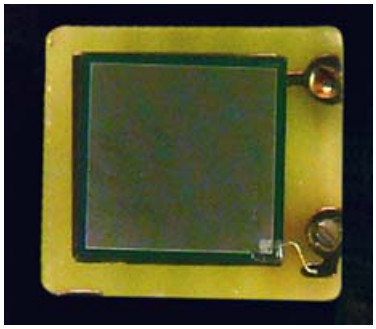
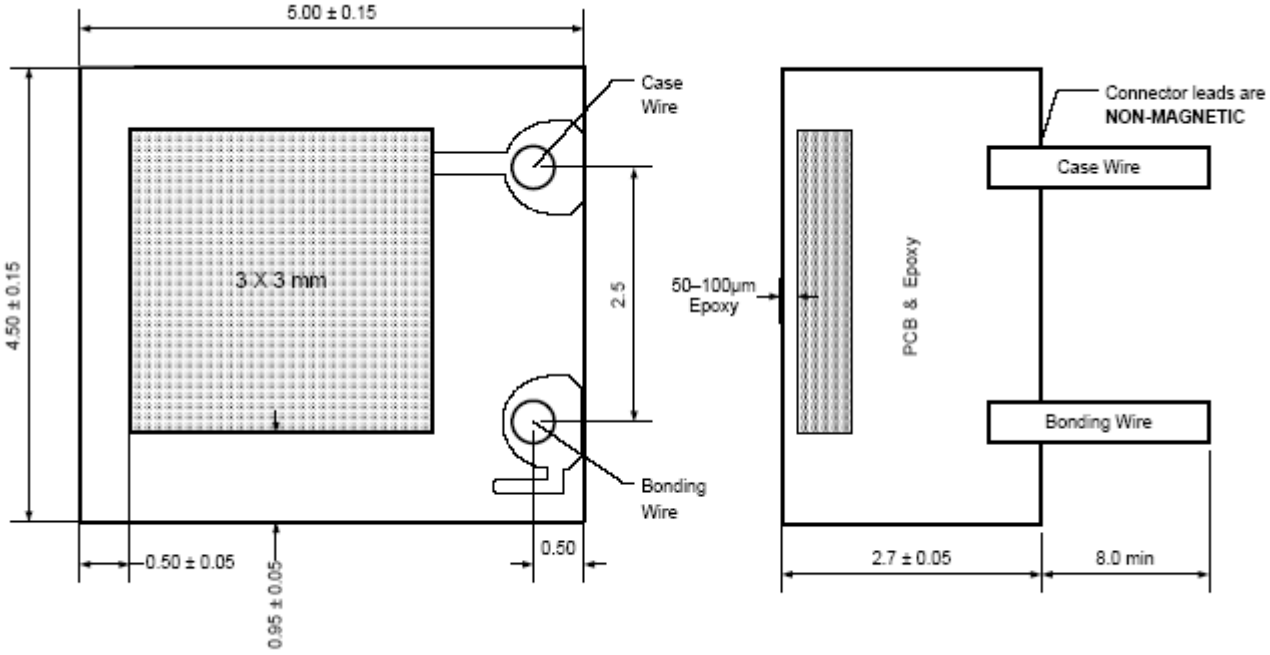
3.0 x 3.0 mm^2 PCB mounted Solid State Photomultiplier



0710G9MM is a 9.0mm2 active area Solid State Photomultiplier offering >20% photon detection efficiency throughout the visible part of the spectrum. The sensor is mounted on a compact, non-magnetic package and is encapsulated in epoxy for easy handling and safe coupling to light sources.

