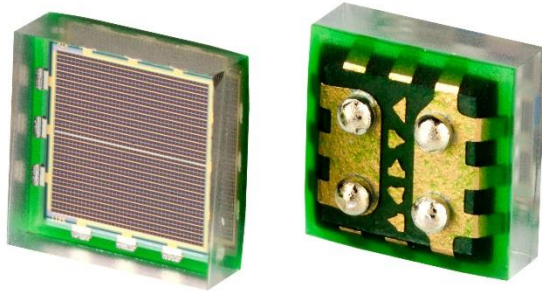


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Product Data Sheet

SiPM – Silicon Photomultiplier

PM1125-WB



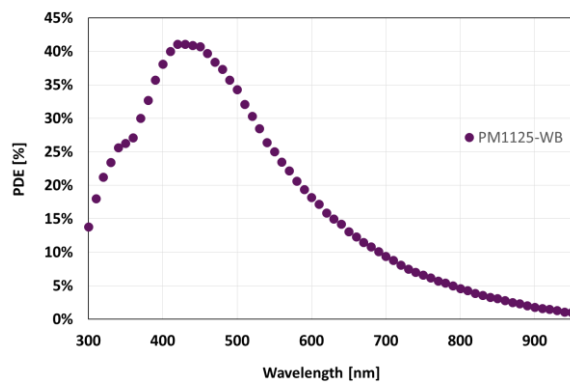
WB Series in new Wafer Level Package

Key Features Overview

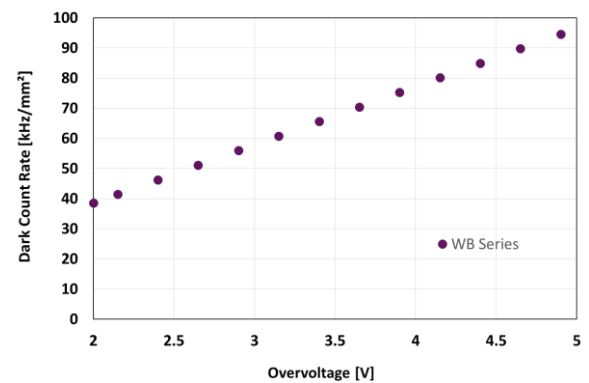
- High Photo Detection Efficiency
- Excellent Timing Properties
- Extremely low Temperature Coefficient
- Fastest Recovery Time
- Ultra high Cell Density and Dynamic Range
- Very low Dark Count Rate
- MSL-1 approved

1. SiPM Key Features

Absolute Photo Detection Efficiency at 5 V overvoltage



Dark Count Rate at 21°C



2. SiPM General Parameters

General Parameters					
Type	Active Area [mm ²]	Microcell Size [μm]	No. of Microcells	Package Dimensions [mm ³]	Order-Code
PM11	1.0 x 1.0	25	1600	1.315 x 1.315 x 0.595	PM1125-WB

3. Main Characteristics

Main Characteristics		
Parameter	Typ.	Unit
Breakdown Voltage (V _{BD})	25.5	V
Recommended Overvoltage (V _{OV})	2.0 – 5.0	V
Temperature Dependency of V _{BD}	22.0	mV/K
Temperature Dependency of Gain	0.3% @ 5.0 V _{OV}	1/K

