

PDB-C160SM

SMD Si Photodiode

The PDB-C160SM is high quality and reliability plastic encapsulated 7.0mm² RED enhanced silicon photodiode designed for high-speed response time applications. The device is excellent for mounting on PCB and handheld devices in harsh environments.

Applications

Photointerrupters
Industrial Electronics
IR Remote Control
Control & Drive Circuits

Features

High Quality and Reliability Surface Mount
High Speed
Available in Tape and Reel

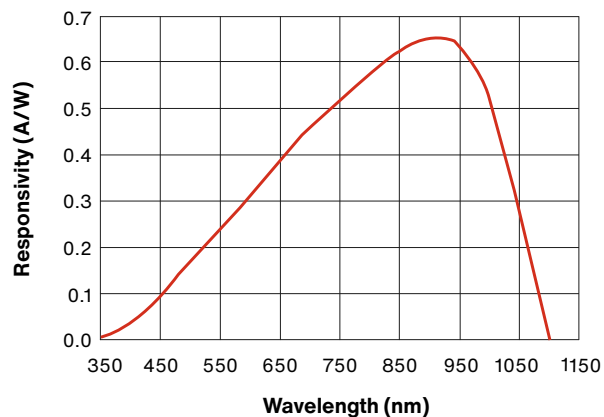
Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Reverse Voltage	V_R	-	32	V
Operating Temperature	T_{OP}	-40	+100	°C
Storage Temperature	T_{STG}	-50	+100	°C
Package	Gull Wing			

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

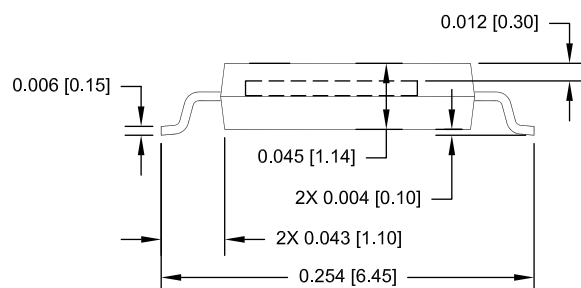
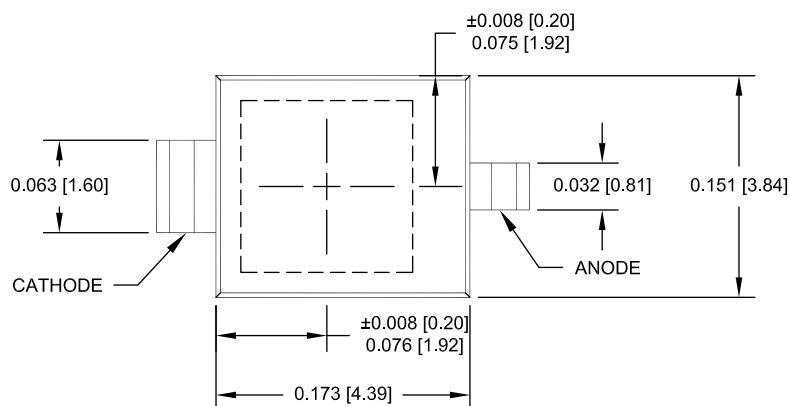
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Short Circuit Current	H=100 fc, 2856K	I_{SC}	-	80	95	μA
Dark Current	$V_R=10\text{V}$	I_D	-	2	30	nA
Shunt Resistance	$V_R=10\text{mV}$	R_{SH}	-	250	-	$\text{M}\Omega$
Junction Capacitance	$V_R=0\text{V}$; f=1MHz	C_J	-	72	-	pF
Spectral Application Range	Spot Scan	λ	400	-	1100	nm
Breakdown Voltage	$\lambda=850\text{nm}$	V_{BD}	-	0.62	-	A/W
Noise Equivalent Power	$V_R=10\text{V}@\lambda=\text{Peak}$	NEP	-	4.1×10^{-14}	-	$\text{W}/\sqrt{\text{Hz}}$
Response Time (10%-90%)	RL=50 Ω , $V_R=5\text{V}$, $\lambda=850\text{nm}$	T_R	-	20	-	nS

Spectral Response

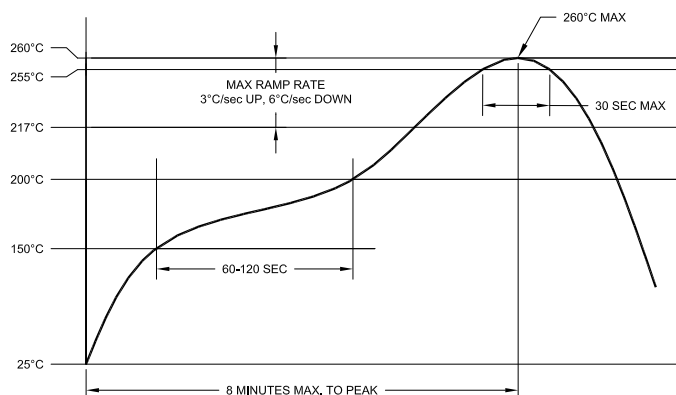


Mechanical Specifications

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	4	J-STD-033