Low operating voltage, high gain and good noise characteristics make this sensor a versatile option for a wide range of low-light sensing applications.

dimensions



notes

- All performance figures are indicative.
- PHOTONIQUE can provide detailed characterization for individual SSPM's
- Diagrams and instructions for signal amplifier and biasing circuits are provided when buying PHOTONIQUE SSPMs.
- CAUTION: For optimal integration and coupling to light sources, the light sensitive sensor is not enclosed - DO NOT SCRATCH OR OTHERWISE DAMAGE ITS SURFACE.
- ALL DATA SUBJECT TO CHANGE WITHOUT NOTICE

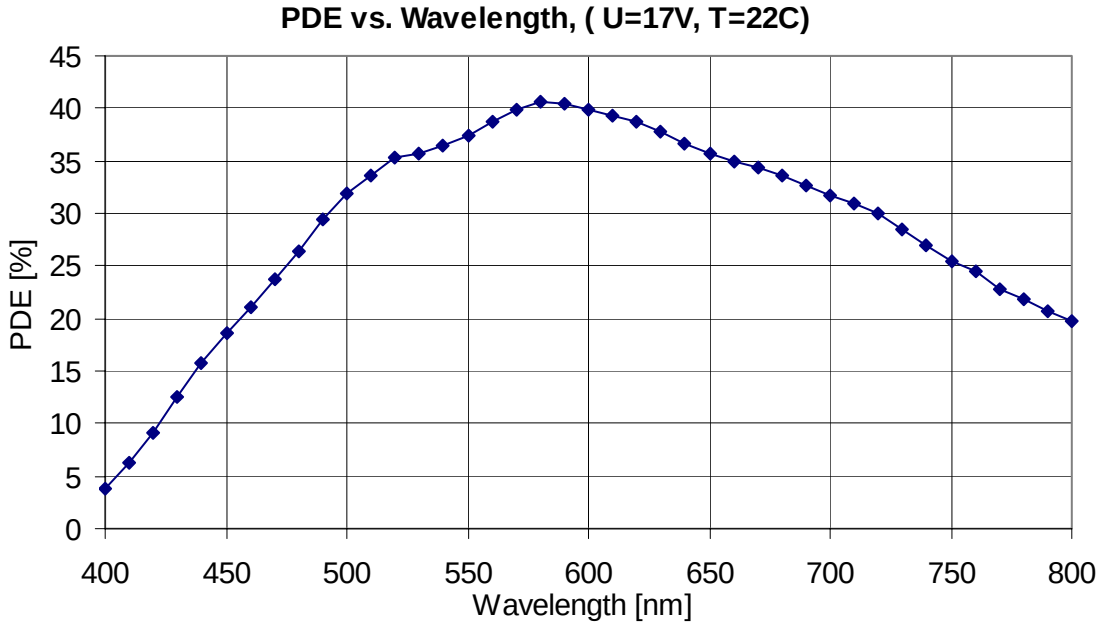
For further information please contact:

Photonique SA
C.P. 1562
1211 Geneva-1
Switzerland

typical performance at T= +22C°

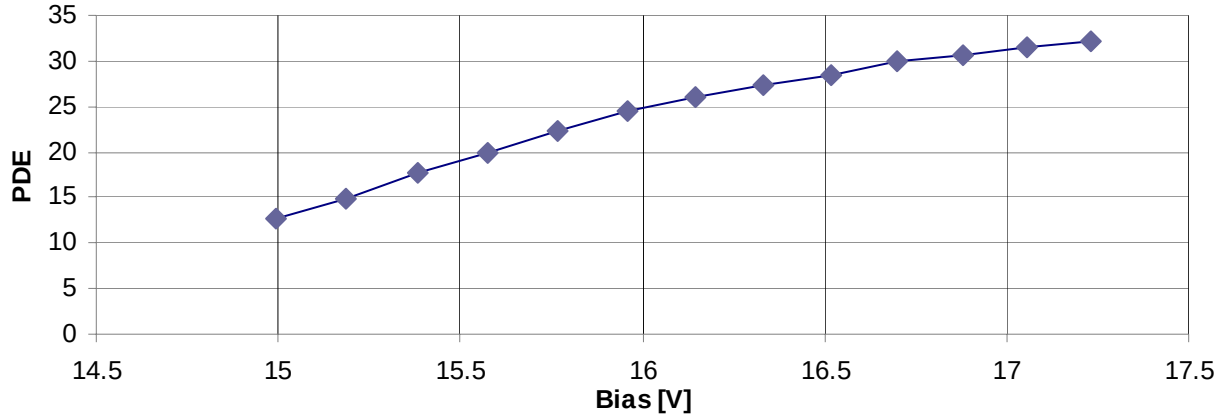
Parameter	Units	Typical Values	Comments
Peak Sensitivity Wavelength	nm	580	= λ_P
Single photon detection efficiency	%	40 / 19	at λ_P / at 450nm
Operating Voltage	V	17.0 15.0 - 17.5	= V_R Recommended range
Gain		0.18 x 10^6	at V_R
Dark current	µA	75	typical at V_R
Capacitance	pF	300	at V_R and readout rate f_R =1MHz
Excess noise factor		<1.15	at V_R, f_R and λ_P
Signal rise time	ns	<2	
Number of micro-cells		~8100	
Fill or Geometric Factor	%	>60	
Operating Temperature	C°	-40 ... +40	
Storage Temperature	C°	-40 ... +60	
Max. sensor temperature during soldering	C°	110	

