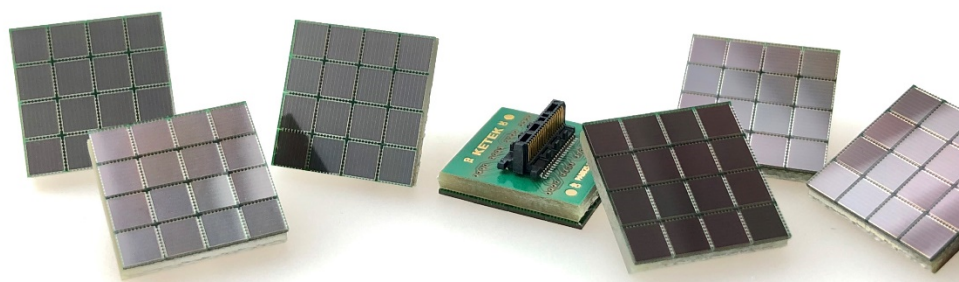


Product Data Sheet

SiPM – Silicon Photomultiplier

PA3325-WB-0404



PA3325-WB-0404

4 x 4 array
 3 x 3 mm² pixel size
 3.36 mm pixel pitch
 25 μm microcells

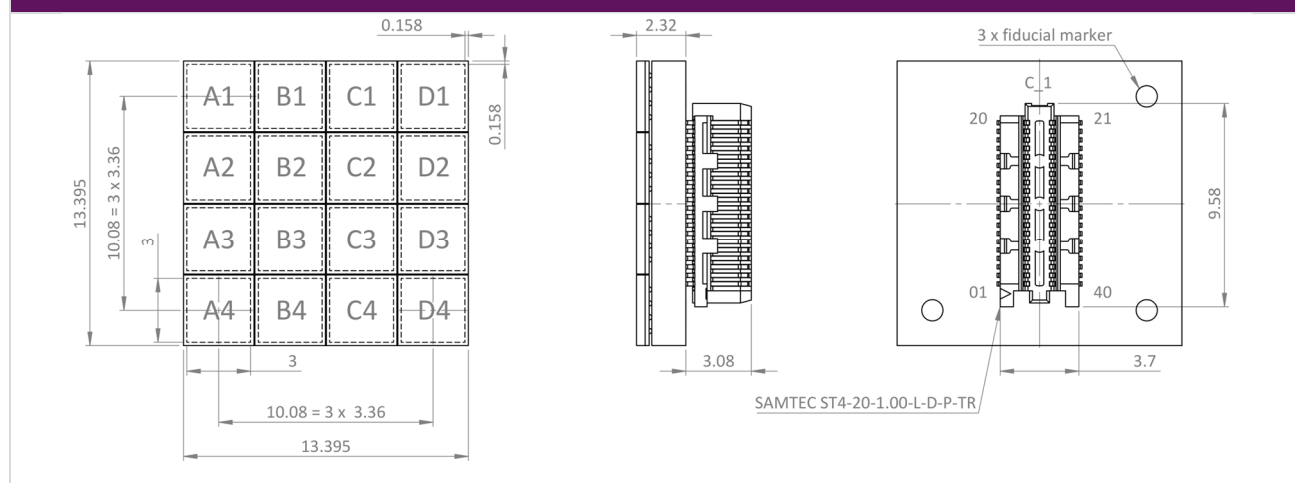
Key Features Overview

- High Photo Detection Efficiency
- Excellent Timing Properties
- High linearity for Scintillator Readout
- Array Fill Factor 80%, seamless 4-side tileable
- Excellent Uniformity of Breakdown Voltage & Gain
- Very Robust and Cost Efficient

Application Examples

- Positron Emission Tomography
- Single Photon Emission Computed Tomography
- Gamma and Compton Cameras
- Scintillator readout for Gamma and X-ray Detection
- Hazard & Threat Detection
- High Energy Physics and Research

PA3325-WB-0404 Layout



General Parameters and Order Information

Type	Active Area of SiPM Pixel [mm ²]	Microcell Size of SiPM Pixel [μm]	SiPM Pixel Pitch in Array [mm]	Array Dimensions [mm ³]	Order-Code
PA3325-WB-0404 based on PM3325-WB-D0 SiPM*	3.0 x 3.0	25	3.36	13.395 x 13.395 x 5.4	PA3325-WB-D0-0404

