



PDSI Series

**Detectors for Fiber Optics
Silicon PIN Diodes**

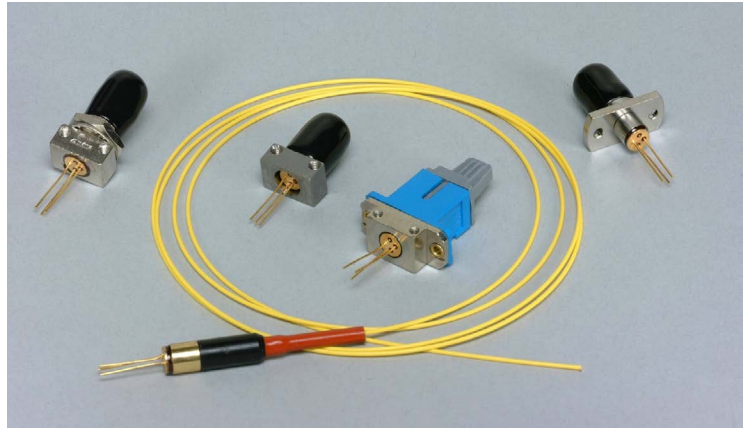
PD-LD Inc. offers a variety of standard and custom PIN Photodiodes and APDs in fiber coupled packages. The semiconductors offered are of proven manufacture and design. Our Silicon devices cover the optical spectrum from 400 to 1100nm. These devices are available in fiber pigtailed co-axial packages or in connector style receptacle packages.

Pigtailing

Devices can be pigtailed with any size optical fiber that is compatible with its active area size. Pigtails may range in core size from 3.5um to 200micron. One meter is the standard length, but any length or connector termination may be specified. Pigtails may be terminated with ST, FC, SC and LC connectors with either PC or APC polish.

Receptacles

Standard ST, FC and SC housings are available in both panel and board mountable versions. These receptacles can be optimized for use with both single mode and multimode optical fibers.



Manufacturing

Efficient package designs and manufacturing processes allow PD-LD to rapidly support both small and large volume requirements. Complete 100% testing of all critical parametric device values ensure optimal performance and quality. Not all receptacle packaging styles are represented on this data sheet, so please contact PD-LD for specific needs. Optical Filters may be installed. Please contact NECSEL to discuss requirements.

PD-LD Part Number Examples	Active Area (µm)	Responsivity		Capacitance Typ. Max (pF)	Dark Current		Bandwidth -3dB (MHz)	Configuration
		Min.	Typ. (A/W)		Typ.	Max (nA)		
Silicon (@5V bias, 850nm Laser Source, 23°C for typical values)								
PDSIU500200A-0-0-01	500	0.35	0.45	2.5 -	0.06	1.0	600	50/125/900um Pigtail
PDSIU5003STD-D-0-01	500	0.35	0.45	2.5 -	0.06	1.0	600	62.5/125/900um w/ST pigtail
PDSIU500FC13-W-0	500	0.35	0.45	2.5 -	0.06	1.0	600	FC Panel Mt Receptacle
PDSIU500FC23-W-0	500	0.35	0.45	2.5 -	0.06	1.0	600	FC Board Mt Receptacle
PDSIU500ST7D-T-0	500	0.35	0.45	2.5 -	0.06	1.0	600	ST Low Profile Receptacle
PDSIU500D00A-0-0-01	500	0.35	0.45	2.5 -	0.06	1.0	600	105/1265/900um Pigtail

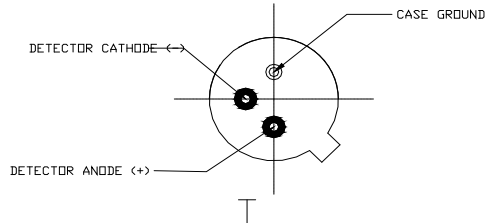
NECSEL reserves the right to make modifications to or discontinue products without prior notice.

5/21 PDSI REV 8

PDSI Series

**Detectors for Fiber Optics
Silicon PIN Diodes**

Pinout & Mechanical Dimensions (mm)



PD-LD aligns then secures each TO-Packaged photodiode within a universal alignment sleeve. This assembly may then be incorporated into a connector receptacle assembly (FC, SC, ST, etc.) or into a fiber pigtailed assembly. Some examples of housings are listed here, but other packages are available upon request, including board mountable SC and FC styles.

