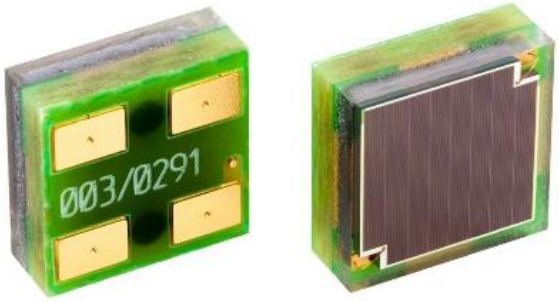
Product Data Sheet
SiPM – Silicon Photomultiplier
PM3325-EB / PM3350-EB



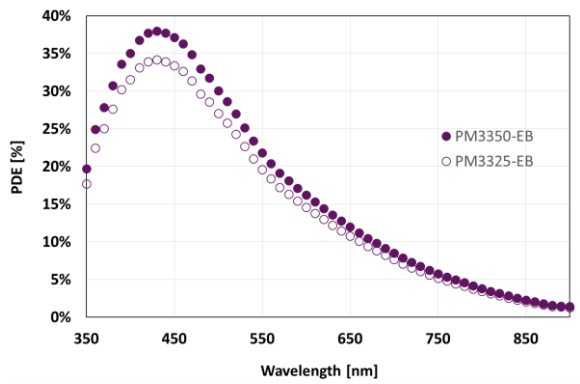
PM33 Series in new Chip Size Package

Key Features Overview

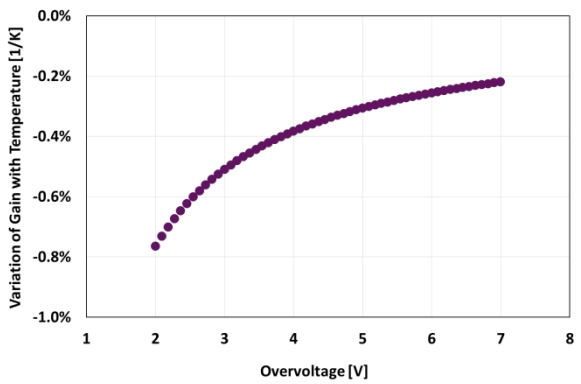
- High Photo Detection Efficiency
- Excellent Timing Properties
- Extremely low Temperature Coefficient
- New Chip Size Package suitable for Arrays
- MSL1 approved

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 [mm²]**	**Microcell Size [µm]**	**No. of Microcells**	**Package Dimensions [mm³]**	**Order-Code**
PM33	3.0 x 3.0	25	13408	3.50 x 3.50 x 1.45	PM3325-EB
		50	3472		PM3350-EB

3. Main Characteristics

Main Characteristics		
Parameter	**Typ.**	**Unit**
Breakdown Voltage (V_{BD})	25.0	V
Recommended Overvoltage (V_{OV})	2.0 – 7.0	V
Temperature Dependency of V_{BD}	18.0	mV/K
Temperature Dependency of Gain	0.3% @ 5.0 V_{OV}	1/K

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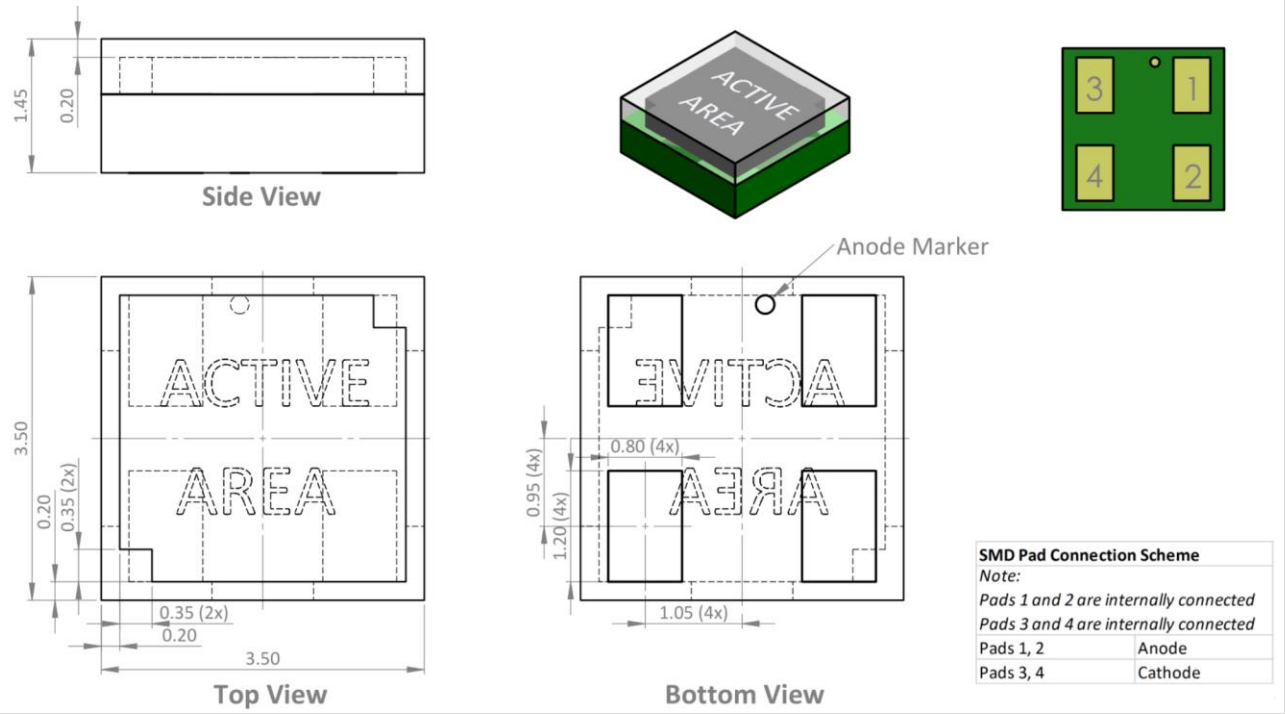
4. Performance Overview

