

PD-LD Inc. offers 2 sizes of standard Silicon Avalanche Photodiodes in several styles of fiber coupled packages. The semiconductors are available in two standard sizes: 230 micron or 500 micron active areas. Our Silicon APDs cover the optical spectrum from 550 nm to 1050 nm and are optimized for peak performance in the 880nm to 905nm region. 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 micron to 200 micron. 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.

Absolute Maximum Rating for both 230 & 500 micron diameter APDs

Parameter	Minimum	Typical	Maximum	Units
Storage Temperature	-40		85	°C
Operating Temperature	-40		85	°C
Reverse Current Peak Value (cw operation)			200	uA
Reverse Current Peak Value (1 sec duration)			1	mA
Forward Current I_f at 20° C Average Value (cw operation)			5	mA
Forward Current I_f at 20°C Peak Value (1 sec duration)			50	mA
Maximum Total Power Dissipation			60	mA
Soldering for 5 seconds			200	°C

PART NUMBER CONFIGURATION

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

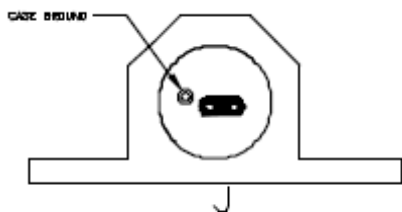
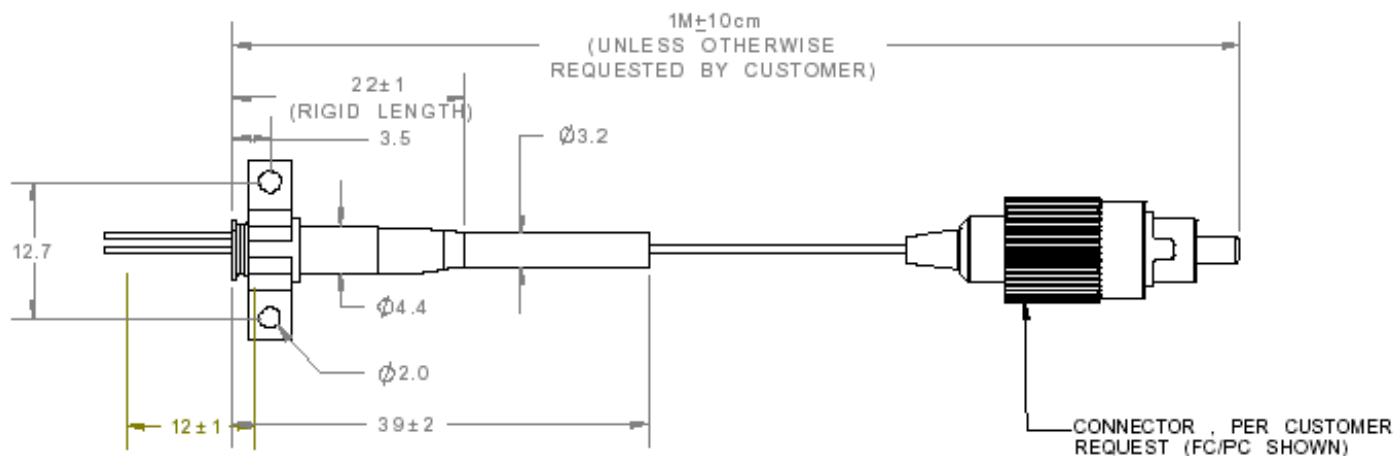
Device Type XX	Device Code K	Active Area AAA	Fiber Size F (μm)	Connector CC Pigtail Only	Receptacle CCC	Bracket B Pigtail Only	Orientation O*	Pigtail Length M
SA= Silicon APD	B=230	230=230μm	1=9/125/900	FC=FC/PC	FC1=Panel Mount	A=None	TBD	10=10m
	C=500	500=500um	2=50/125/900	FA=FC/APC	FC2=Board Mount	B=Panel/ Vertical		02=2m
			3=62.5/125/900	SM=SMA 905	SC1=Panel Mount	18mm hole spacing		01=1m
			4=105/125/900	SC=SC/PC	SC2=Panel or Board Mount	E=Panel/ Vertical		.5=0.5m
			A=200/240/900	SA=SC/APC	ST7=Low Profile	12mm hole spacing		.1=0.1m
			9=Customer Sup- plied	ST=ST/PC	ST8=Board/ Panel Mount	D= Board/ Horizontal		
				00=No Con- nector	SM1=SMA			
					UN1=Universal Bd. Mt.			

