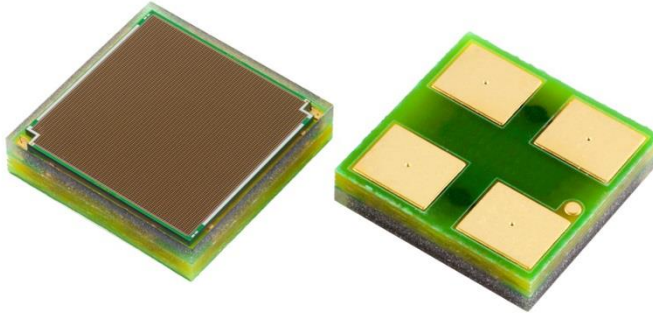


Product Data Sheet

SiPM – Silicon Photomultiplier

PM6625-EB / PM6650-EB



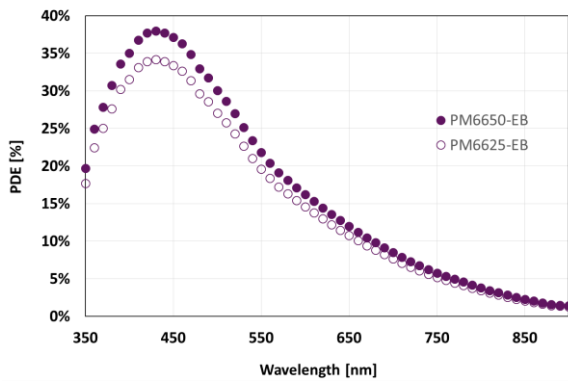
PM66 Series in new Chip Size Package

Key Features Overview

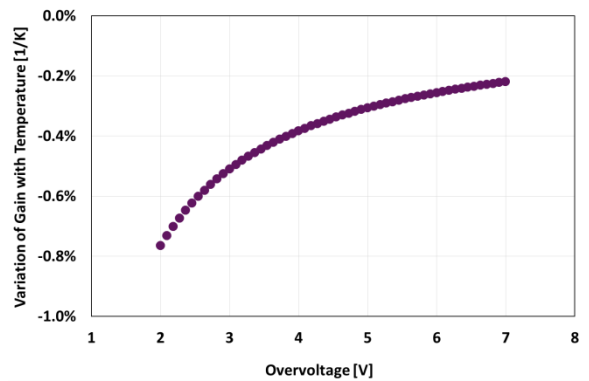
- High Photo Detection Efficiency
- Large Active Area
- Extremely low Temperature Coefficient
- New Chip Size Package suitable for Arrays
- MSL1 approved

1. SiPM Key Features

Absolute Photo Detection Efficiency at 5 V overvoltage



Temperature Dependency of the Gain



2. SiPM General Parameters

General Parameters					
Type	Active Area [mm ²]	Microcell Size [μm]	No. of Microcells	Package Dimensions [mm ³]	Order-Code
PM66	6.0 x 6.0	25	55168	6.50 x 6.50 x 1.45	PM6625-EB
		50	14272		PM6650-EB

