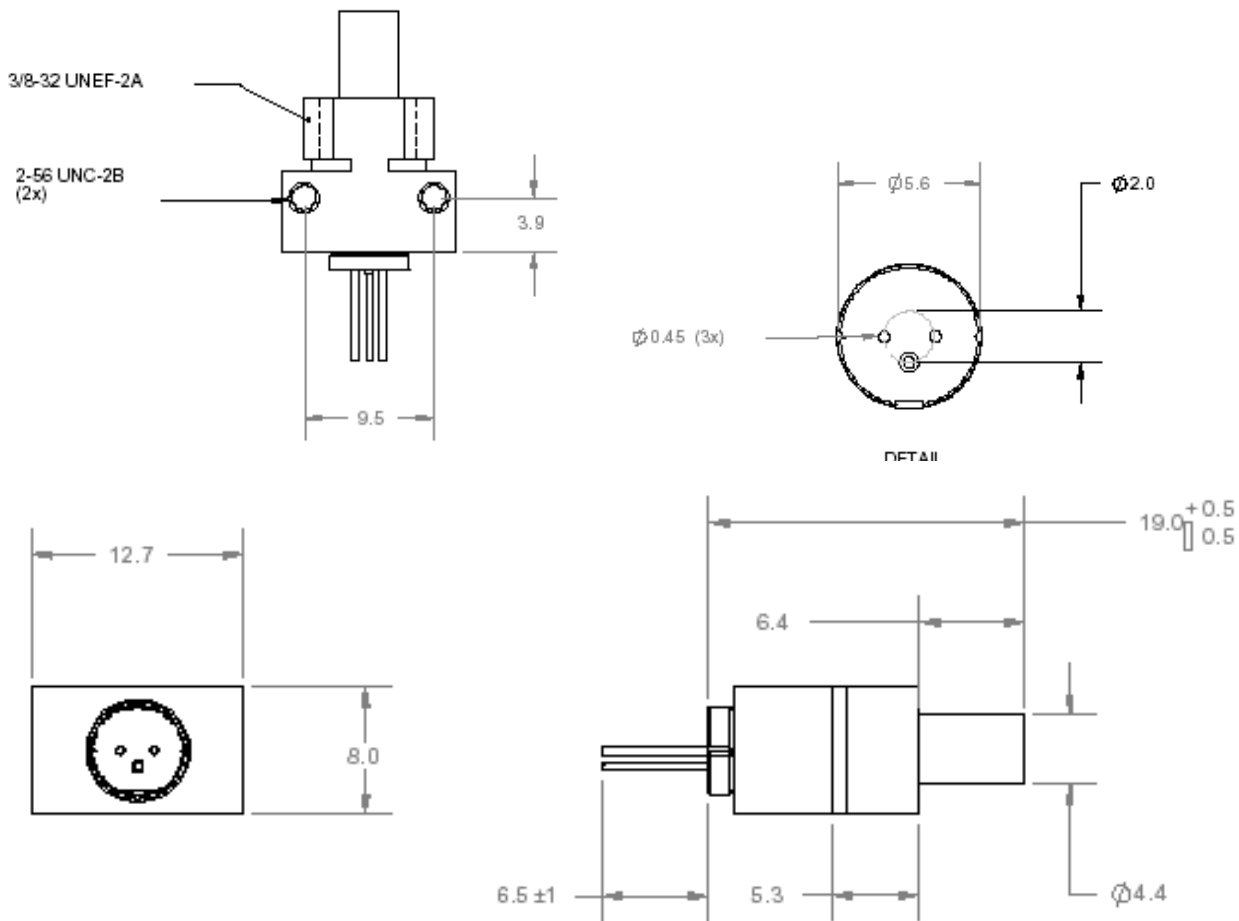


# PL 63/65/67 Visible Series Laser Diode Modules

## 5.6mm Laser Mounted in SC2 Panel/Board Mount Receptacle



## Universal Receptacle for 2.5mm Ferrule








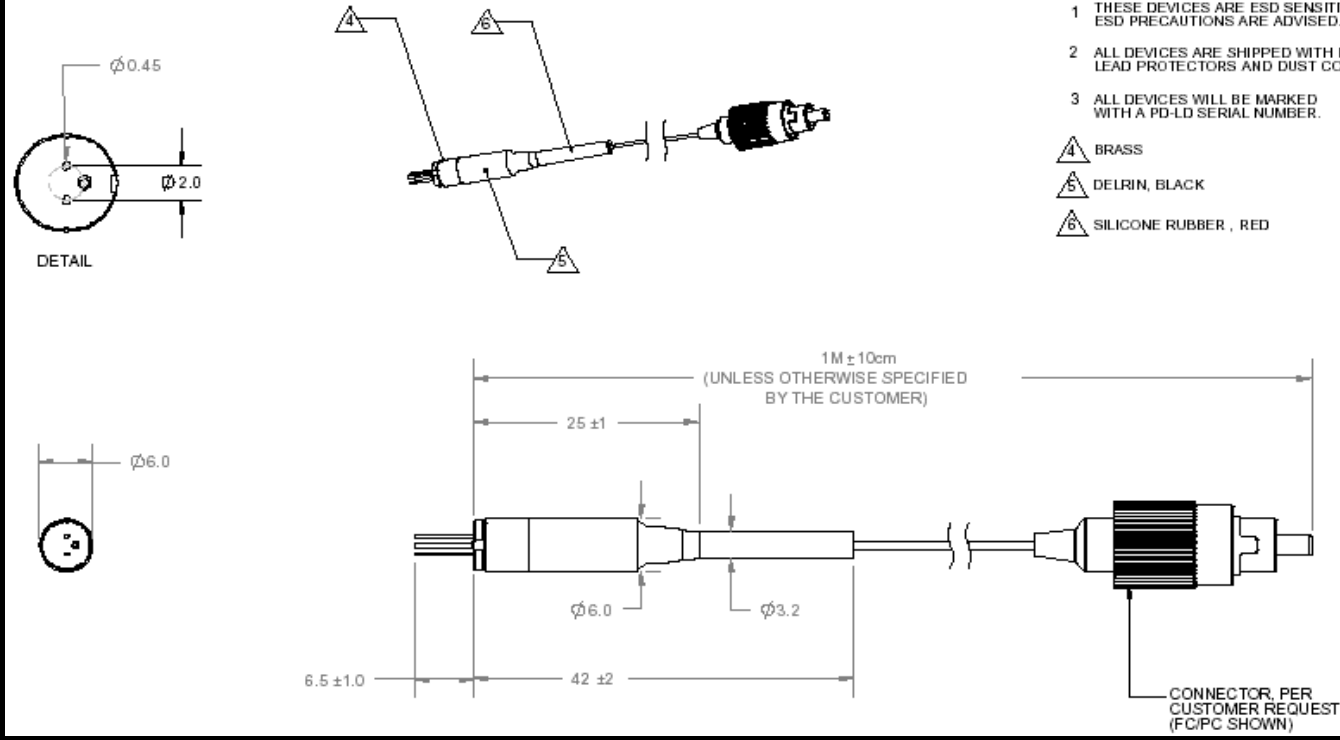
# PL 63/65/67 Visible Series Laser Diode Modules

