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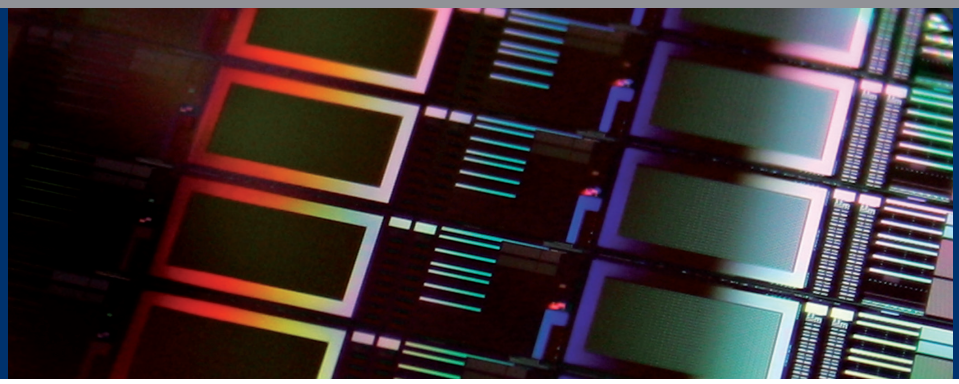

1 *CSPAD3000 on wafer level*

COMING SOON – CSPAD3000

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Light Detection and Ranging

LiDAR cameras are employed in an increasing number of applications like ADAS, autonomous cars or industrial robots and require highly dynamic detectors that allow capturing the environment reliably.

CMOS integrated SPAD detectors

With CSPAD3000 Fraunhofer IMS presents the first sensor of the CSPAD product line. This series covers a range of CMOS integrated SPAD detectors. CSPAD3000 with over 3000 pixels is a backside illuminated (BSI) device manufactured in a wafer-to-wafer bonding process. Only this technology allows high resolution SPAD arrays.

On chip ambient light suppression

CSPAD3000 features single-photon sensitivity with a low dark count rate and a high dynamic range. Moreover, the smart adaptive pixel for background light suppression on chip-level allows for robust measurements and an increased range even in situations with high levels of ambient light.

Designed for Solid-state LiDAR

Due to its fast read out up to 26 kHz the novel SPAD area sensor by Fraunhofer IMS is ideally suited for LiDAR applications.

CSPAD3000 Specifications

Pixel Count	64 x 48
SPADs per pixel	4
Photon co-incidence	Adaptive, 46 dB higher dynamic
Timing resolution	312.5 ps
Frame rate	26 kHz
Technology	0.35 µm CMOS, BSI
Dimensions	8 x 6 mm
SPAD size	40 µm x 40 µm
Features	Timing and counting mode