PART NUMBER CONFIGURATION

Pigtailed	Receptacle
P DXXKAAAFCCB-O-V-M	PDXXKAAACCCF-O-V

Device Type XX	Device Code K	Active Area AAA	Fiber Size F (µm)	Connector CC	Receptacle Assemblies CCC	Bracket B Pigtail Units Only	Orientation Lead wrt Bracket or Housing O	Version V	Pigtail Length m
SI= Silicon PIN	Unique Device codes may be assigned by NECSEL- to each detector. Standard 500 µm detectors are code "U"	500=500µm	1=9/125/900	FC=FC/PC	FC1=Panel Mount	A=None	0=no bracket	0=standard	01=1m
			2=50/125/900	FA=FC/APC	FC2=Board Mount	B=102-10112 Panel	A= bracket shipped separately	Customer Specific	02=2m
			3=62.5/125/900	SM=SMA 905	SC1=Panel Mount	C=102-10181 BdMt	W=ground at 9:00		10=10m
			6= 4.0/125/900 630-HP SMF	SC=SC/PC	SC2=Panel or Board Mount	D=102-10198 BdMt			.5=0.5m
			7= 5.0/125/900 780-HP SMF	SA=SC/APC	ST7=Low Profile	A=Bracket Shipped Separately			.1=0.1m
			9=Customer Supplied	ST=ST/PC	ST8=Board/ Panel Mount	X=Customer Supplied			
			A=200/240/900	00=No Connector	SM1=SMA				
			D=105/125/900		UN1=Universal Bd. Mt.				
			V=3.5/125/900 460-HP SMF						

NECSEL reserves the right to make modifications to or discontinue products without prior notice.

