

PDINP Series

InGaAs Detectors for Fiber Optics

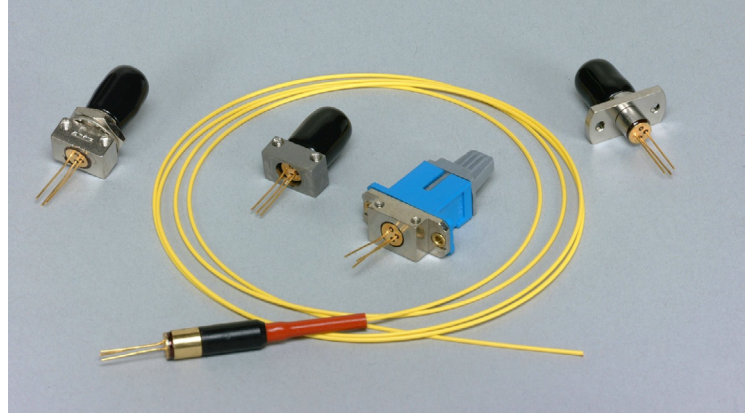
PD-LD Inc. offers a variety of standard and custom PIN Photodiodes and APDs in fiber coupled packages. The semiconductors offered are of proven manufacture and design. Our PDINP Series are 75um diameter InGaAs PIN photodiodes that are optimal from 1100 to 1650nm. These devices are available in fiber pigtailed co-axial packages or in connector style receptacle packages.

Pigtailling

These 75um diameter devices can be pigtailed with any size optical fiber that is compatible with its active area size. Pigtails may range in core size from 3um to 62.5micron. 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, SC as well as SMA 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.



Low Back Reflection Assemblies

For those applications requiring low optical back reflection, PD-LD offers a series of fiber pigtailed InGaAs detectors. Typically, 55 um or 75um InGaAs detectors are aligned to angle-polished, radially tuned fiber pig-tails, in order to minimize incident reflected light. With this process, back reflection values from -40 to -50dB may be specified. Such devices are ideal for CATV, tap

Manufacturing

PD-LD Inc. maintains a large inventory of the most popular detector sizes and pin-outs. 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

PD-LD Part Number	Zarlink X-Ref	Connector or Receptacle Type	Fiber Type Core/Cladding (um)	Lead Orientation	Bandwidth -3dB (GHz)
InGaAs (@ 5V bias, 1300nm Laser Source, 25°C. Maximum Input power 10mW, 50/125um test fiber. 0.9pF maximum capacitance. 0.8A/W min responsivity.					
PDINP075FC13-W-0	MF432FC	FC Panel Mount	62.5/125	"W"	2.5
PDINP075SC23-W-0	MF432-SC	SC Board or Panel Mount	62.5/125	"W"	2.5
PDINP075SC63-Q-0	MF432-SC special	SC Board Mount Narrow body	62.5/125	"Q"	2.5
PDINP075ST73-Q-0	MF432ST	ST Low Profile	62.5/125	"Q"	2.5
PDINP075ST83-Q-0	N/A	ST High Profile	62.5/125	"Q"	2.5
PDINP075ST83-W-0	N/A	ST High Profile	62.5/125	"W"	2.5
PDINP075SM13-Q-0	MF432SMA	SMA Board Mount	62.5/125	"Q"	2.5
PDINP0755SAD-V-0-01	N/A	Pigtailed LBR SC/APC	9/125	"V"	2.5
PDINP0751SCA-0-0-01	MF432PT	Pigtailed SC/PC	9/125	—	2.5
PDINP075FC11-W-0	N/A	FC Panel Mount	9/125	"W"	2.5
PDINP0751LCD-V-0-01	N/A	Pigtailed LC w/flange	9/125	"V"	2.5

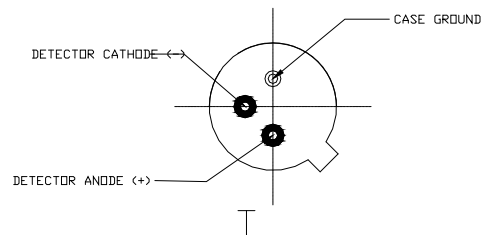
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Pinout & Mechanical Dimensions (mm)



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, ect) 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. The standard pin-out rotation is to have the TO can tab at 1:00 when the assembly is viewed from the rear and the key slot is up (12:00) .