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Product Data Sheet

SiPM – Silicon Photomultiplier

PM1125-WB



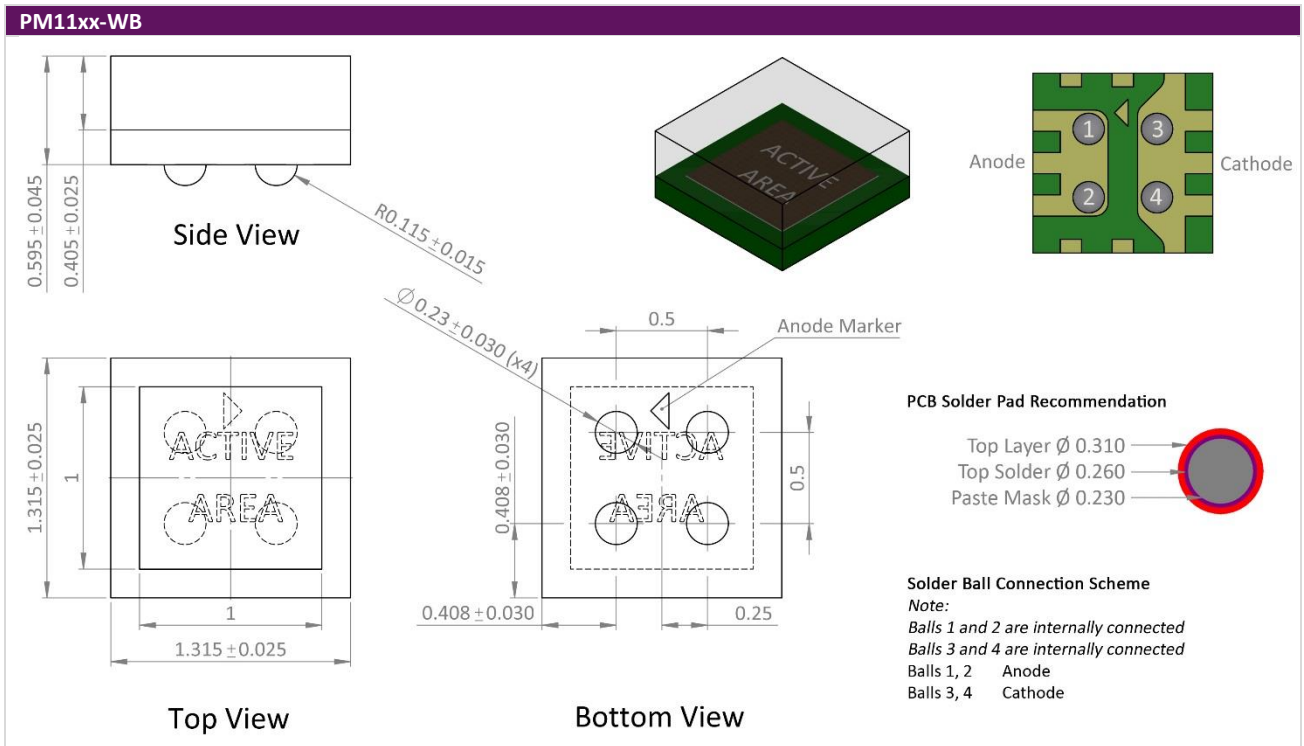
4. Performance Overview

Performance Overview at 21°C					
Parameter	Type	Microcell Size [μm]	Typ. @ 2.5 V _{OV}	Typ. @ 5.0 V _{OV}	Unit
Photo Detection Efficiency at 430 nm	PM11	25	31	43	%
Dark Count Rate	PM11	25	50	100	kHz/mm ²
Crosstalk Probability*	PM11	25	11	30	%
Afterpulse Probability	PM11	25	< 1		%
Gain	PM11	25	0.87	1.74	x 10 ⁶
Terminal Capacitance	PM11	25	90		pF
Recovery Time τ **	PM11	25	30		ns
Signal Rise Time	PM11	25	< 1		ns

* including delayed crosstalk with a probability < 0.1%

** measured at 5 Ω load by an exponential fit to the pulse decay

5. Technical Drawing and Footprint



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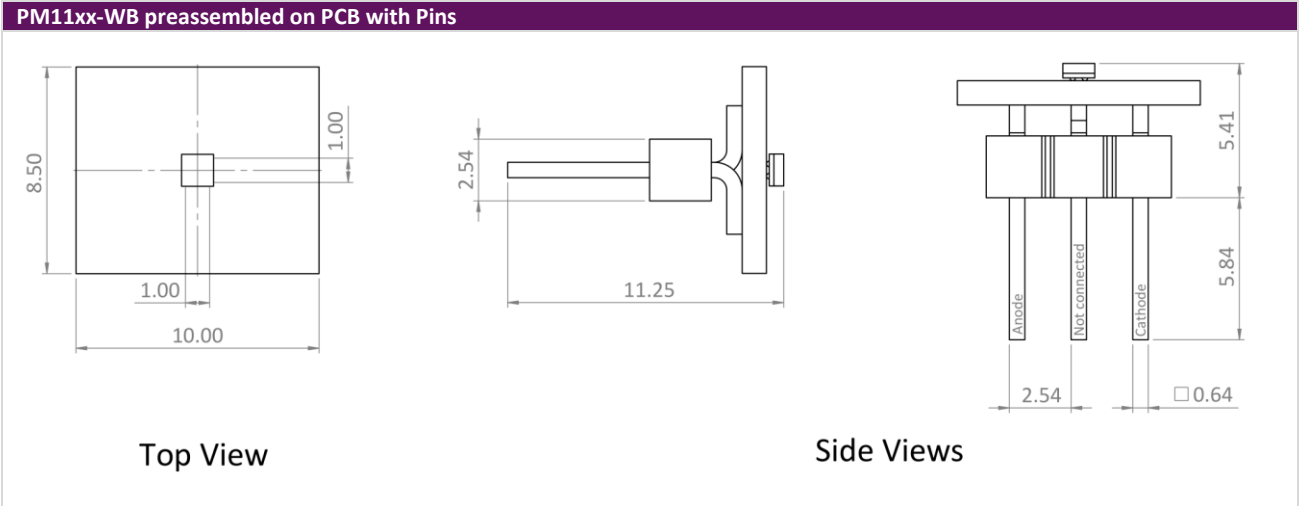
Product Data Sheet