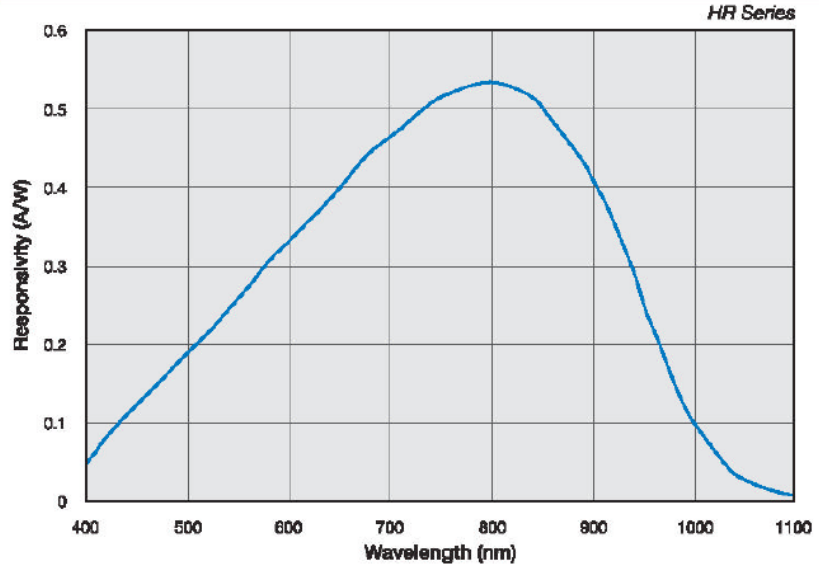
5/21 PDSI REV 8

08/23 / V5 / MaHSL / necsel_pd_ld / detectors:si:pin:diodes:500um

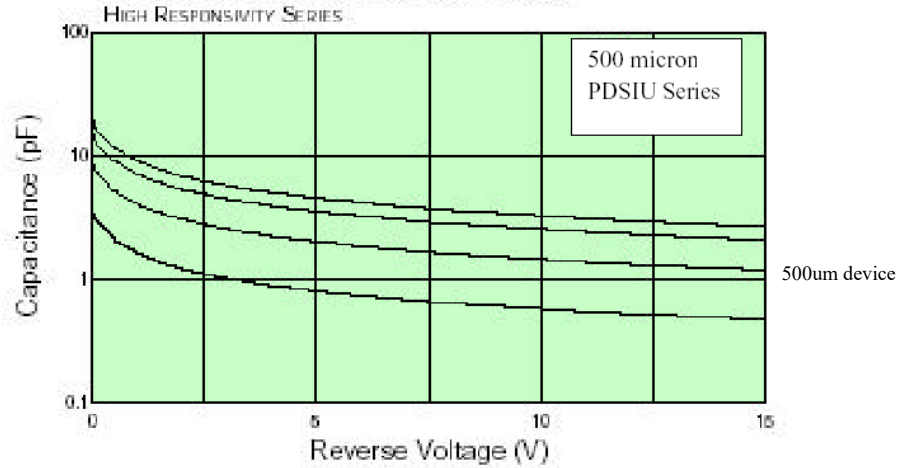
PDSI Series

Detectors for Fiber Optics
Silicon PIN Diodes

■ Typical Spectral Response



Typical Capacitance vs Reverse Bias

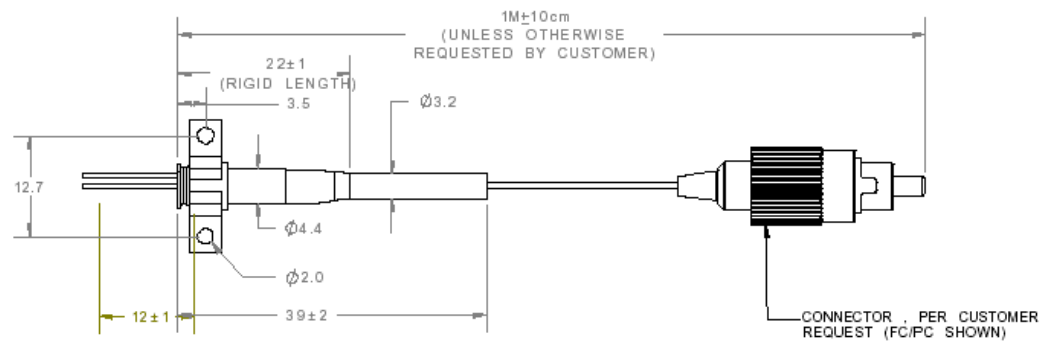
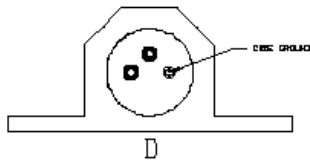
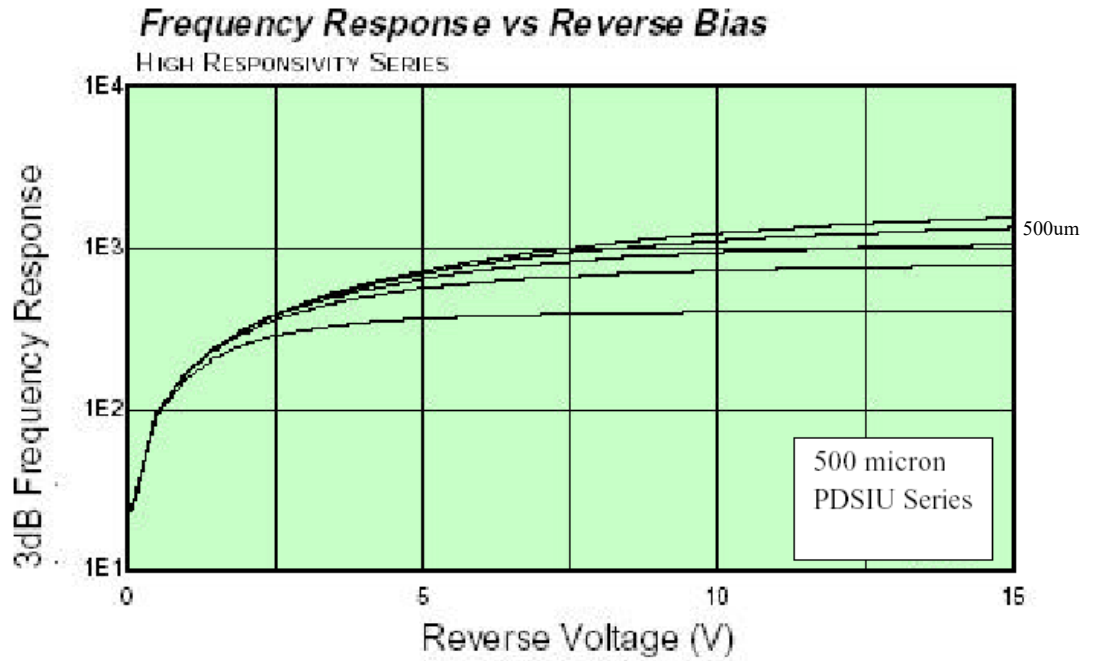