*Orientation : the leads of the APD may be rotated with respect to the receptacle body or mounting bracket . The customer may specify the positioning of the leads in order to align them most easily with existing pcb layouts. When not specified PD-LD standard orientations will be applied

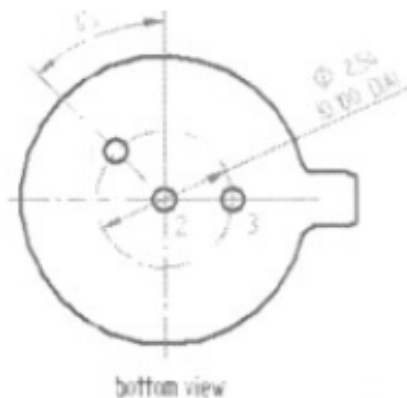
* V= Version Number that may be assigned to a part number when special requirements for packaging, testing or documentation are required.

Electrical Characteristics								
	PDSAB Series				PDSAC Series			
Parameter	Min	Typ	Max	Units	Min	Typ	Max	Units
Diameter		230		um		500		um
Breakdown Voltage @Id=10 uA	150	230	300	Volt	150	230	300	Volt
Responsivity @ 880nm & M=100	45	50		A/W	45	50		A/W
V _{br} Temperature Coefficient		0.6	1.5	V/°C		0.6	1.5	V/°C
Dark Current @ M=100		1.0	3.0	nA		1.5	5.0	nA
Noise Current @ M=100		0.2	0.5	pA/sqrt Hz		0.2	0.5	pA/sqrt Hz
Capacitance @ M=100		1.0	1.5	pF		2.0	3.0	pF
Rise Time @ M=100		500		psec		500		psec

**Mechanical Drawing for
PDSAB2302FCD-J-0-01
PDSAC5002FCD-J-0-01**



Pin#1: GND
Pin#2: Anode
Pin#3: Cathode



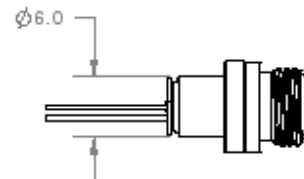
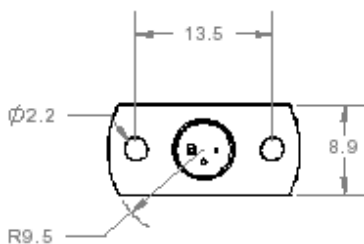
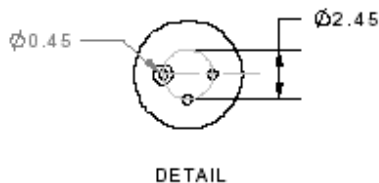
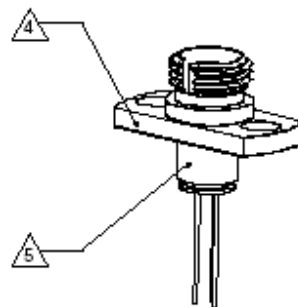
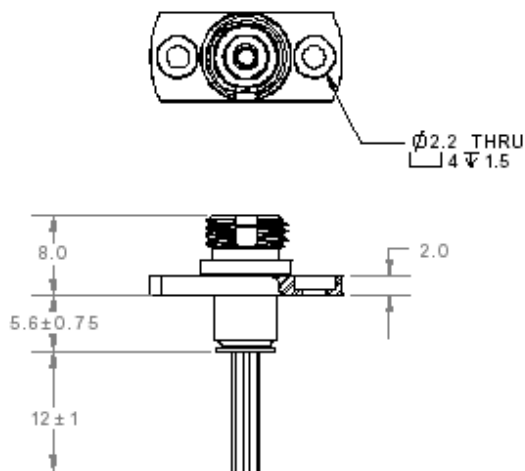
Mechanical Drawing for PDSAB230FC13-W-0 PDSAC500FC13-W-0

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



**Mechanical Drawing for
PDSAB230ST74-T-0
PDSAC500ST74-T-0**

