

Sensitivity Wavelength Range: 250-1100nm

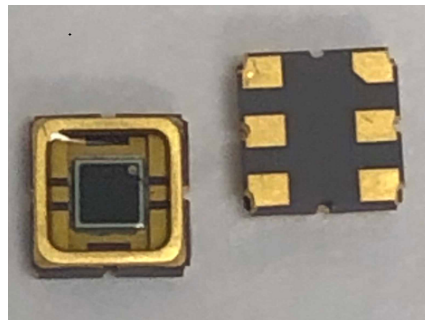
The MT03-021 is a square (1.1 x1.1) 1.2mm² active area Silicon Photodiode in a surface mount package with clear encapsulation. It is optimized for applications requiring high sensitivity in the 300 to 500nm region (UVA, Blue & Green).

Features

- > Ultra Low Noise
- > High Shunt Resistance
- > Wide Dynamic Range
- > 365nm & Blue/Green Enhanced

Applications

- > Flame Detection
- > Currency Authentication
- > Spectroscopy Equipment
- > Fluorescence



Absolute Maximum Ratings



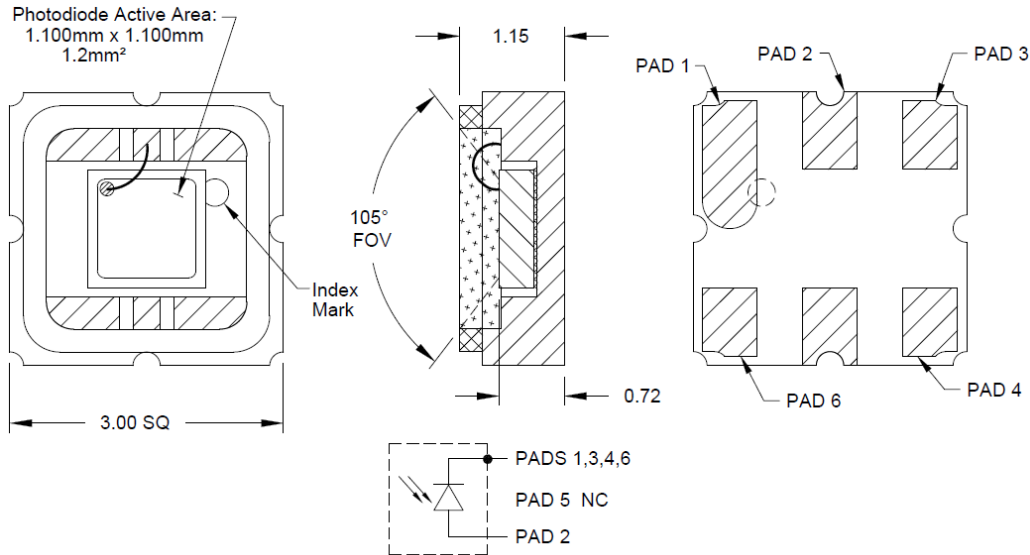
Items	Symbol	Rating	Unit
Reverse Voltage	V _R	50	V
Operating Temperature Range	T _{opr}	-40 ~ +100	°C
Storage Temperature Range	T _{stg}	-55 ~ +125	°C
Lead Soldering Temperature*1	T _{ls}	260	°C

*1: Time 5 Sec max, Position: Up to 3mm from the body.

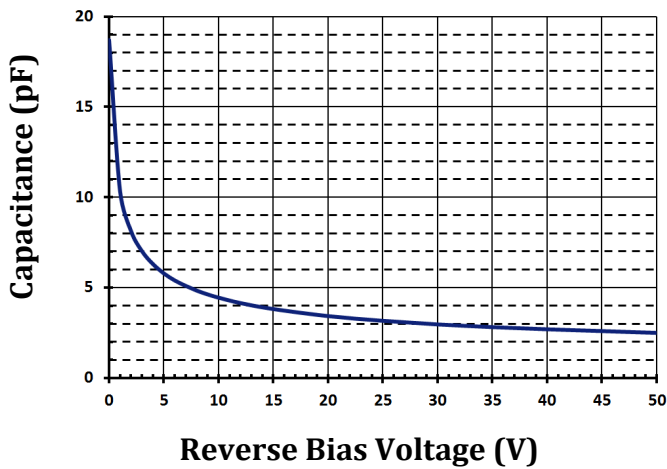
Electrical & Optical Characteristics (T_a = 23°C)

Items	Symbol	Conditions	MIN	TYP	MAX	Unit
Dark Current	I _d	V _R =5V	--	0.2	1.0	nA
Breakdown Voltage	V _(BR)	I _R =10μA	50	--	--	V
Spectral Sensitivity	λ	--	--	250-1100	--	nm
Peak Sensitivity	λ _p	--	--	950	--	nm
Wavelength Responsivity	R	V _R =0V, λ=365nm	--	0.22	--	A/W
Responsivity	R	V _R =0V, λ=633nm	--	0.40	--	A/W
Response Time @635nm	T _r	R _L =50Ω, V _R =5V	--	20	--	ns
Junction Capacitance	C _j	@ 1MHz, V _R =0V	--	20	--	pF
Junction Capacitance	C _j	@ 1MHz, V _R =5V	--	6	8	pF
Shunt Resistance	R _{sh}	V _R =10mV	500	800	--	MΩ

