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NUV-MT – A new generation of blue sensitive SiPMs: Performance, Products and Roadmap

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The recently released blue sensitive NUV-MT Silicon Photomultiplier (SiPM) range by Broadcom Inc. is setting new standards by combining excellent sensitivity, noise, timing performance and uniformity. In this presentation we will present details of the new NUV-MT technology,

including market leading Photon Detection Efficiency (63% at 420nm), Dark Count Rate (120kcps/mm²), Cross Talk (23%), After Pulsing (1%) and excellent results

of the uniformity of breakdown voltage per design and Coincidence Resolution Timing (CRT) measurements using LYSO scintillators.

Furthermore, all NUV-MT products come in a newly developed, simple, reliable and robust sensor package. We will show data on the optical transmittance down to UV-wavelengths, resulting in a PDE of > 20% at 260nm, relevant for, e.g., timing critical Cherenkov applications. Finally, an overview of the product-portfolio and an outlook of Broadcom's SiPM-roadmap and upcoming product-releases will be shown.

Target applications are: TOF-PET, Cherenkov-PET, radiation spectroscopy, photon-counting X-ray detection, flow cytometry and time-gated fluorescence applications.

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