



IQS-L

Lidar Integrated Quantum Sensor (CMOS Silicon Photomultiplier) (Light Detection and Ranging)

IQS-L is a type of sensors SiPM (CMOS Silicon Photomultiplier) for Light Detection and Ranging. It is new type of high sensitivity Semiconductor Sensors for Low Photon Flux up to Single Photon.

IQS-L series are IQS LiDar Applications. L-IQS has Hight Sensitivity and low dark rate on the level single photon,

Features

Applications

Single Photon and Multi-photon response	LiDAR - Light Detection and Ranging
Low dark rate and crosstalk	
Excellent Time Resolution	
Operates at Room Temperature	
Low Voltage operation (Breakdown Voltage = 13.5 V)	
Compact	

Geometry Structure - 1D Array of Integrated Quantum Sensors

Type	Array Dimension	Number of Integrated Quantum Sensors	Number of Cells in Integrated Quantum Sensor
IQP-L (CMOS SiPM)	1D	8	25

Type	Number of Cells	Cell Size micron	Step micron	Fill Factor (%)	Package window
IQP (CMOS SiPM)	25	50x50	5.025	42	Glass epoxy

Electrical Characteristics (at 25C)

Type	Breakdown Voltage	Measurement Conditoins (V _{over})	Gain	Terminal Capacity (pF)	Temperature Coif. (mV/C)
IQP (CMOS SiPM)	13.5 V	3.5 V	5 x10 ⁵	10	50

Optical Characteristics

Type	Spectral Responce Range λ nm	Peak Sensitivity () λ nm	Detection Efficiency (%)	Dark Rate (Single Photon) (kHz)	Cross Talk Probability (%)
IQP (CMOS SiPM)	800-950	900	28	10	5