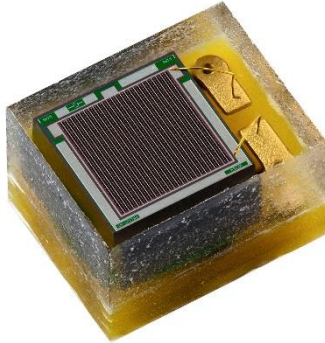


Product Data Sheet

SiPM – Silicon Photomultiplier

PM1125-EB / PM1150-EB



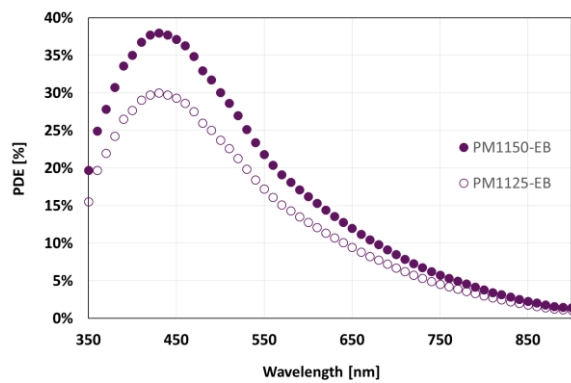
PM11 Series in Epoxy Package

Key Features Overview

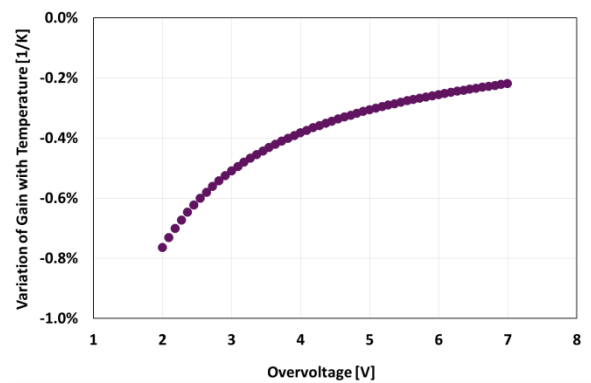
- Active Area 1.2 x 1.2 mm²
- High Photo Detection Efficiency
- Extremely low Temperature Coefficient
- Ultra Fast Response to Photons

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
PM11	1.2 x 1.2	25	2304	2.45 x 1.95 x 1.45	PM1125-EB
		50	576		PM1150-EB

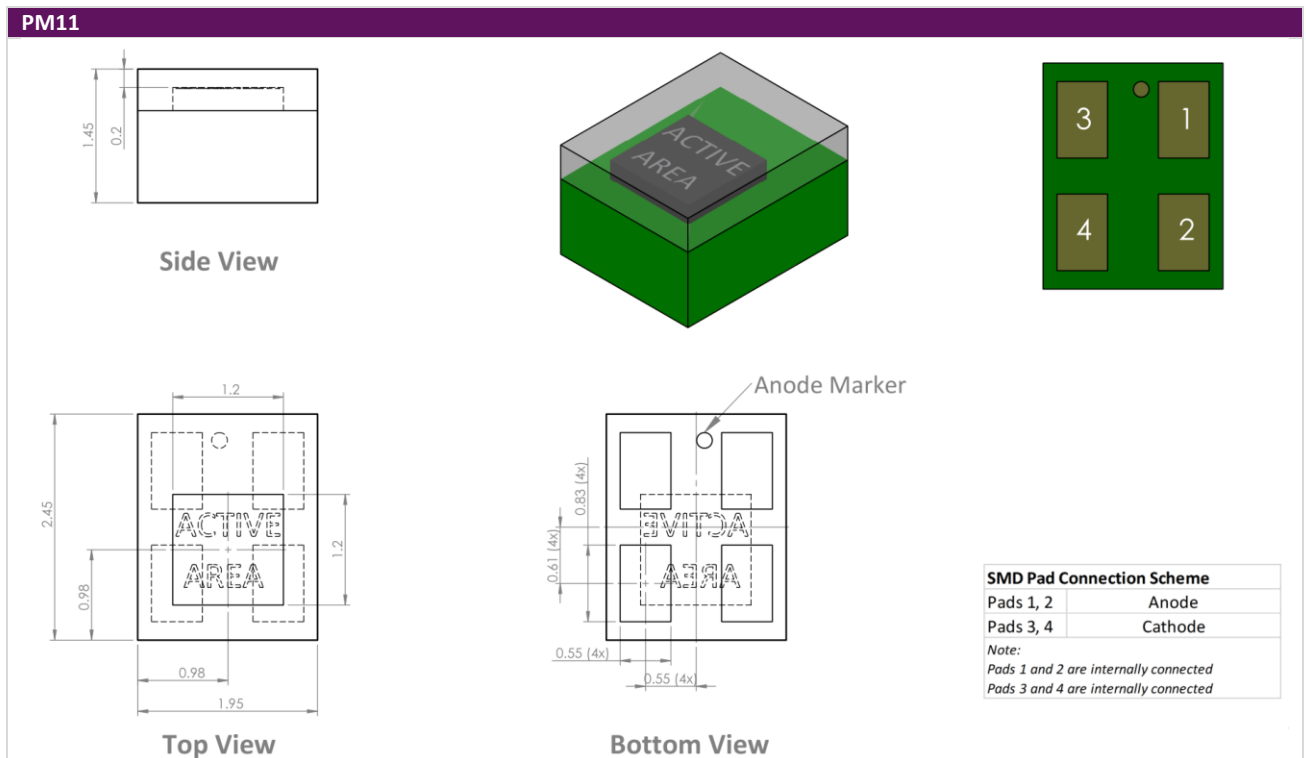
3. Main Characteristics

Main Characteristics		
Parameter	Typ.	Unit
Breakdown Voltage (V _{BD})	27.5 (PM1125) / 26.0 (PM1150)	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