NECSEL reserves the right to make modifications to or discontinue products without prior notice.

5/21 PDSI REV 8

PDSI Series

**Detectors for Fiber Optics
Silicon PIN Diodes**



NECSEL reserves the right to make modifications to or discontinue products without prior notice.

5/21 PDSI REV 8

08/23 / V5 / MaHSL / necsel+pd_id / detectors+pin+diodes-500um

PDSI Series

**Detectors for Fiber Optics
Silicon PIN Diodes**

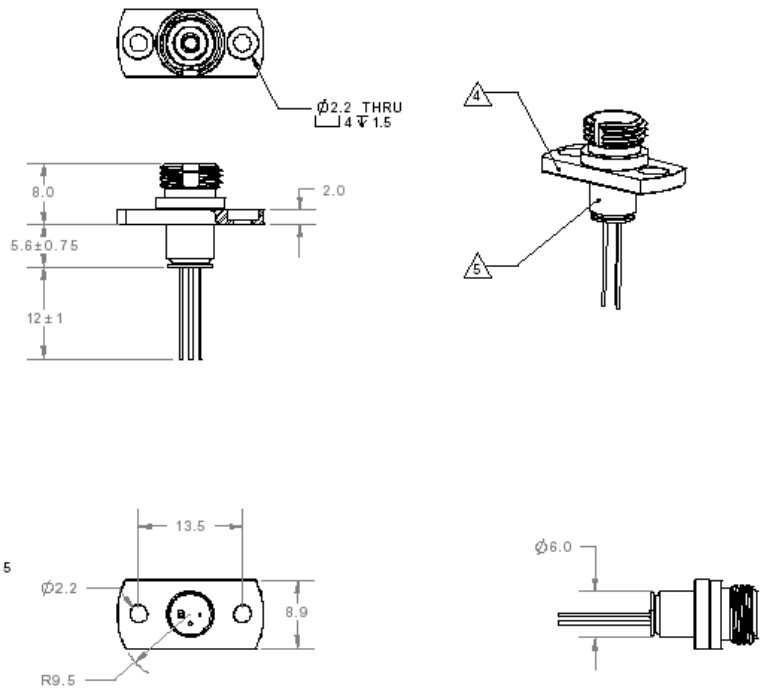
**Mechanical Drawing for
PDSIU500FC13-W-0**

