

ARRAYRDM-0112A20-QFN

NIR-enhanced for Automotive LiDAR Applications

Product Overview

For complete documentation, see the data sheet.

The Silicon Photomultiplier (SiPM) is a high gain, single photon-sensitive sensor used for the detection of visible to NIR wavelengths. The ArrayRDM0112A20QFN is a monolithic, 1 × 12 array of SiPM pixels based on the marketleading RDM process. The RDM process has been specifically developed to create products that achieve high PDE (photon detection efficiency) at the NIR wavelengths of 905/940nm which are typically used for LiDAR and 3D dToF ranging applications.

The array is packaged in a robust QFN package that gives access to the 12 individual pixels. In order to meet the requirements for automotive LiDAR applications this product will be qualified to AEC-Q102. An evaluation board (ArrayRDM0112A20GEVB) is has also been developed for this product.

It is recommended that those new to SiPM sensors consult the 'Introduction to Silicon Photomultipliers' application note.

Note: Automotive qualification and PPAP in process. Contact sales for additional information.

Features

- High gain and detection efficiency
- Automotive qualified
- 1 x 12 pixel array format
- PDE of 16% at 905 nm
- 30 V bias supply
- 0.47 mm x 1.12 mm pixel size
- QFN package (10 mm x 5.2 mm)

Applications

- 3D Ranging & Sensing
- Automotive LiDAR
- Industrial LiDAR
- Consumer 3D imaging
- Robotics

End Products

- Scanning LiDAR systems

Part Electrical Specifications

Product	Status	Compliance	Type	Array Format	Active Area Dimensions	Microcell Size (μm)	Optimized Wavelength (nm)	PDE @ Max Overvoltage (%)	DCR @ Typical Overvoltage (KHz/mm)	Package Type	Case Outline	MSL Type	MSL Temp (°C)	Container Type	Container Qty.
ARRAYRDM-0112A20-QFN-TR	Active	 	Array	1 x 12	1.12 mm x 0.47 mm	20	905	16	250	QFN-28	485FZ.PDF	4	260	REEL	1000
ARRAYRDM-0112A20-QFN-TR1	Active	 	Array	1 x 12	1.12 mm x 0.47 mm	20	905	16	250	QFN-28	485FZ.PDF	4	260	REEL	1