

### Sensitivity Wavelength Range: 350nm ~ 1100nm

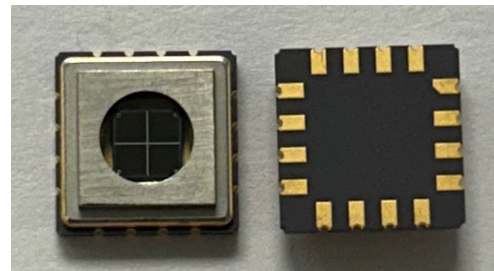
The MT03-081, is ideally suited for nulling or beam centering applications. Custom packaging options for this die are also available.

#### FEATURES

- > Peak Sensitivity: 950nm
- > 7.24mm x 7.24 Seam Welded Package
- > 5.8mm Quad
- > Hermetically Sealed Package

#### APPLICATIONS

- > Optical Tweezers
- > Beam Centering
- > Beam Nulling
- > Position Centering
- > Atomic Force Microscopes (AFM)



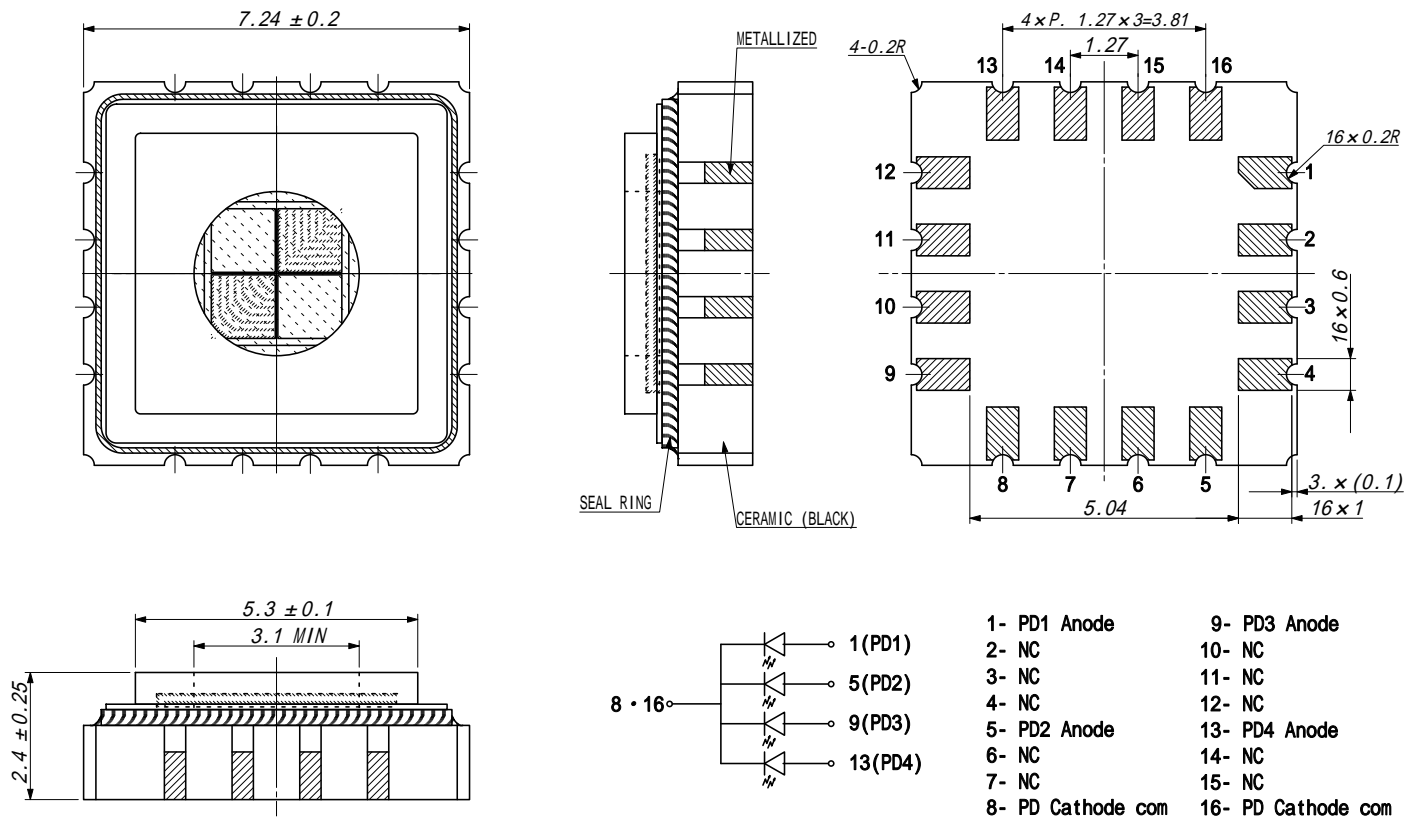
### Absolute Maximum Ratings

ITEMS	SYMBOL	RATINGS	UNIT
Active Area	$\Phi$	1.2mm x 1.2mm	mm <sup>2</sup>
Operating Temperature Range	T <sub>opr</sub>	-40 to +85	°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +125	°C

