

PDB-C154SM

Surface Mount Device (SMD) Silicon Photodiode

The PDB-C154SM is a 2.1mm² RED enhanced PIN silicon photodiode ideal for high-speed response applications assembled in a compact 1210 water clear surface-mount package. The device is available on Tape and Reel and designed for automated SMT assembly.

Applications

Industrial Controls

Optical Switches

Optical Counters

Features

Photoconductive

High Speed

Surface Mount

Available in Tape and Reel

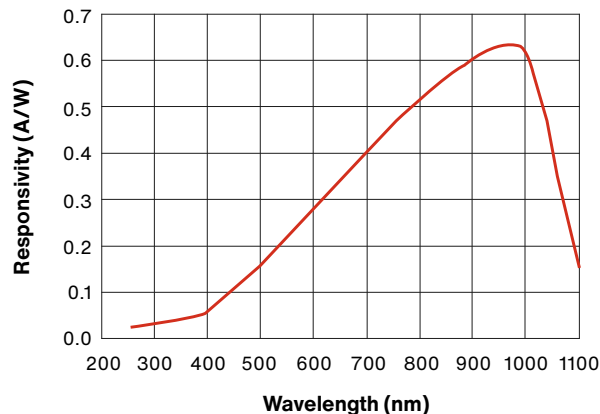
Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Reverse Voltage	V_R	-	32	V
Operating Temperature	T_{OP}	-40	+80	°C
Storage Temperature	T_{STG}	-50	+125	°C
Package		1210		

Typical Electro-Optical Specifications at $T_A=23\text{ °C}$

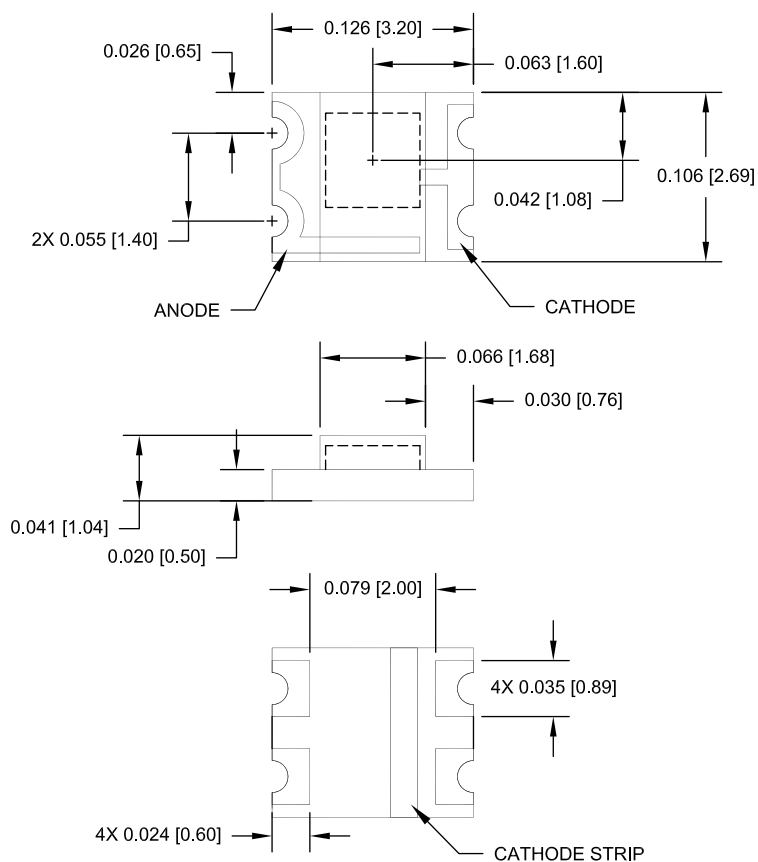
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Short Circuit Current	H=100 fc, 2850K	I_{SC}	45	67	-	μA
Dark Current	$V_R=10\text{V}$	I_D	-	5	30	nA
Shunt Resistance	$V_R=10\text{mV}$	R_{SH}	100	500	-	G Ω
Junction Capacitance	$V_R=10\text{V}$; f=1MHz	C_J	-	18	25	pF
Spectral Application Range	Spot Scan	-	400	-	1100	nm
Breakdown Voltage	I=10 μA	V_{BD}	50	100	-	V
Noise Equivalent Power	$V_R=10\text{V}@\lambda=\text{Peak}$	NEP	-	2×10^{-14}	-	W/ $\sqrt{\text{Hz}}$
Response Time (10%-90%)	RL=1K Ω , $V_R=10\text{V}$	T_R	-	10	-	nS

Spectral Response

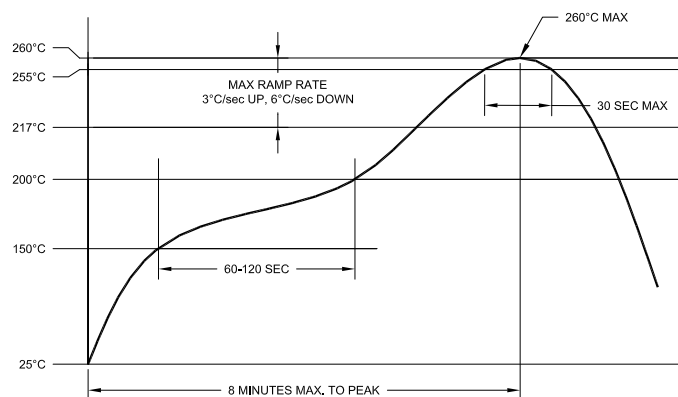


Mechanical Specifications

Units are in mm



Reflow Profile



Soldering

Recommendation		
Wave	Not Advised	-
IR Oven Reflow	Allowed	See Reflow Profile
Forced Convection Reflow	Recommended	See Reflow Profile
Convection Reflow	Recommended	See Reflow Profile
Vapor Phase Reflow	Recommended	See Reflow Profile
Manual	Allowed	260°C for 3 seconds max
Moisture Sensitivity Level	3	J-STD-033