

# PDB-C152SM

## Surface Mount Device (SMD) Silicon Photodiode

The PDB-C152SM is a 0.65mm<sup>2</sup> BLUE enhanced PIN silicon photodiode ideal for high-speed response applications assembled in a compact 1206 water clear surface-mount package. The device is available on Tape and Reel and designed for automated SMT assembly.

### Applications

Industrial Controls

Opto Switches

Opto Counters

### Features

Large Active Area

Photoconductive

High Speed Available in Tap and Reel

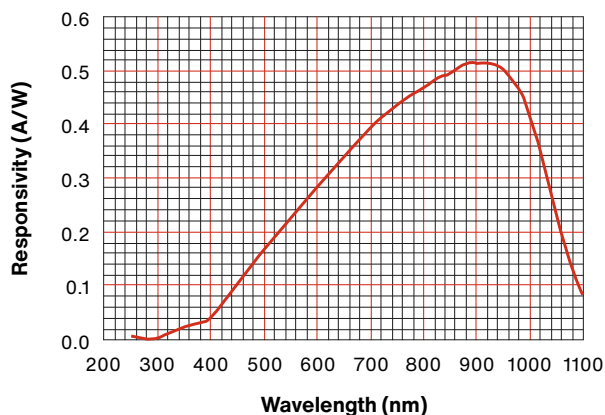
## Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Reverse Voltage	$V_R$	-	50	V
Operating Temperature	$T_{OP}$	-40	+105	°C
Storage Temperature	$T_{STG}$	-50	+125	°C
Package		1206		

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

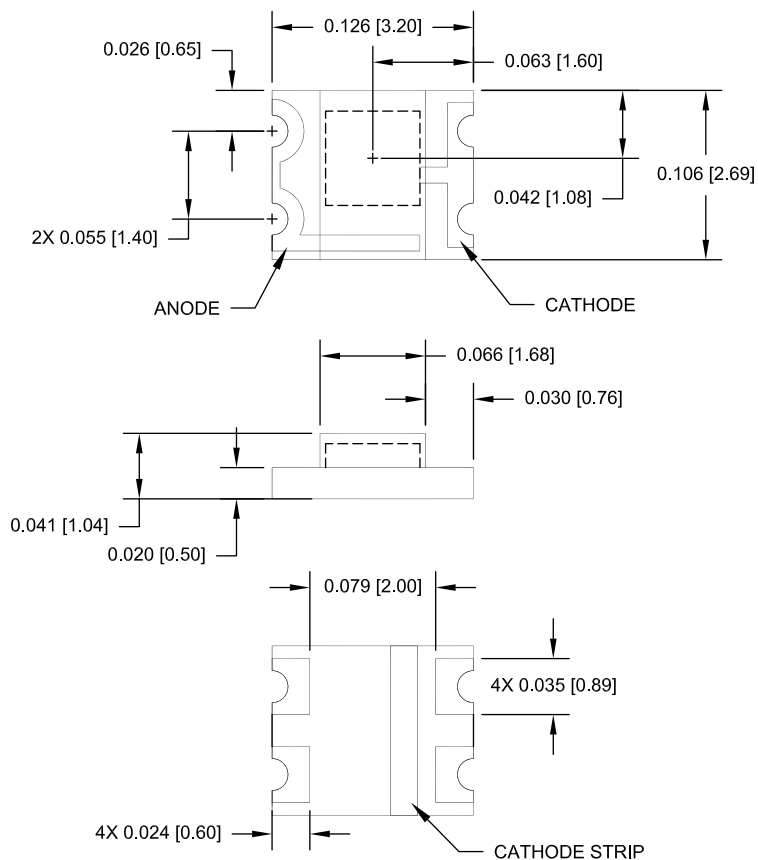
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Short Circuit Current	H=100fc, 2850K	$I_{SC}$	8	10	-	$\mu\text{A}$
Dark Current	$V_R=10\text{V}$	$I_D$	-	2	10	nA
Shunt Resistance	$V_R=10\text{mV}$	$R_{SH}$	500	-	-	G $\Omega$
Junction Capacitance	$V_R=10\text{V}$ ; f=1MHz	$C_J$	-	15	20	pF
Spectral Application Range	Spot Scan	$\lambda$	400	-	1100	nm
Breakdown Voltage	I=10 $\mu\text{A}$	$V_{BD}$	50	100	-	V
Noise Equivalent Power	$V_R=10\text{V}$ @ $\lambda$ =Peak	NEP	-	$1.5 \times 10^{-13}$	-	W/ $\sqrt{\text{Hz}}$
Response Time (10%-90%)	RL=1K $\Omega$ , $V_R=50\text{V}$	$T_R$	-	50	-	nS

## Spectral Response

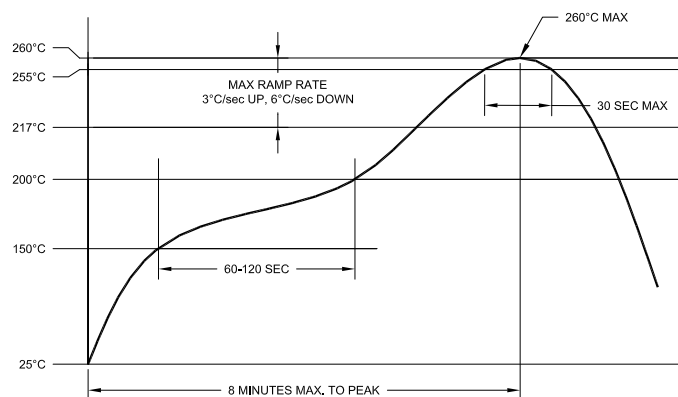


## Mechanical Specifications

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