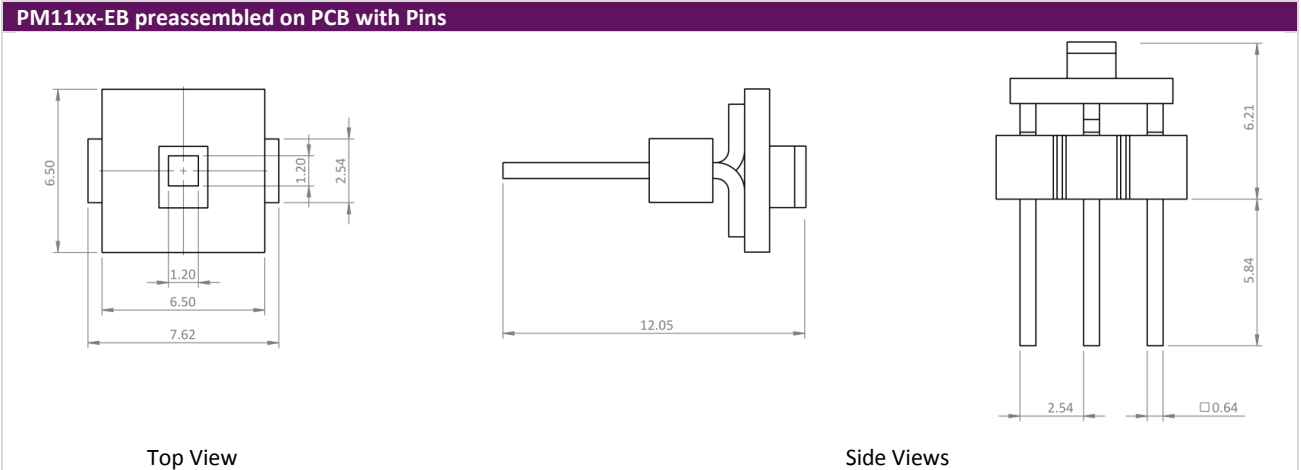
4. Performance Overview

Performance Overview					
Parameter	Type	Microcell Size [μm]	Typ. @ 2.5 V _{OV}	Typ. @ 5.0 V _{OV}	Unit
Photo Detection Efficiency @ 430 nm	PM11	25	19	30	%
		50	28	38	
Dark Count Rate	PM11	25	100	210	kHz/mm ²
		50	280	540	
Crosstalk Probability	PM11	25	6	16	%
		50	9	27	
Afterpulse Probability	PM11	25	1	3	%
		50			
Gain	PM11	25	0.7	1.5	x 10 ⁶
		50	3.8	7.6	
Terminal Capacitance	PM11	25	110		pF
		50	140		
Recovery Time τ	PM11	25	43		ns
		50	146		
Signal Rise Time	PM11	25	< 0.5		ns
		50			

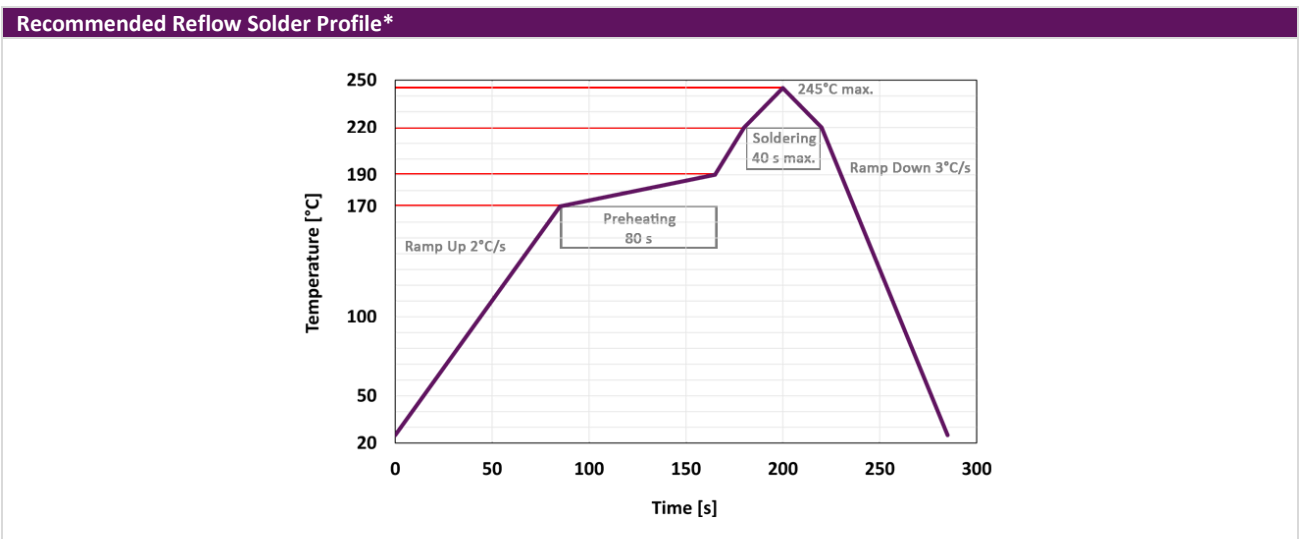
5. Technical Drawing and Footprint



6. Pin Variant



7. Reflow Solder Profile



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