

SD0090-3111-185

Surface Mount Device (SMD) InGaAs Photodiode

The SD0090-3111-185 is a 0.3mm (300 μ m) diameter active area InGaAs photodiode ideal for detecting wavelengths at SWIR and NIR. The device is highly sensitive with a low noise assembled in a compact 1206 water clear surface-mount package. The device is available on Tape and Reel and is designed for automated SMT assembly.

Applications

Industrial Controls

Security

Communication

Medical

Features

Small Footprint

Low Dark Current and Capacitance

High Sensitivity

Detection in SWIR

Available in Tape and Reel

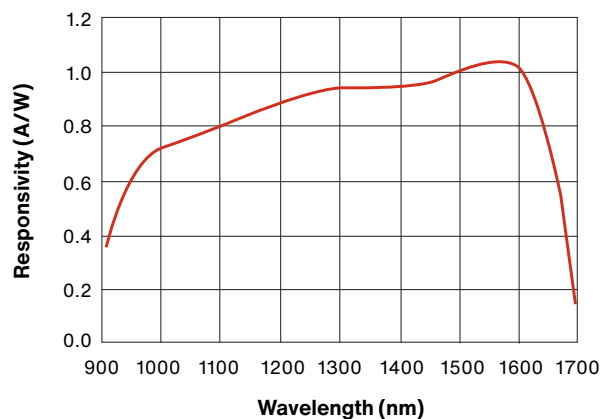
Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Reverse Voltage	V_R	-	20	V
Operating Temperature	T_{OP}	-40	+100	°C
Storage Temperature	T_{STG}	-55	+125	°C
Package		1206		

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

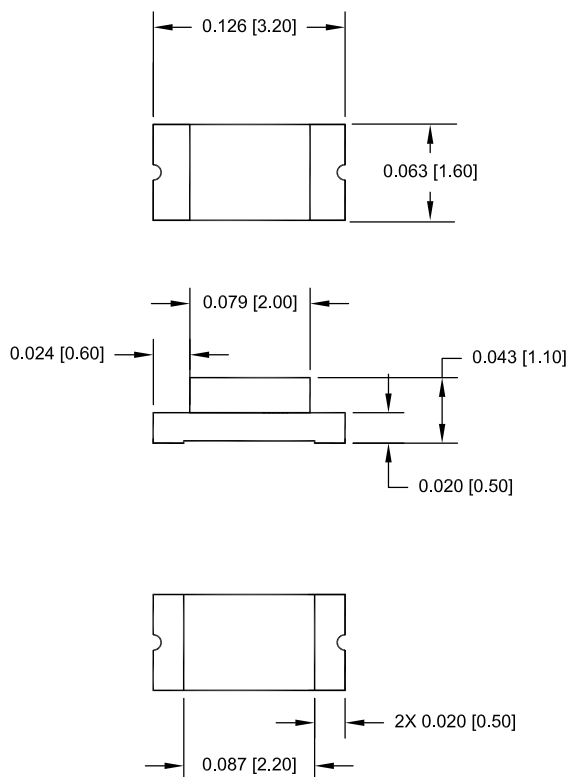
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Active Area	-	A.A.	-	0.071	-	mm ²
Spectral Range	-	$\Delta\lambda$	900	-	1700	nm
Responsivity	$V_R=5V; \lambda=1300nm$	R_λ	0.9	0.95	-	A/W
	$V_R=5V; \lambda=1500nm$	R_λ	0.95	1	-	A/W
Capacitance	$V_R=5V; f=1MHz$	C_j	-	5	6	pF
Dark Current	$V_R=10V$	I_D	-	0.2	1	nA
Shunt Resistance	$V=10mA$	R_{SH}	40	-	-	MΩ

Spectral Response

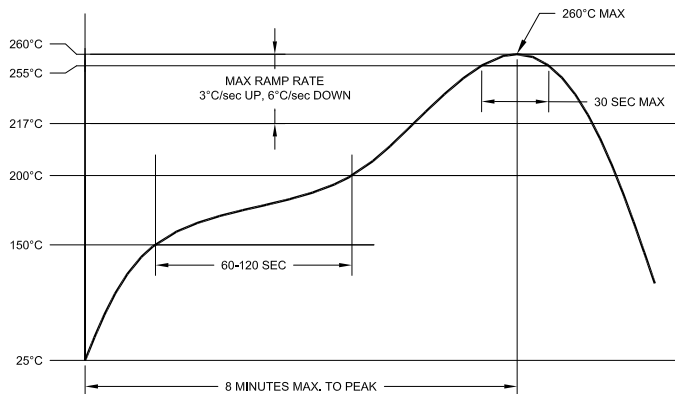


Mechanical Specifications

Units are in inches (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