performance graphs

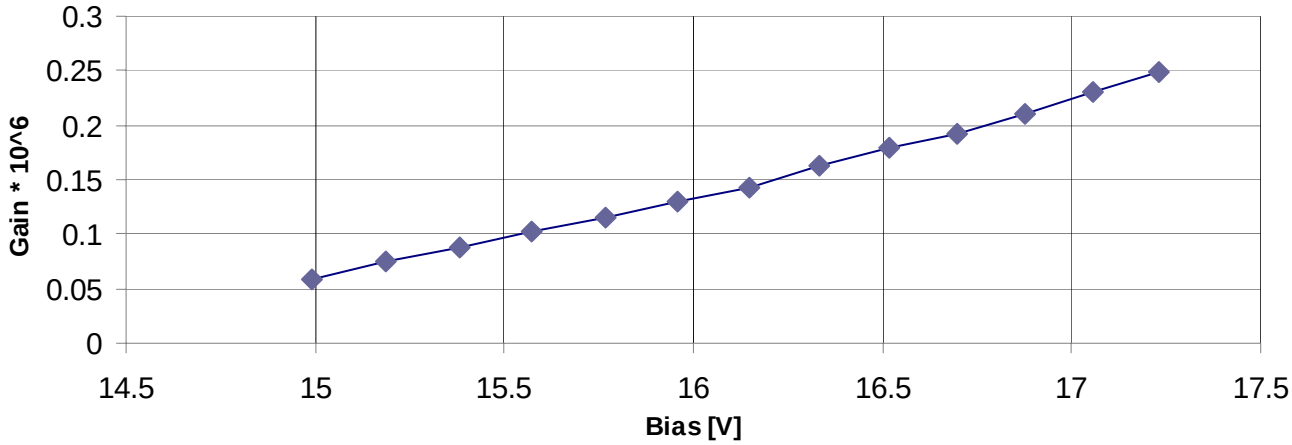


performance graphs

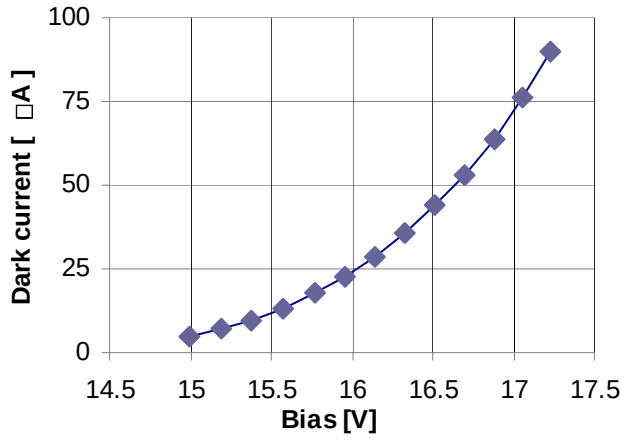
Photon Detection Efficiency vs. Bias Voltage (at 515nm)



Gain vs. Bias Voltage (50ns readout gate)



Dark current vs. Bias Voltage



Noise (Photoelectrons) vs. Bias