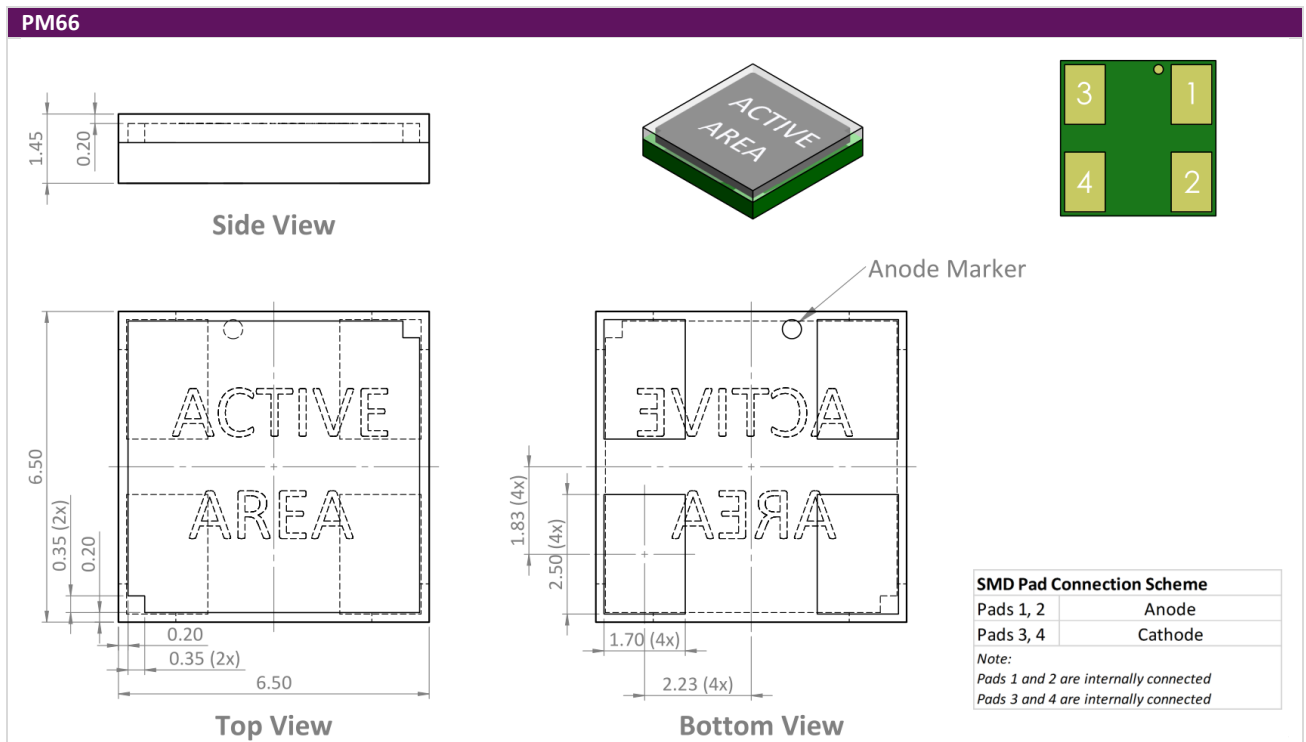
3. Main Characteristics

Main Characteristics		
Parameter	Typ.	Unit
Breakdown Voltage (V_{BD})	26.5	V
Recommended Overvoltage (V_{OV})	2.0 – 5.0	V
Temperature Dependency of V_{BD}	18.0	mV/K
Temperature Dependency of Gain	0.3% @ 5.0 V_{OV}	1/K