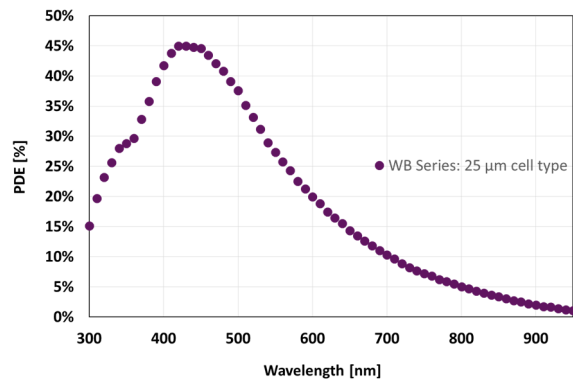
* Full SiPM specification can be found in the corresponding SiPM Datasheet of PM3325-WB-D0
<https://www.ketek.net/wp-content/uploads/2018/12/KETEK-PM3325-WB-D0-Datasheet.pdf>

* SiPMs, SiPM Arrays, Evaluation Kits and Accessories are available for purchase at <https://www.ketek.net/store/>

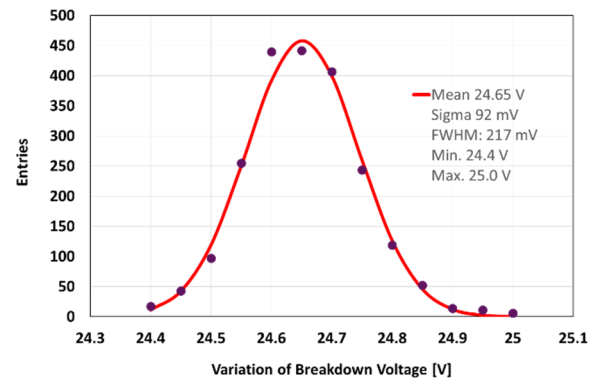
Main Characteristics

Parameter	Typ.	Unit
Breakdown Voltage (V_{BD}) at 21°C	24.7 (min. 24.4, max. 25.0)	V
Recommended Overvoltage (V_{OV})	2.0 – 5.0 (max. 6.0)	V
Temperature Dependency of V_{BD}	22.0	mV/K
Temperature Dependency of Gain	0.3% @ 5.0 V_{OV}	1/K
Operating Temperature Range	-40 to +60	°C
Reliability Classification	MSL1	
Index of Refraction of Glass Entrance Window	1.52 @ 430 nm	
Surface Roughness of the Array	< 10	μm (sigma)

Photo Detection Efficiency at 5 V Overvoltage



Breakdown Voltage Variation



Pin Layout*

Connector C_1 (SAMTEC ST4-20-1.00-L-D-P-TR**)

Pin	SiPM Pixel	Pin	SiPM Pixel
1	Cathode(C4)	21	Cathode(B1)
2	Cathode(D4)	22	Cathode(A1)
3	NC	23	NC
4	Anode(C4)	24	Anode(B1)
5	Anode(D4)	25	Anode(A1)
6	Anode(D3)	26	Anode(A2)
7	Anode(C3)	27	Anode(B2)
8	NC	28	NC
9	Cathode(D3)	29	Cathode(A2)
10	Cathode(C3)	30	Cathode(B2)
11	Cathode(C2)	31	Cathode(B3)
12	Cathode(D2)	32	Cathode(A3)
13	NC	33	NC
14	Anode(C2)	34	Anode(B3)
15	Anode(D2)	35	Anode(A3)
16	Anode(D1)	36	Anode(A4)
17	Anode(C1)	37	Anode(B4)
18	NC	38	NC
19	Cathode(D1)	39	Cathode(A4)
20	Cathode(C1)	40	Cathode(B4)

* NC = Not Connected

** SAMTEC ST4-20-1.00-L-D-P-TR mates with SAMTEC SS4-20-3.00-L-D-K-TR, Mated Stacked Height is 4 mm