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, NICKEL PLATED

5 SS303



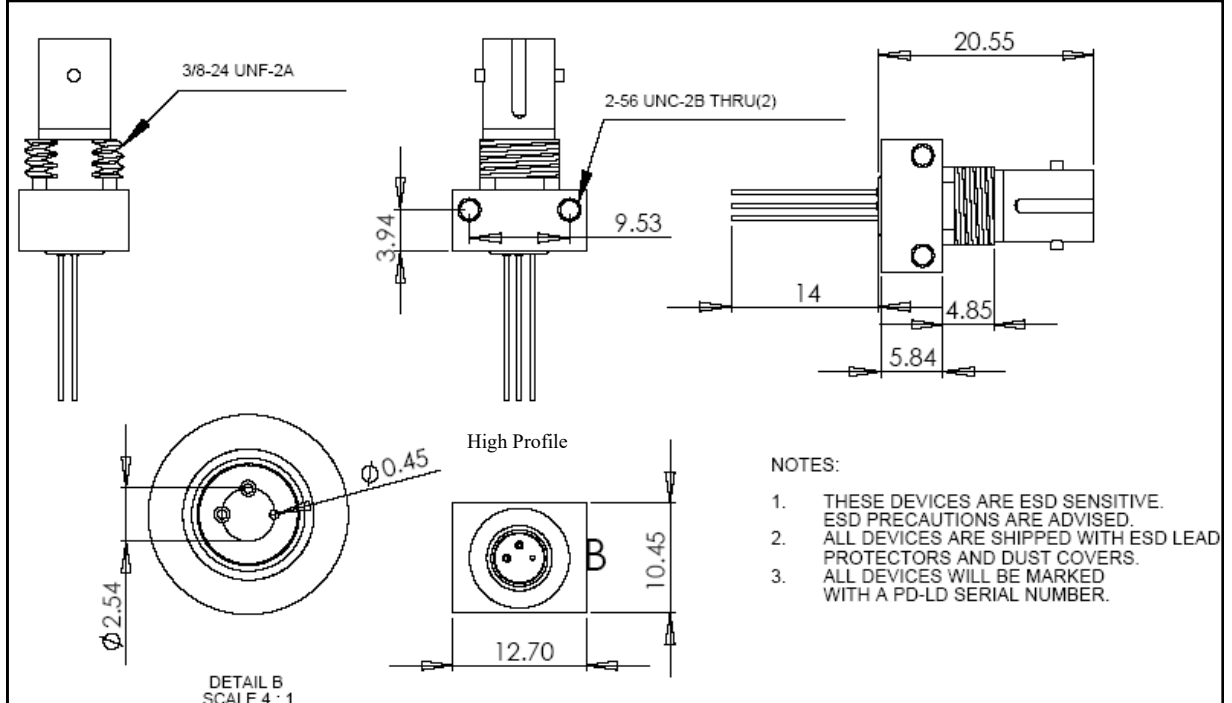
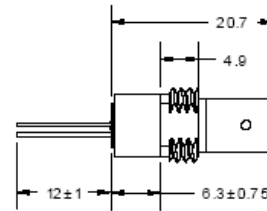
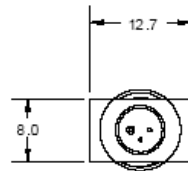
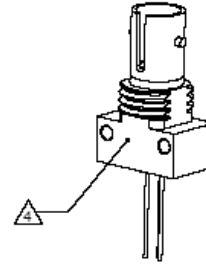
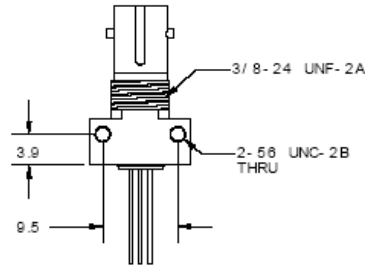
NECSEL reserves the right to make modifications to or discontinue products without prior notice.

5/21 PDSI REV 8

PDSI Series

**Detectors for Fiber Optics
Silicon PIN Diodes**

Mechanical Drawing for PDSIU500ST74-W-0



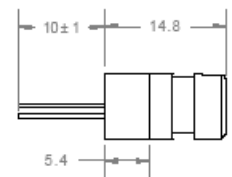
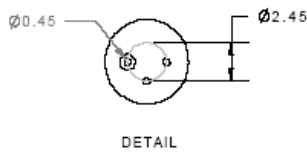
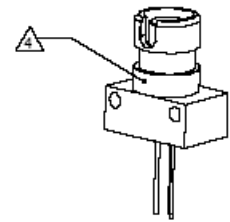
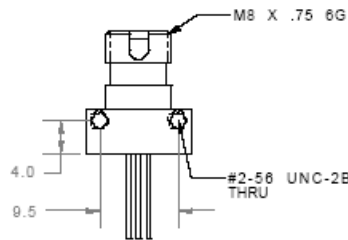
NOTES:

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.

PDSI Series

**Detectors for Fiber Optics
Silicon PIN Diodes**

**Mechanical Drawing for Board Mount FC Receptacle
PDSIU500FC23-W-0**



Absolute Maximums	
Operating Temperature	-40 to +85 °C
Storage Temperature	-40 to +100 °C
Reverse Voltage	15V

NECSEL reserves the right to make modifications to or discontinue products without prior notice.

5/21 PDSI REV 8