		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	Orienta- tion O	Pigtail Length M	
IN=InGaAs PIN	P= 75µm device with "T" style pin-out	075=75microns	1=9/125/900	FC=FC/PC	FC1=Panel Mount	A=None	TBD	10=10m	
			2=50/125/900	FA=FC/APC	FC2=Board Mount	B=102-10112 Panel	V=Gnd at 9:00	03=3m	
			3=62.5/125/900	FU=FC/UPC	SC1=Panel Mount	C=102-10181 BdMt	0=no bracket	01=1m	
			4=100/140/900	SC=SC/PC	SC2=Panel or Board Mount	D=102-10198 BdMt		.5=0.5m	
			5=9/125/900 Low Back Reflection -40dB max	SA=SC/APC	SC6= Board Mount receptacle without "ears"	W=Bracket Shipped Separately		.1=0.1m	
			8=7/125/900 Flexcore						
			9=Customer Supplied	ST=ST/PC	ST7=Low Profile	X=Customer Supplied			
			A=200 micron core fiber	LC=LC/PC	ST8=Board/ Panel Mount				
			G=9/125/250 Low Back reflection	LA=LC/APC					
			Sensor Fiber and other sizes available	00=No Connector	UN1=Universal Bd. Mt.				

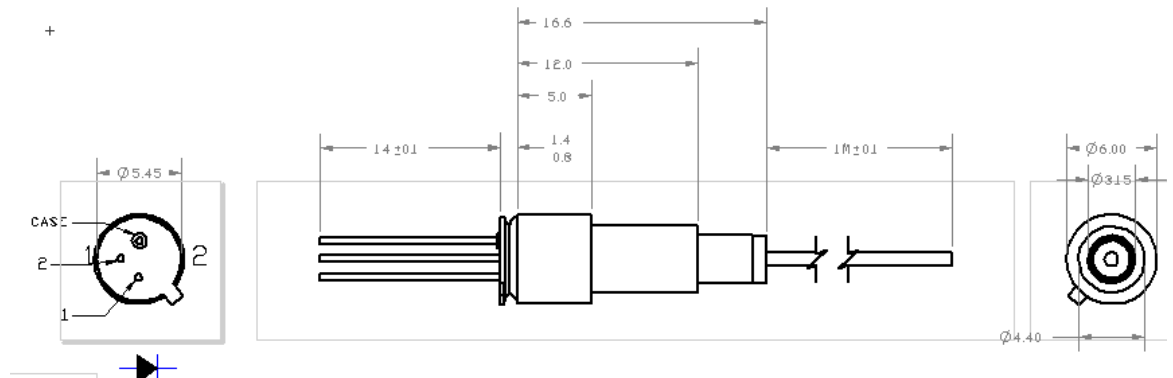
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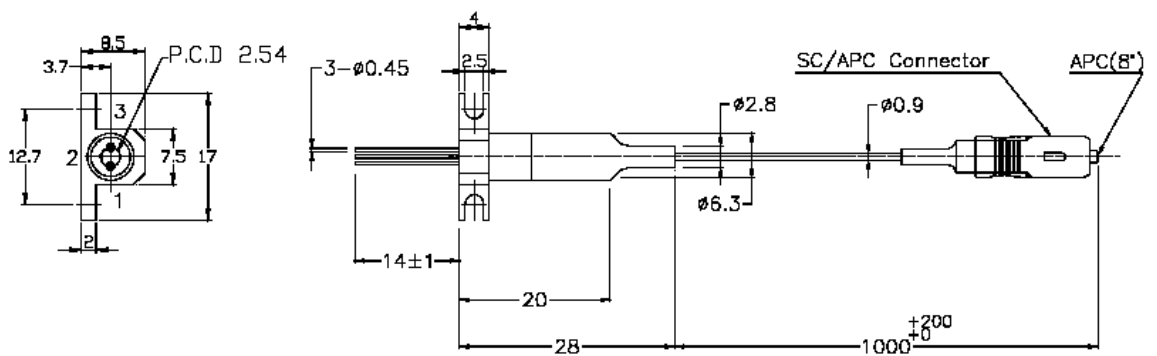
InGaAs Detectors for Fiber Optics

