

SPAD

SPAD means **S**ingle **P**hoton counting **A**valanche photo-**D**iode. It stands commonly for a complete module including an Avalanche Photodiode, working temporary above the breakdown voltage in reverse bias. One photon may trigger the avalanche process and generates a time-corresponding electrical pulse. The avalanche must be “quenched” in order to prevent destructive current flow. This is achieved by passive or active quenching circuits. Passive quenching requires basically just a resistor but is slow and causes longer deadtimes. Active quenching is standard for all modules used by PicoQuant.

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