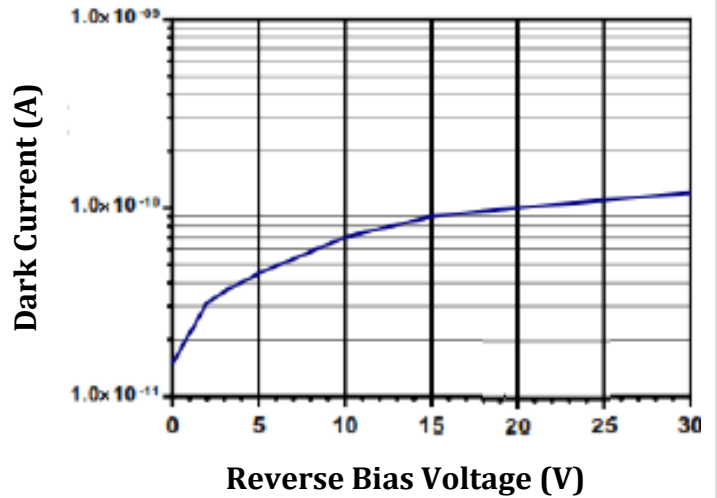
SMD Package Dimensions (6 Pads)



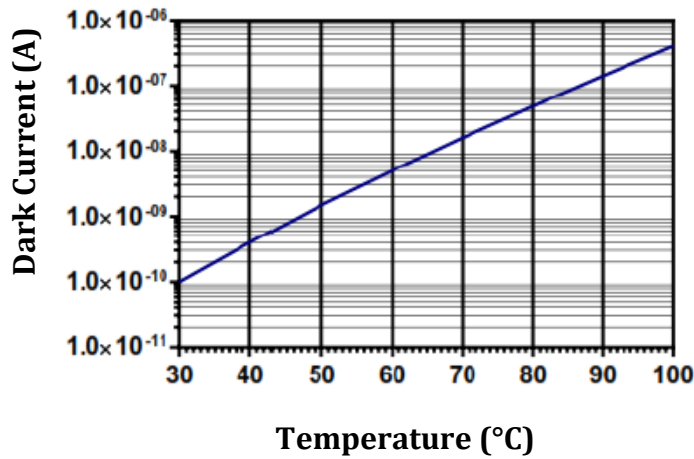
Capacitance vs Reverse Bias



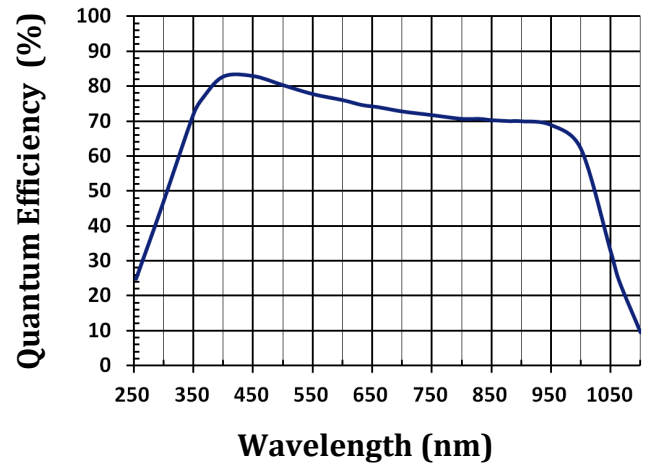
Dark Current vs Reverse Bias (23°C)



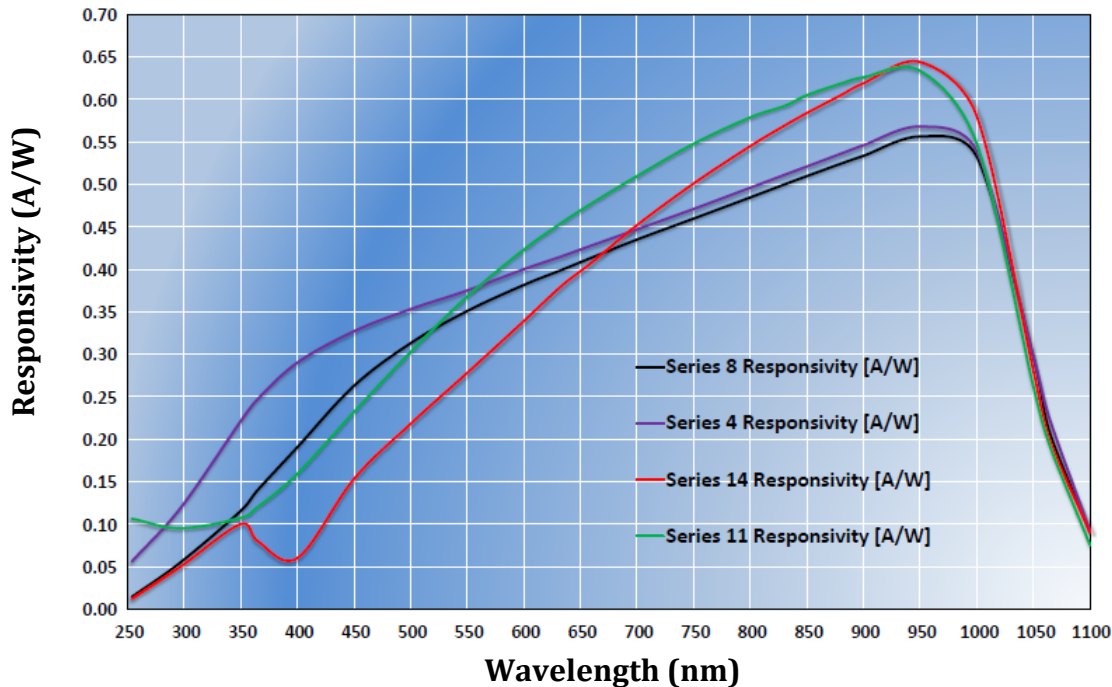
Dark Current vs Temperature ($V_r=10V$)



Series 4 Quantum Efficiency (23°C)



Photodiode Responsivity by Series



The information contained herein is subject to change without notice.

2019-03

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