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




NOTES:

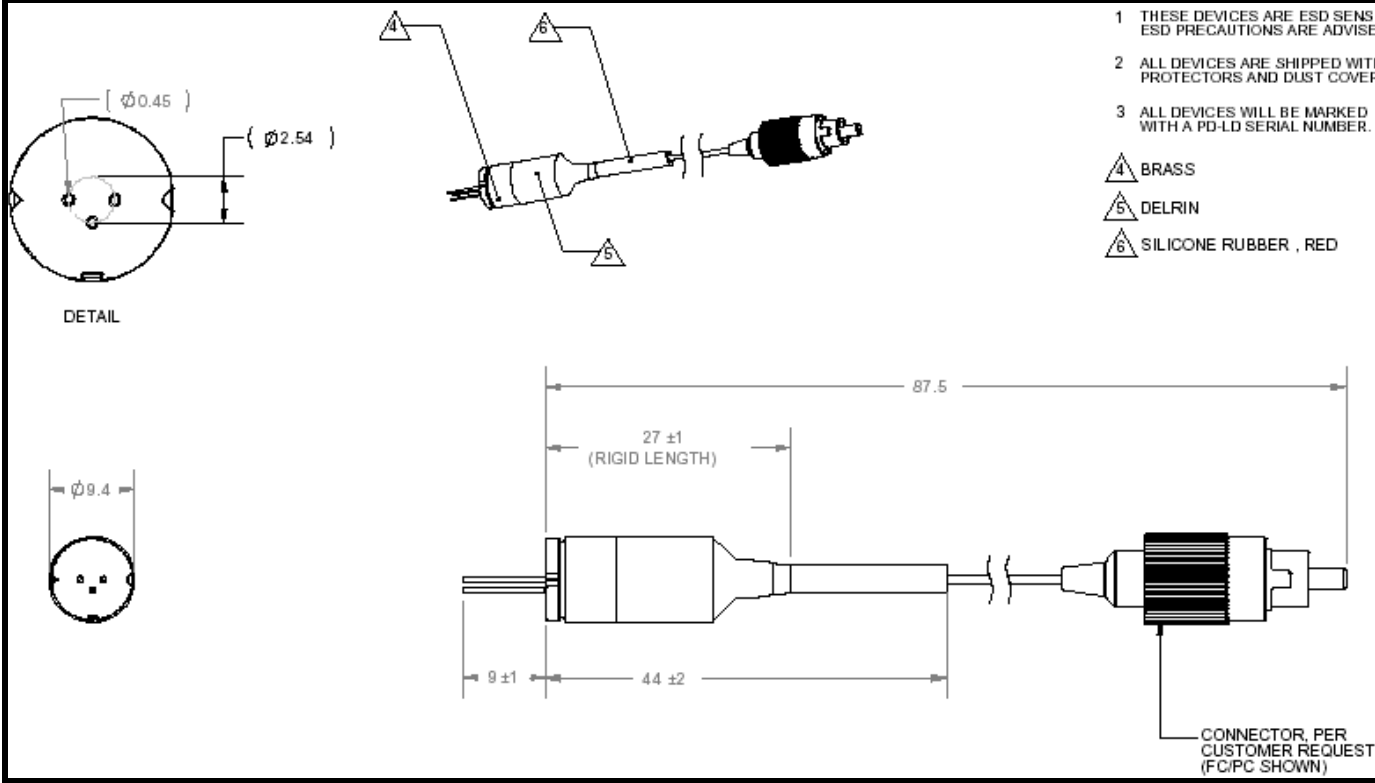
- 1 THESE DEVICES ARE ESD SENSITIVE. ESD PRECAUTIONS ARE ADVISED.
- 2 ALL DEVICES ARE SHIPPED WITH ESD LEAD PROTECTORS AND DUST COVERS.
- 3 ALL DEVICES WILL BE MARKED WITH A PD-LD SERIAL NUMBER.

