



# Non-Cooled OEM Modules

## Electro-Optical Characteristics

All specifications apply when APD is at 23°C with a gain of 200 and a load resistance of 50 ohms.

Part Number	APD Diameter	APD Spectral Enhancement	Sensitivity @ 1 MHz Typical* (10 <sup>5</sup> V/W)	NEP Typical* (pW/√Hz)	Frequency High Cutoff	
	(mm)				Typ (MHz)	Min (MHz)
118-70-73-651	3	UV	3.4	0.16	14	12
118-70-74-651		Blue	6.7	0.08		
118-70-72-651		Red/IR	9.3	0.06		
197-70-73-651	5	UV	3.4	0.22	14	12
197-70-74-651		Blue	6.7	0.12		
197-70-72-651		Red/IR	9.3	0.085		
394-70-73-651	10	UV	3.4	0.55	11	10
394-70-74-651		Blue	6.7	0.28		
394-70-72-651		Red/IR	9.3	0.2		

Feedback Resistance (kΩ)	Output Offset		Output Impedance (Ω)	Linear Output Swing (V)	Output Stability Typical (%/°C)	Current Consumption			
	Typ (mV)	Max (mV)				+12V±1V Supply		-12V±1V Supply	
20±1%	±1	±5	50	+1	0.5	Typ (mA)	Max (mA)	Typ (mA)	Max (mA)
						120	220	30	50

## Absolute Maximum Ratings<sup>◇</sup>

APD Active Diameter (mm)	Continuous Incident Light Intensity APD gain =200 λ=675nm (μW)	APD Gain @ 23°C λ=675nm	Ambient Operating Temp. (°C)	Storage Temp. (°C)	Supply Voltage (V)
3	0.75	250	0 to +40	-40 to +70	±13
5	1.0				
10	2.0				

HV bias/APD gain control realized by potentiometer located on backside of the module or remote 0 to +5V analog programming configured by jumper located on backside of the module.

Remote HV control ratio: 404 V per 1V (typical).

HV monitor ratio: 404 V per 1V (typical).

Temperature monitor output is 10mV/°K. (See National Semiconductor data sheet for LM335 temperature sensor.)

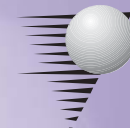
Recommended load on the amplifier output is from 50 ohms to 1 Mohm.

Modules can be modified or customized by Advanced Photonix to meet individual customer requirements.

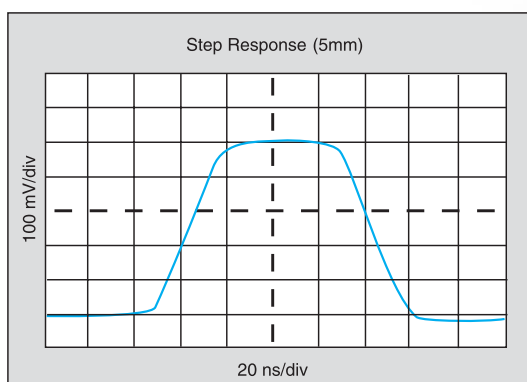
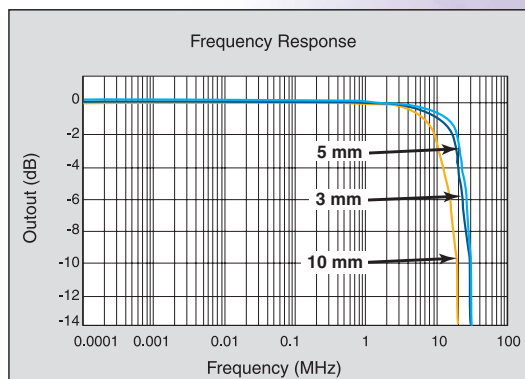
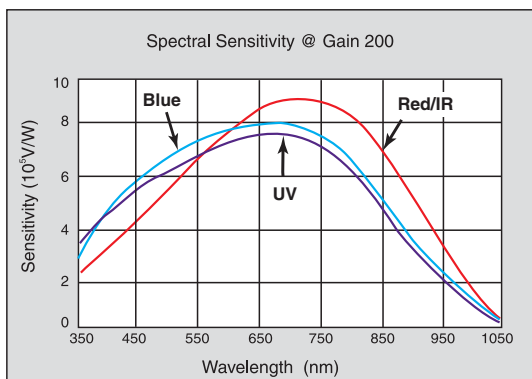
<sup>◇</sup> Operating beyond these limits may cause permanent damage to the device.

\* Sensitivity and NEP for UV, Blue and Red/IR specified at wavelengths of 350nm, 500nm and 750nm, respectively.





# Typical Performance Graphs



## Mechanical Dimensions

### Non-Cooled OEM Modules Electric Wiring Table

Wire Color	Item
Red	+12V
Green	GND
Black	-12V
Orange	HV Monitor
Blue	External Bias Adjust Input
Violet	Temperature Monitor