Mechanical Drawing for Coaxial Fiber Pigtailed PIN Photodiode
 Low Back Reflection Model PDINP075500A-0-0-01
 Standard Model PDINP075100A-0-0-01
 Flexcore 5.9um core at 980nm PDINP075800A-0-0-01



PDINP0755SAD-V-0-01

**Pin 1= PD Anode
 Pin 2= PD Cathode
 Pin 3= Ground**



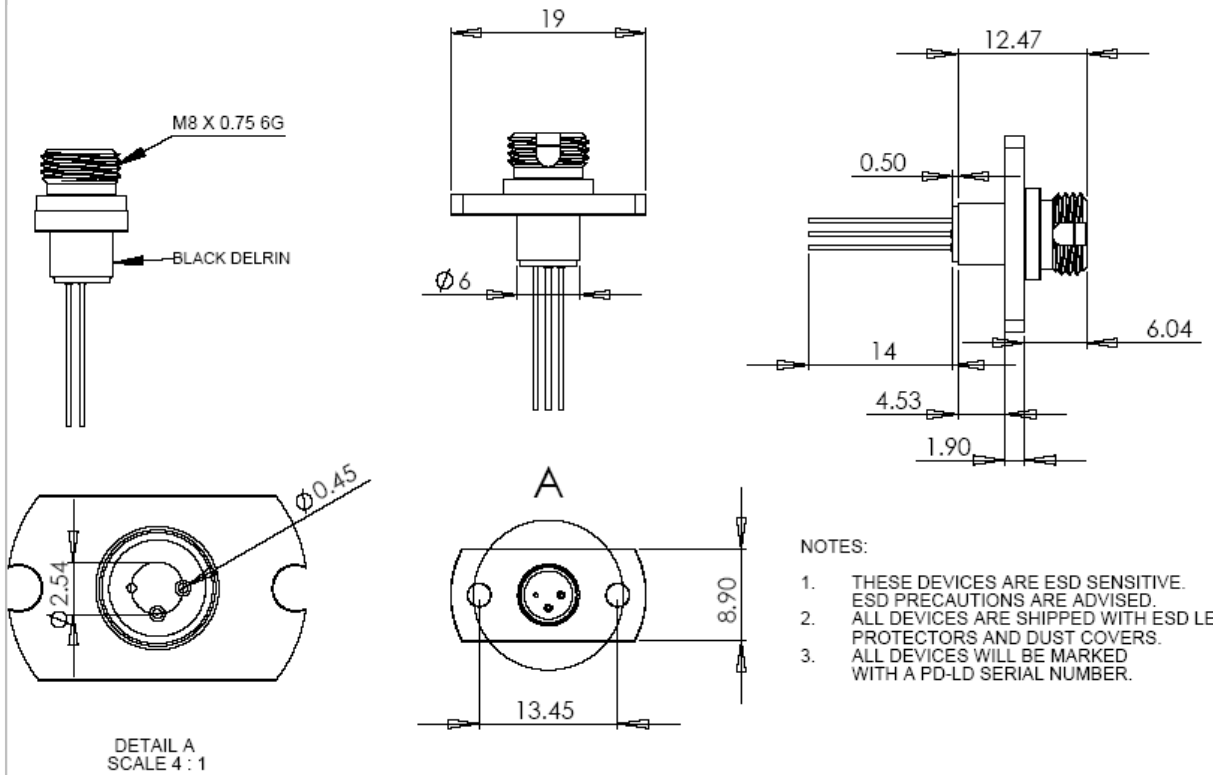
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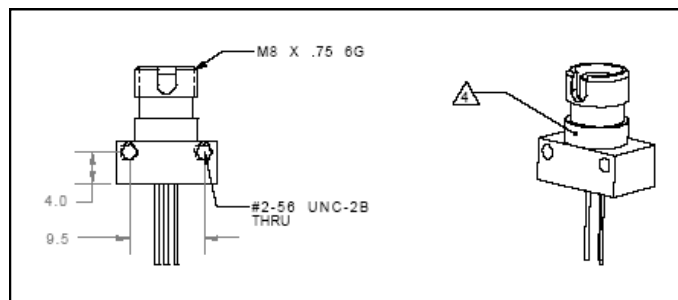
FC Panel Mount Receptacle with “W” Lead Orientation



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.