Performance Overview					
Parameter	**Type**	**Microcell Size [µm]**	**Typ. @ 2.5 V_{OV}**	**Typ. @ 5.0 V_{OV}**	**Unit**
Photo Detection Efficiency @ 430 nm	PM33	25	26	34	%
		50	28	38	
Dark Count Rate	PM33	25	250	500	kHz/mm²
		50	250	500	
Crosstalk Probability	PM33	25	10	30	%
		50	10	25	
Afterpulse Probability	PM33	25	1	3	%
		50			
Gain	PM33	25	0.9	1.7	x 10^6
		50	3.6	7.2	
Terminal Capacitance	PM33	25	790		pF
		50	810		
Recovery Time τ	PM33	25	35		ns
		50	130		
Signal Rise Time	PM33	25	< 1		ns
		50			

5. Technical Drawing and Footprint

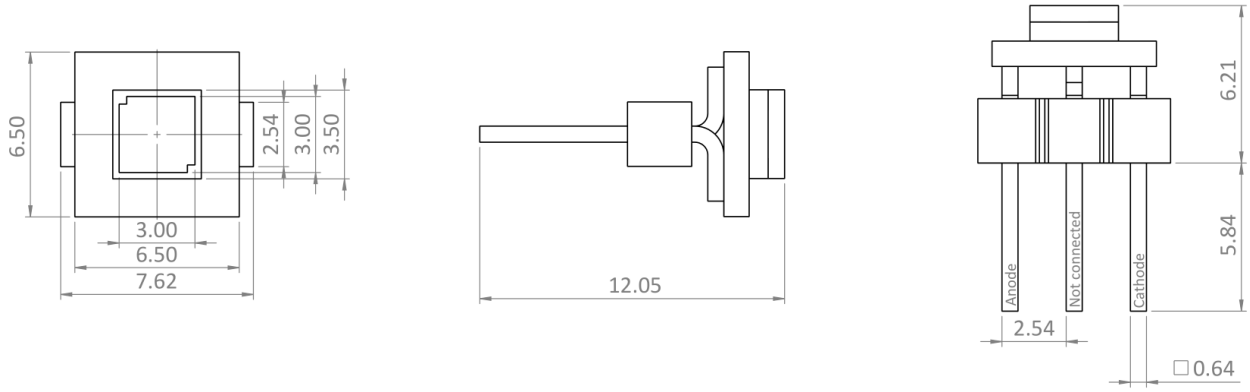
PM33



SMD Pad Connection Scheme	
Note:	
Pads 1 and 2 are internally connected	
Pads 3 and 4 are internally connected	
Pads 1, 2	Anode
Pads 3, 4	Cathode

6. Pin Variant

PM33xx-EB preassembled on PCB with Pins

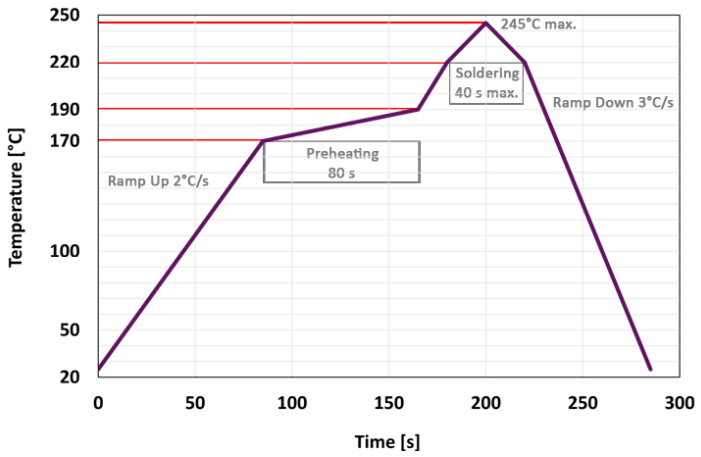


Top View

Side Views

7. Reflow Solder Profile

Recommended Reflow Solder Profile*



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