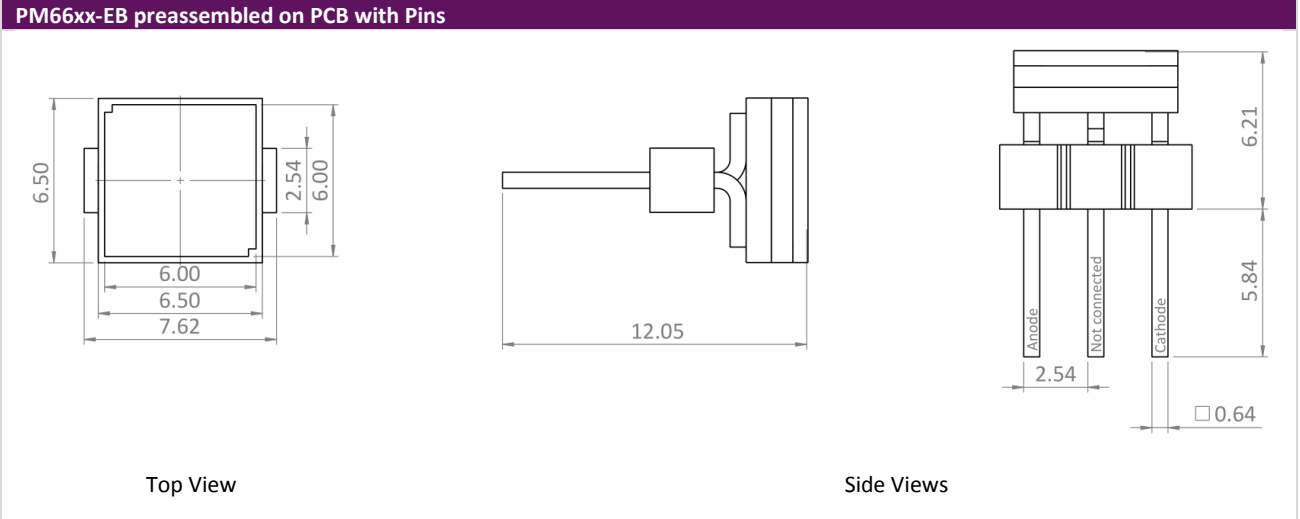
4. Performance Overview

Performance Overview					
Parameter	Type	Microcell Size [μm]	Typ. @ 2.5 V _{OV}	Typ. @ 5.0 V _{OV}	Unit
Photo Detection Efficiency @ 430 nm	PM66	25	26	34	%
		50	28	38	
Dark Count Rate	PM66	25	250	500	kHz/mm ²
		50	250	500	
Crosstalk Probability	PM66	25	16	35	%
		50	16	35	
Afterpulse Probability	PM66	25	1	3	%
		50			
Gain	PM66	25	0.9	1.7	x 10 ⁶
		50	3.6	7.2	
Terminal Capacitance	PM66	25	2800		pF
		50	3100		
Recovery Time τ	PM66	25	40		ns
		50	70		
Signal Rise Time	PM66	25	1.0		ns
		50			

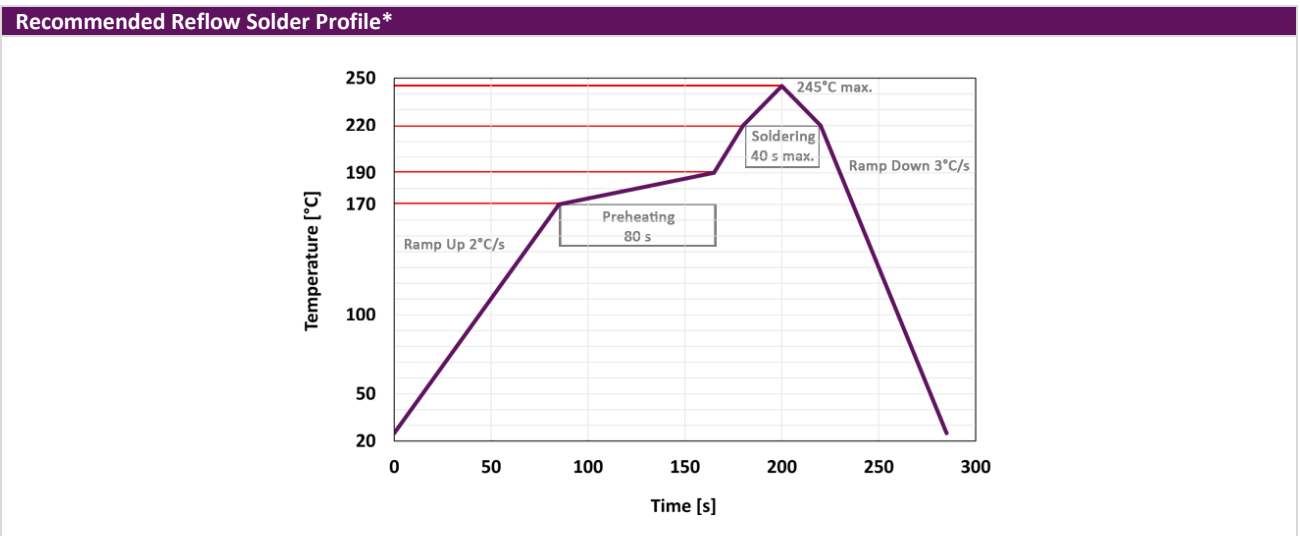
5. Technical Drawing and Footprint



6. Pin Variant



7. Reflow Solder Profile



* Soldering under nitrogen atmosphere is recommended to avoid deterioration of the highly transparent epoxy encapsulation