FC Board Mount Receptacle Housing



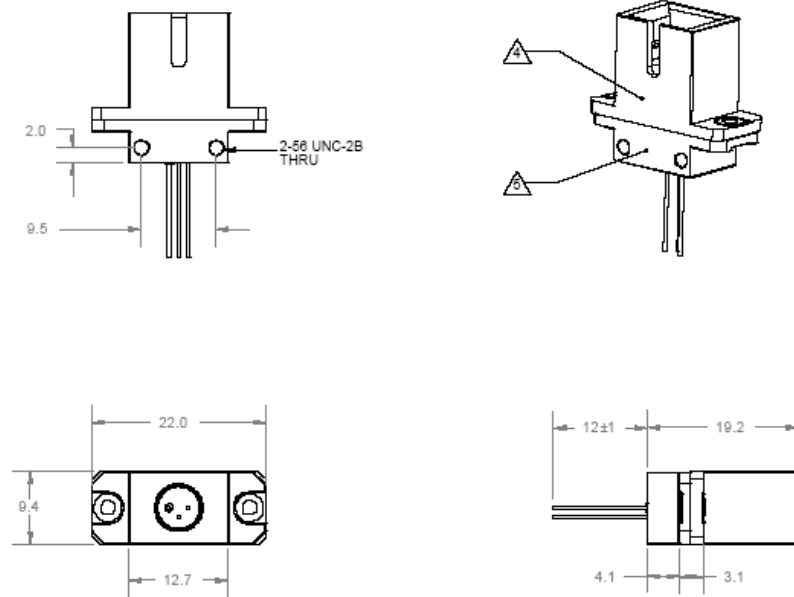
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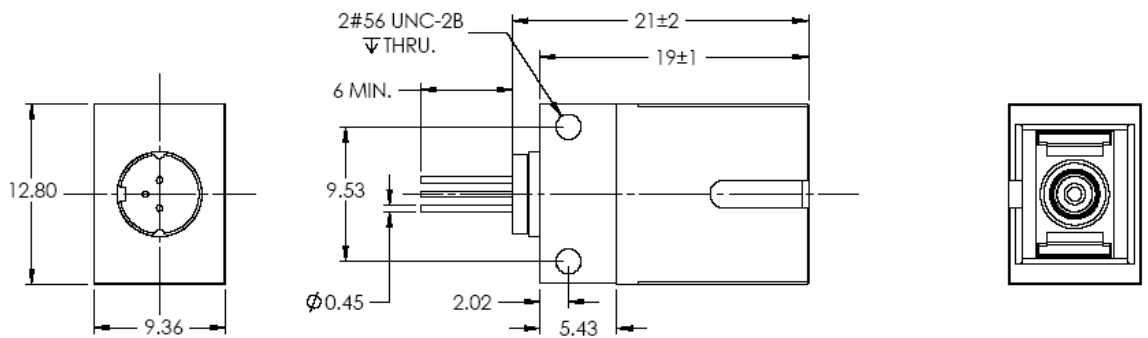
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**SC2 Style Board / Panel Mount
Receptacle with "W" Lead Orientation**



