



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		Dark Current		Noise Current Spectral Density f = 100kHz		Rise Time λ = 675 nm Load = 50Ω	
			Typ (pF)		Typ (nA)	Max (nA)	Typ (pA/√Hz)	Max (pA/√Hz)	Typ (ns)	Max (ns)
3	1700 to 2000	+0.1	15		25	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			140		280	600	2.5	5.5	15	22

Absolute Maximum Ratings◇

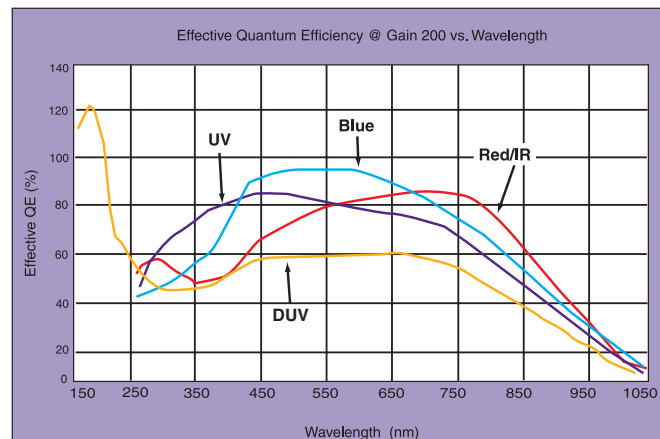
Gain, M @ λ=675nm	250
Operating Temp Range (°C)	-20 to +50
Storage Temp Range (°C)	-55 to +70
Power Dissipation @23°C (W)	3mm - 0.12
	5mm - 0.2
	10mm - 0.4
	16mm - 0.6

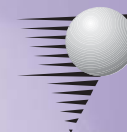
Part Number	Active Area Diameter (mm)	Spectral Enhancement	Responsivity Typical (A/W)
118-70-75-520	3	DUV	30 @ 160nm
118-70-73-520		UV	38 @ 350nm
118-70-74-520		Blue	70 @ 500nm
118-70-72-520		Red/IR	100 @ 750nm
197-70-75-520	5	DUV	30 @ 160nm
197-70-73-520		UV	38 @ 350nm
197-70-74-520		Blue	70 @ 500nm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

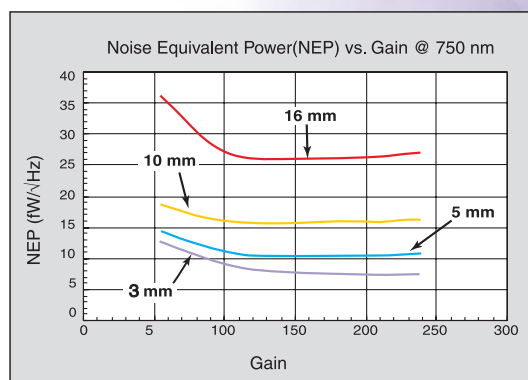
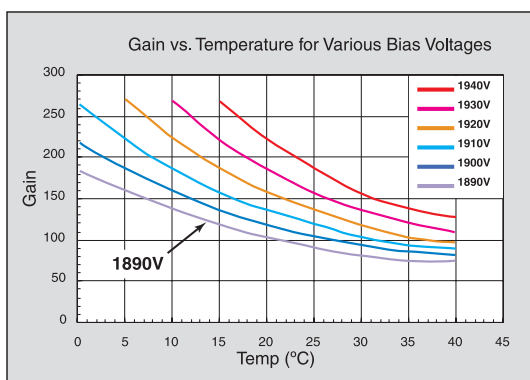
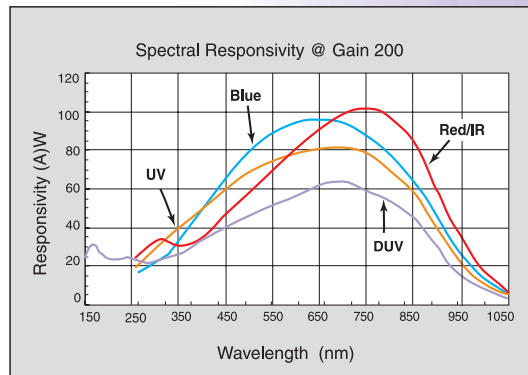
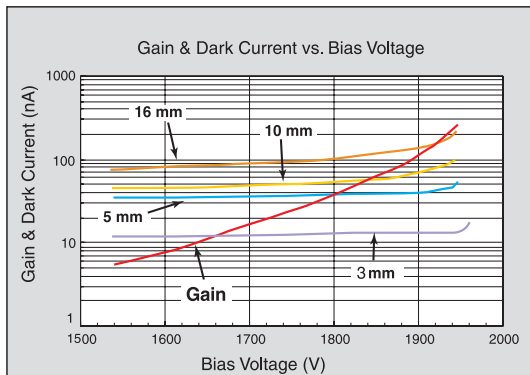
‡ "X" indicates package style; "0" = SHV connector (supplied with mating connector) and "1" = a single pin connection.

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

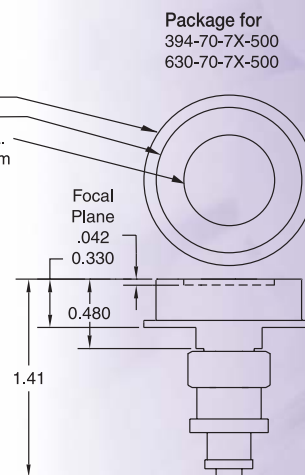
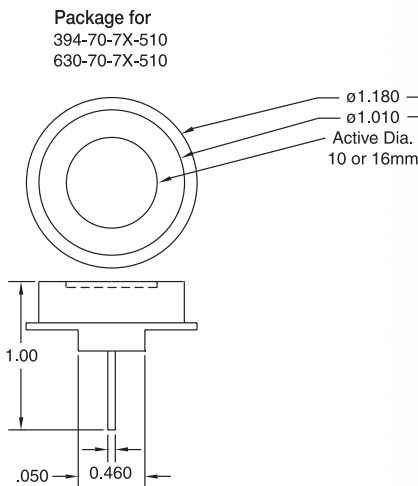
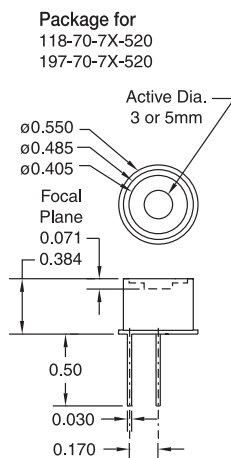




Typical Performance Graphs



Mechanical Dimensions



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