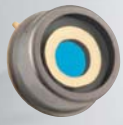
Windowed - Large Area APDs

Electro-Optical Characteristics

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

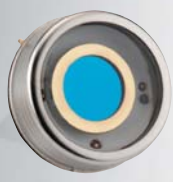
3 mm

Active 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 = 10kHz Typ (pA/√Hz)	Noise Current Spectral Density f = 10kHz Max (pA/√Hz)	Rise Time λ = 675nm Load = 50Ω Typ (ns)	Rise Time λ = 675nm Load = 50Ω 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



5 mm

Part Number	Active Area Diameter (mm)	Spectral Enhancement	Responsivity Typical (A/W)
118-70-73-581	3	UV	35 @ 350nm
118-70-74-581		Blue	65 @ 500nm
118-70-72-581		Red/IR	93 @ 750nm
197-70-73-581	5	UV	35 @ 350nm
197-70-74-581		Blue	65 @ 500nm
197-70-72-581		Red/IR	93 @ 750nm
394-70-73-581	10	UV	35 @ 350nm
394-70-74-581		Blue	65 @ 500nm
394-70-72-581		Red/IR	93 @ 750nm
630-70-73-5X1‡	16	UV	35 @ 350nm
630-70-74-5X1‡		Blue	65 @ 500nm
630-70-72-5X1‡		Red/IR	93 @ 750nm



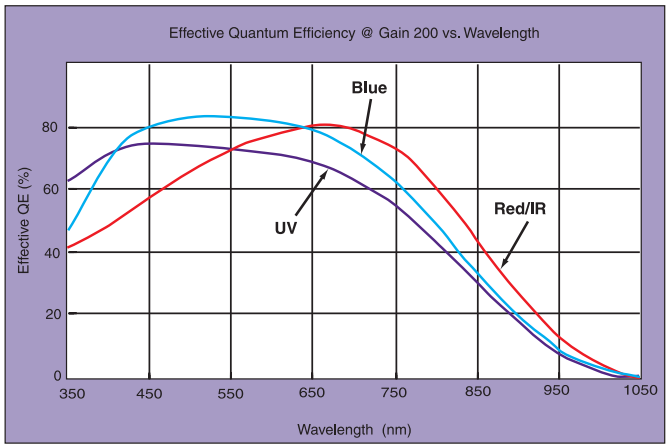
10 mm

Absolute Maximum Ratings◊

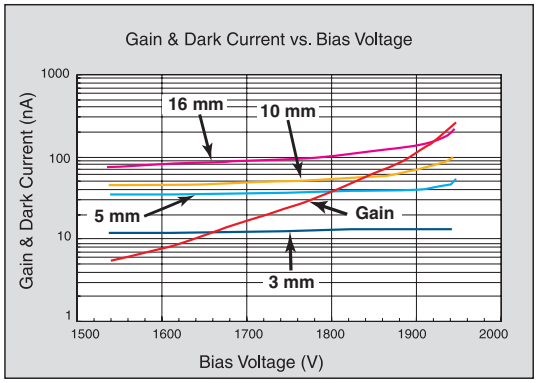
Gain, M @ λ=675nm	250
Operating Temp Range (°C)	-20 to +50
Storage Temp Range (°C)	-20 to +70
Power Dissipation @23°C (W)	3mm - 0.12 5mm - 0.2 10mm - 0.4 16mm - 0.6

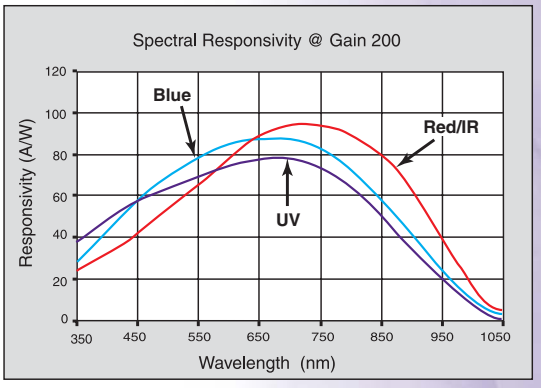
† Positive high voltage (HV) is applied to the cathode contact. The maximum value for the operating HV is specified with each device.
‡ "X" indicates package style; "0" = SHV connector (supplied with mating connector) and "1" = a single pin connection.
◊ Operating beyond these limits may cause permanent damage to the device.

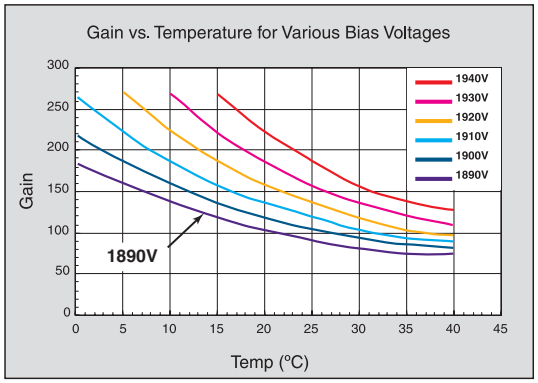
16 mm

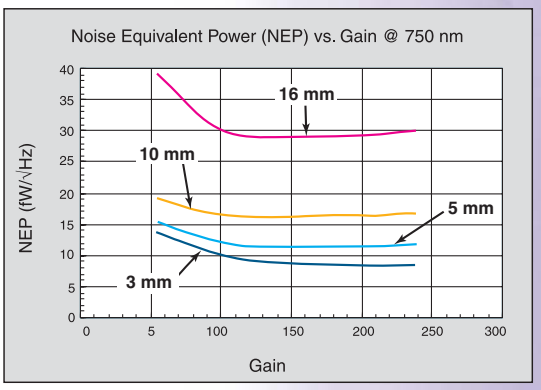


Typical Performance Graphs



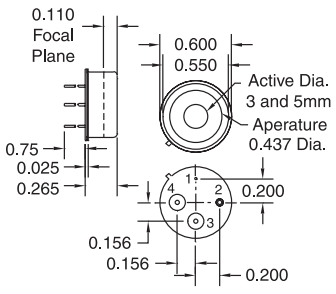




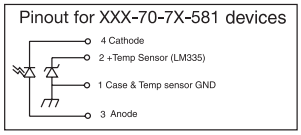


Mechanical Dimensions

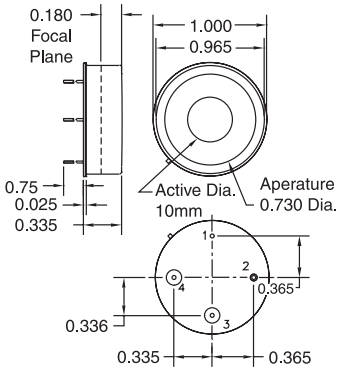
Package for
118-70-7X-581
197-70-7X-581



Pinout for XXX-70-7X-581 devices

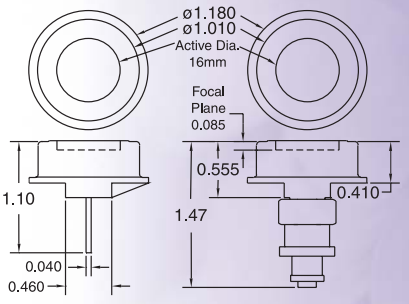


Package for
394-70-7X-581



Package for
630-70-7X-511

Package for
630-70-7X-501



Center pin on 630-70-7X-5X1 packages is the APD's cathode and the case is the APD's anode.