SC6 Style Board Mountable Receptacle with "W" Lead Orientation



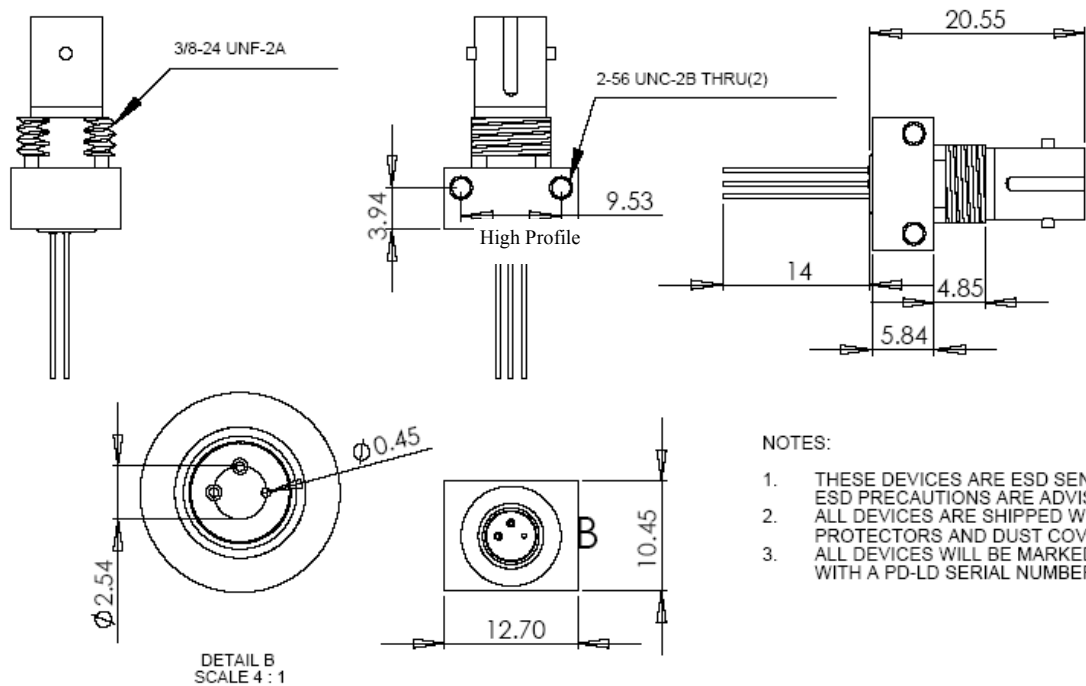
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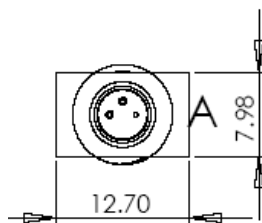
ST Receptacle style Housings Low and High Profile Heights With “Q” or “W” Lead Orientation



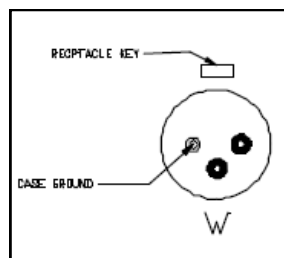
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Low Profile “Q”



“W” Lead Orientation



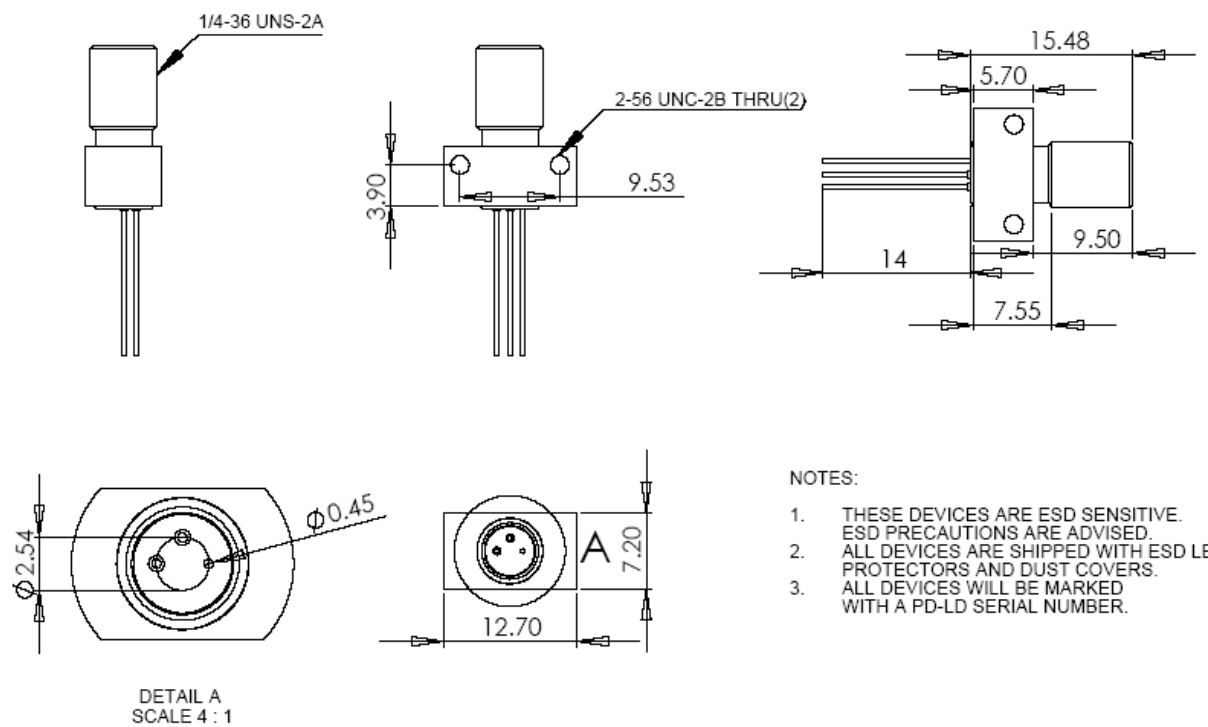
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**SMA Board Mount Housing with
“Q” Lead Orientation**