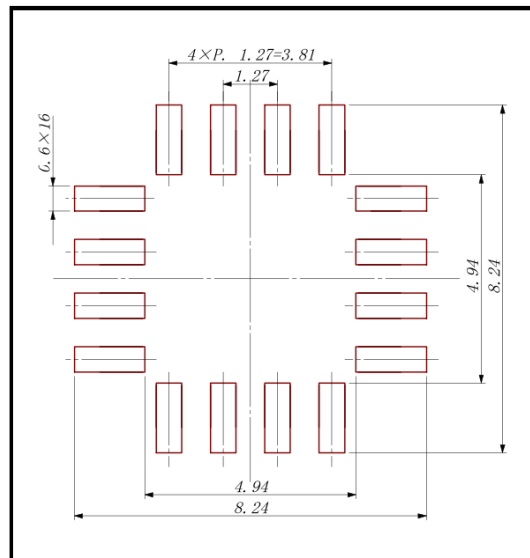
### Electrical & Optical Characteristics (T<sub>a</sub> = 22°C)

ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Breakdown Voltage	V <sub>BR</sub>	IR=10uA	50	--	--	V
Sensitivity Range	$\lambda$	VR=0V	350	--	1100	nm
Dark Current	I <sub>d</sub>	VR=5V	--	0.5	1.0	nA
Response Time @635nm		VR=5V; RL=50Ω	--	20	--	ns
Capacitance	C <sub>j</sub>	VR=0V; 1MHz	--	21	--	pF
Capacitance	C <sub>j</sub>	VR=5V; 1MHz	--	6.5	8.0	pF
Responsivity	R	$\lambda$ =633nm	--	.38	--	A/W
Responsivity	R	$\lambda$ =950nm	--	.55	--	A/W
Crosstalk	C <sub>t</sub>	VR=0V; $\lambda$ =633nm	--	2	--	%
Shunt Resistance	R <sub>sh</sub>	VR=10mV	200	250	--	MΩ

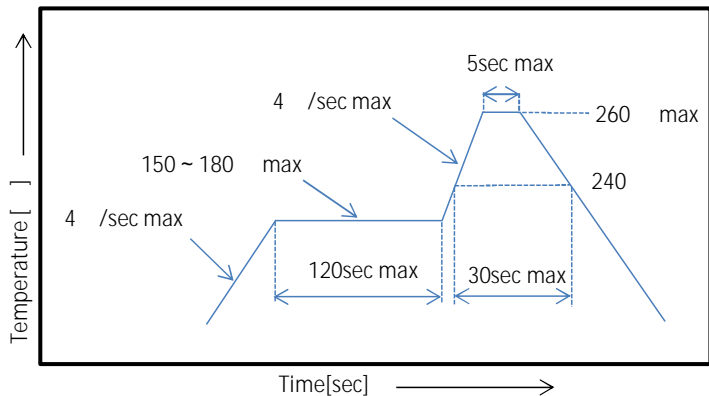
### Package Dimensions



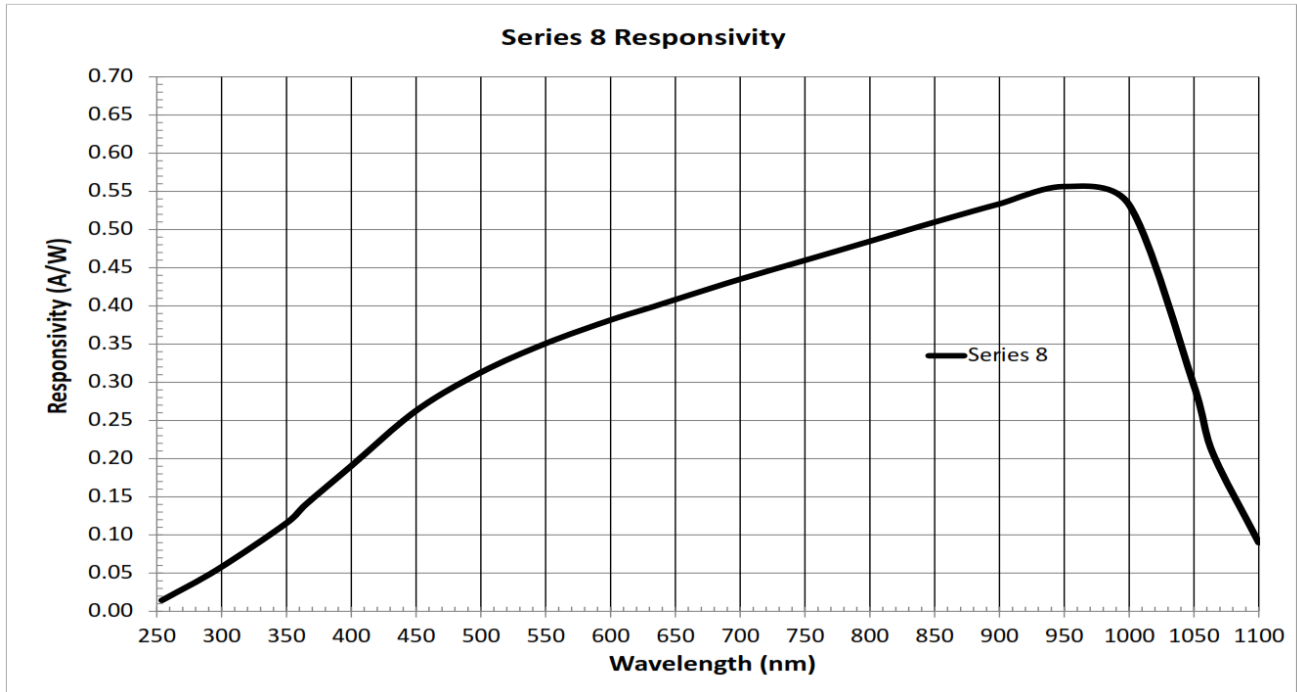
Recommended Soldering Pattern [mm]



Reflow Soldering Temperature-Profile [Pb free Soldering] (Recommend condition)



### Spectral Responsivity



The information contained herein is subject to change without notice.

2024-03-12