



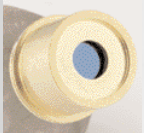
# Windowless - Large Area APDs

## Electro-Optical Characteristics

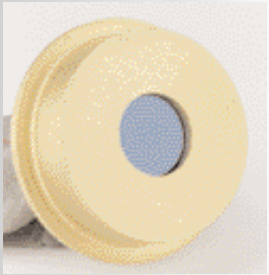
All specifications apply when APD is operated at 23°C and at a gain of 200.



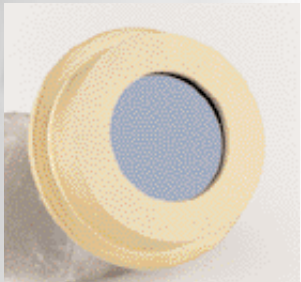
3 mm



5 mm



10 mm



16 mm

Active Area Diameter (mm)	Bias Voltage Range† (V)	Temperature Coefficient of Breakdown Voltage (%/°C)	Capacitance f = 100kHz Typ (pF)	Dark Current Typ (nA)	Dark Current Max (nA)	Noise Current Spectral Density f = 100kHz Typ (pA/√Hz)	Noise Current Spectral Density f = 100kHz Max (pA/√Hz)	Rise Time λ = 675 nm Load = 50Ω Typ (ns)	Rise Time λ = 675 nm Load = 50Ω Max (ns)
3	1700 to 2000	+0.1	15	20	60	0.7	1.4	8	12
5			25	35	100	1.0	2.0	10	15
10			65	90	230	1.5	3.0	12	18
16			130	280	600	2.5	5.5	15	22

## Absolute Maximum Ratings◇

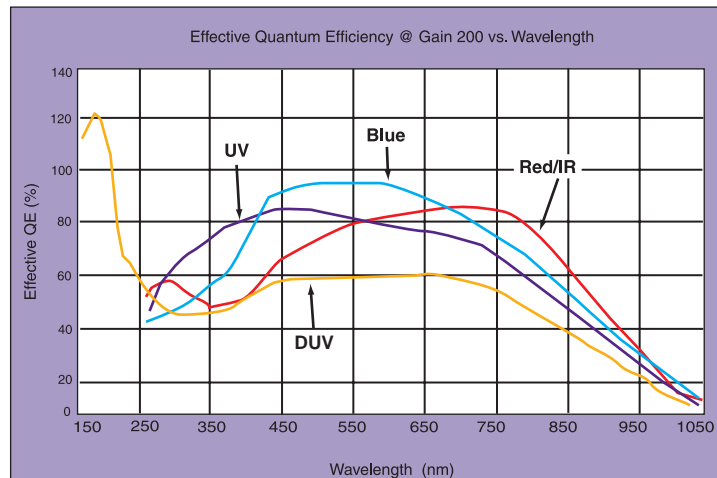
Gain, M @ λ=675nm	250
Operating Temp Range (°C)	-55 to +40
Storage Temp Range (°C)	-55 to +70
Power Dissipation @23°C (W)	3mm - 0.12 5mm - 0.2 10mm - 0.4 16mm - 0.6

Part Number	Active Area Diameter (mm)	Spectral Enhancement	Responsivity Typical (A/W)
118-70-75-520	3	DUV	30 @ 160nm
118-70-73-520		UV	38 @ 350nm
118-70-74-520		Blue	70 @ 500nm
118-70-72-520		Red/IR	100 @ 750nm
197-70-75-520	5	DUV	30 @ 160nm
197-70-73-520		UV	38 @ 350nm
197-70-74-520		Blue	70 @ 500nm
197-70-72-520		Red/IR	100 @ 750nm
394-70-75-5X0‡	10	DUV	30 @ 160nm
394-70-73-5X0‡		UV	38 @ 350nm
394-70-74-5X0‡		Blue	70 @ 500nm
394-70-72-5X0‡		Red/IR	100 @ 750nm
630-70-75-5X0‡	16	DUV	30 @ 160nm
630-70-73-5X0‡		UV	38 @ 350nm
630-70-74-5X0‡		Blue	70 @ 500nm
630-70-72-5X0‡		Red/IR	100 @ 750nm