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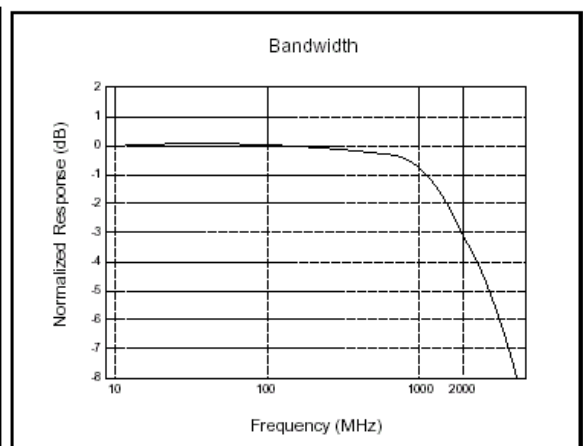
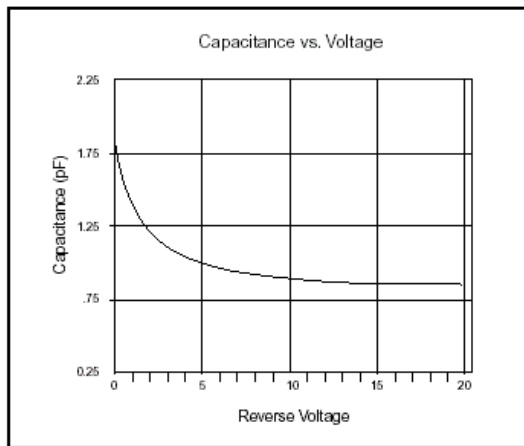
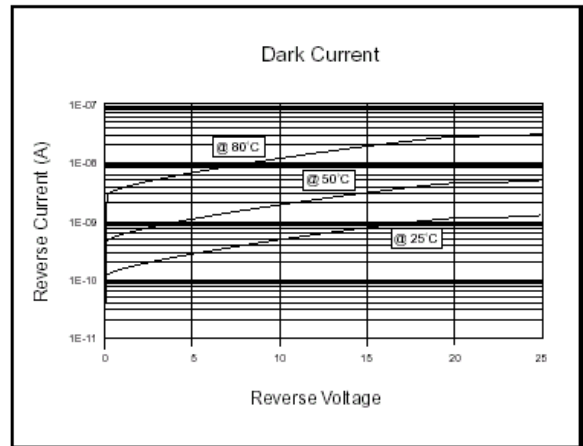
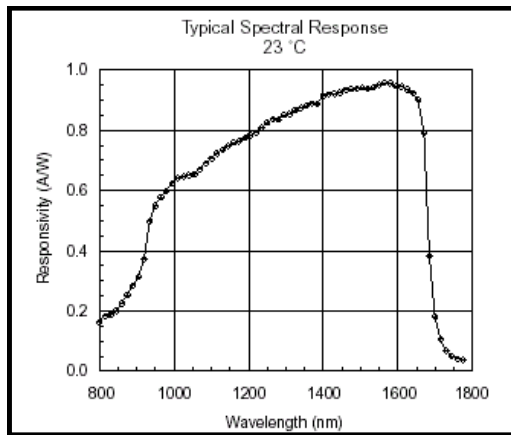
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InGaAs Absolute Maximum Ratings (Tc=25°C)			
Parameter	Symbol	Value	Unit
Reverse Current	I_R	2	mA
Reverse Voltage	V_R	20	V
Forward Current	I_F	5.0	mA
Operating Temperature	T_{OPR}	-40 to 85	°C
Storage Temperature	T_{STR}	-40 to 95	°C

Plots for 75um Diameter InGaAs PIN Photodiodes, INP and INR Series



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