-  BRASS
-  DELRIN, BLACK
-  SILICONE RUBBER, RED



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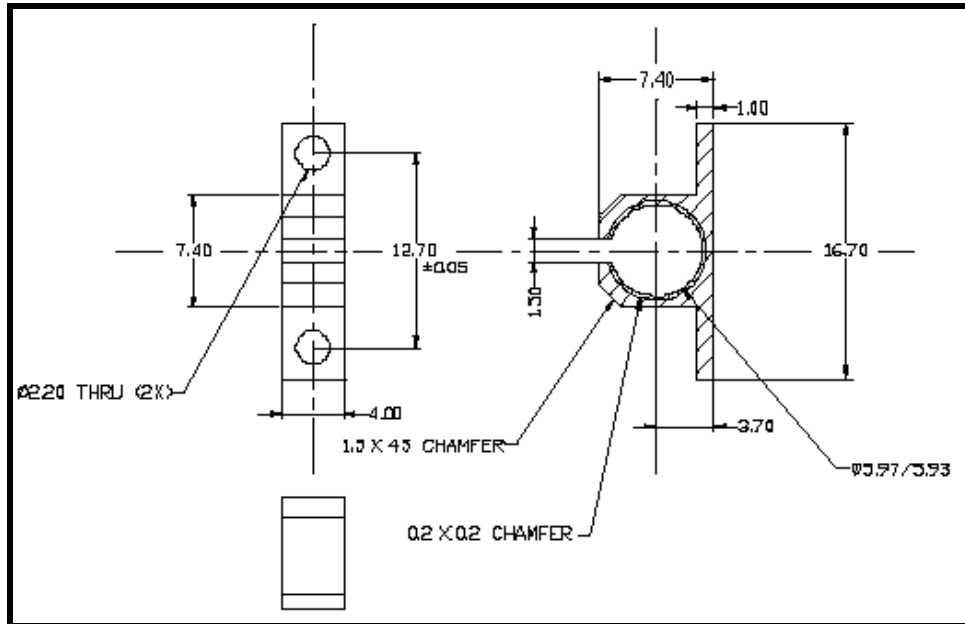




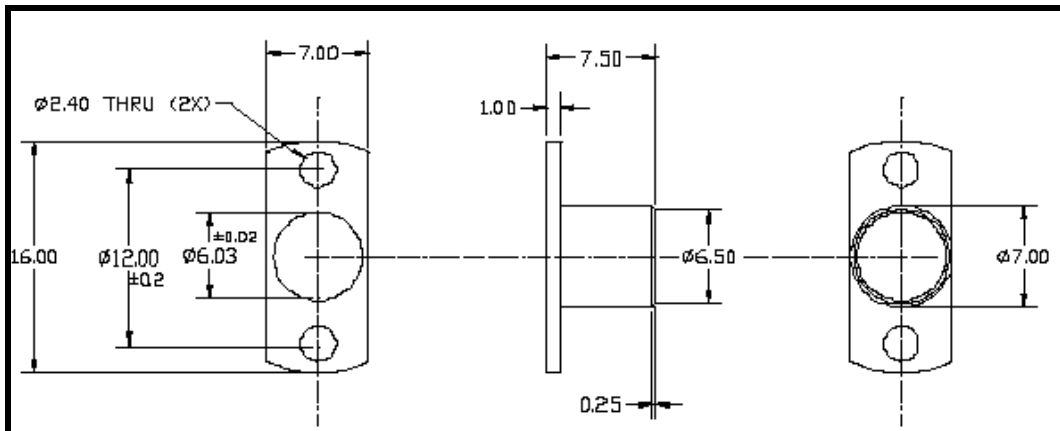


# PL 63/65/67 Visible Series Laser Diode Modules

## 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