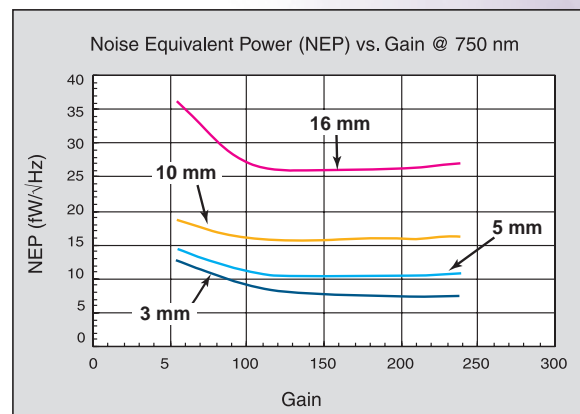
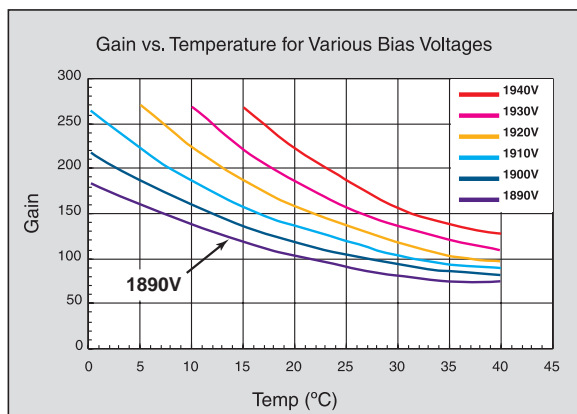
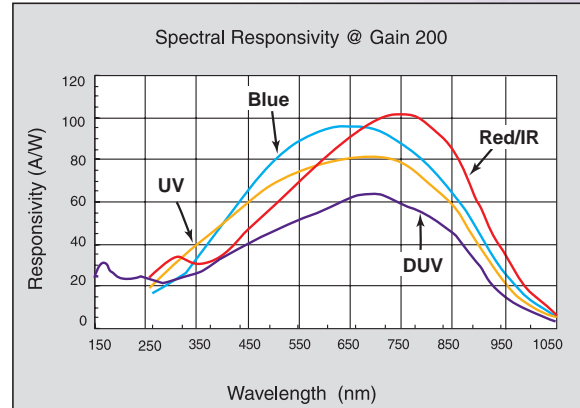
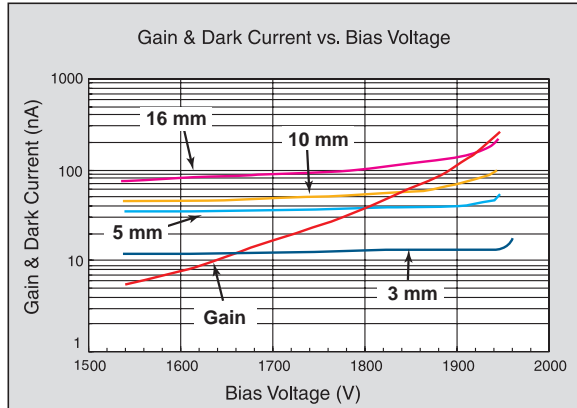
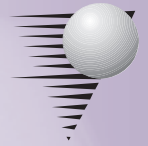
† Positive high voltage (HV) is applied to the cathode contact. The maximum value for the operating HV is specified with each device.

‡ "X" indicates package style; "0" = SHV connector (supplied with mating connector) and "1" = a single pin connection.

◇ Operating beyond these limits may cause permanent damage to the device.

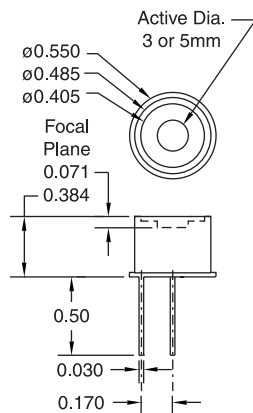


# Typical Performance Graphs

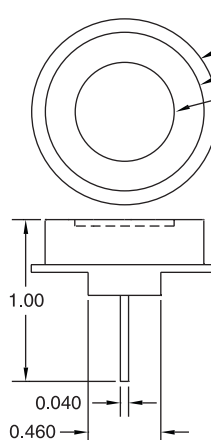


## Mechanical Dimensions

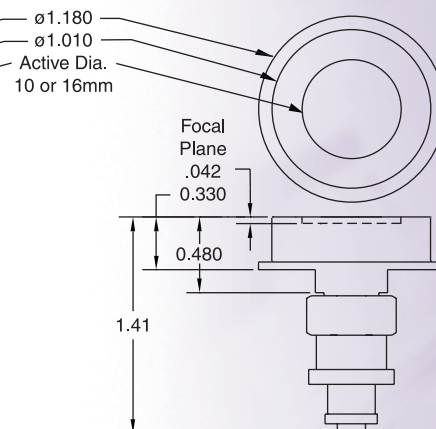
Package for  
118-70-7X-520  
197-70-7X-520



Package for  
394-70-7X-510  
630-70-7X-510



Package for  
394-70-7X-500  
630-70-7X-500



Center pin on all three package types is the APD's cathode and case is the APD's anode.