SiPM – Silicon Photomultiplier

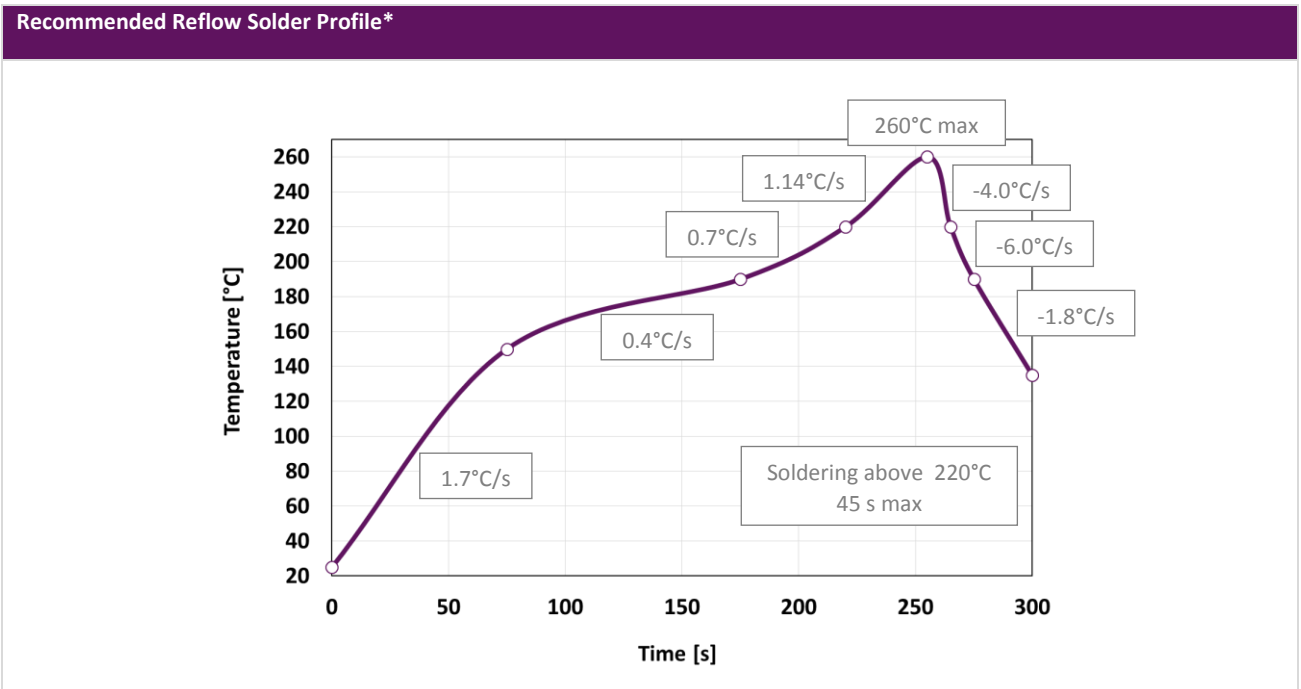
PM1125-WB



6. Pin Variant



7. Reflow Solder Profile



* A lead-free no-clean solder paste Type 4 is recommended

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