

Sensitivity Wavelength Range: 600nm ~ 1750nm

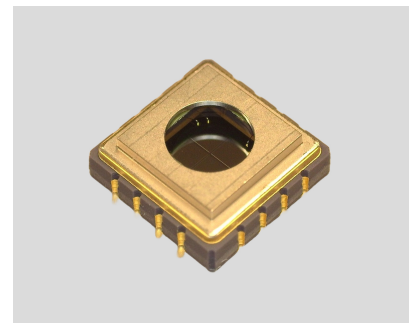
The MTSM1346SMF3-SP4-030, a high sensitivity and high reliability product series, is ideally suited for Optical Communication devices. Custom packaging options for this die are also available.

FEATURES

- > High Speed Response - 2.0GHz
- > 7.24mm Seam Welded Surface Mount Package
- > Total Chip Area of 3.0mm x 3.0mm / High Sensitivity
- > Spectral Range: 600nm - 1750nm
- > 4 Individual 0.3mm active area photodiodes

APPLICATIONS

- > High Speed Optical Communications
- > Industrial Controls
- > Optical Switches
- > LIDAR
- > Medical



Absolute Maximum Ratings (Ta=25°C)

ITEMS	SYMBOL	RATINGS	UNIT
Active Area	Φ	3.0	mm
Operating Temperature Range	T _{opr}	-40 to +85	°C
Storage Temperature Range	T _{stg}	-40 to +125	°C

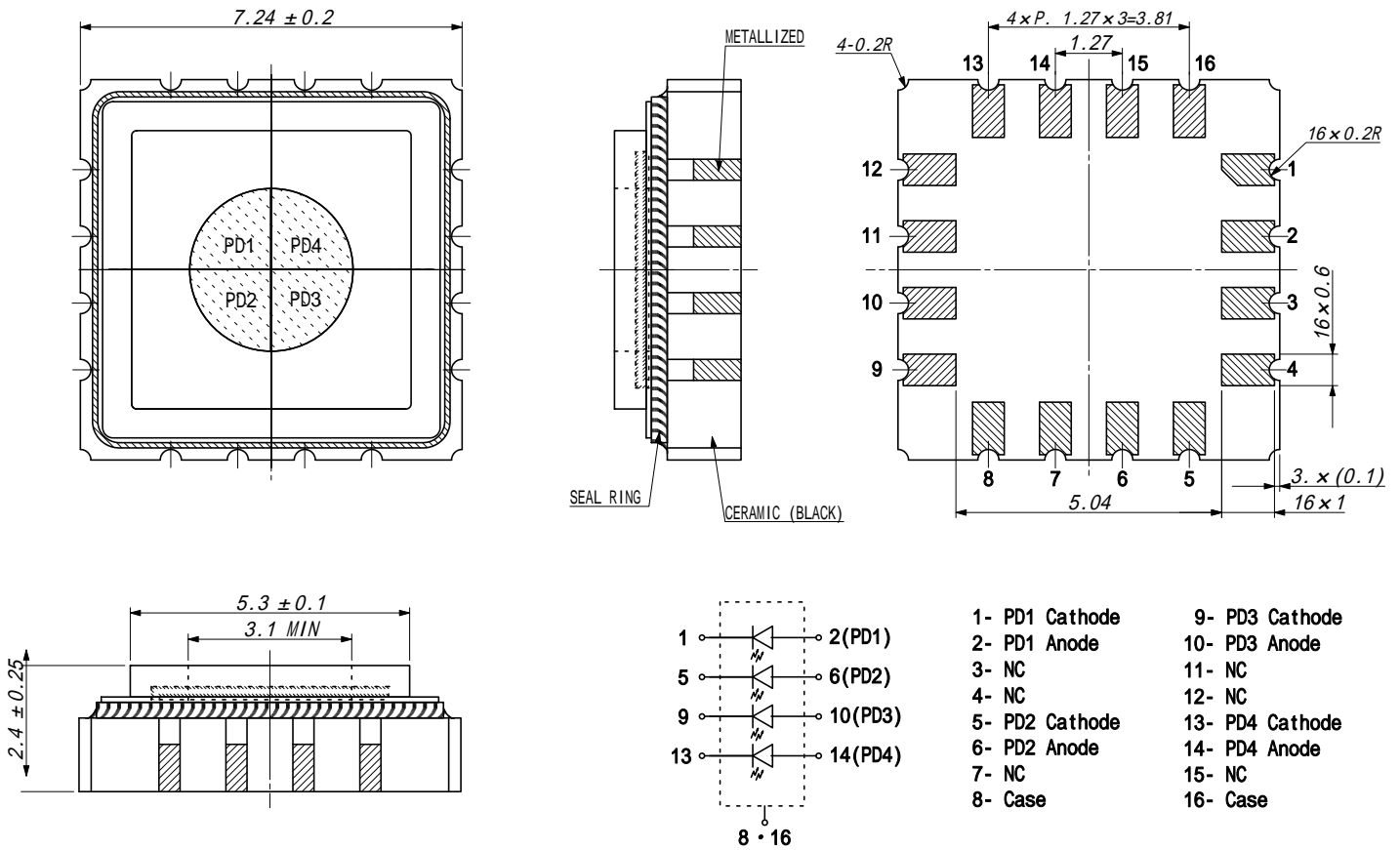
Electrical & Optical Characteristics (Ta = 25°C)

ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Breakdown Voltage	VR	IR=10uA	--	--	1	V
Sensitivity Range	λ	VR=0V	600	--	1750	nm
Dark Current	ID	VR=0V	--	0.025	--	nA
Dark Current	ID	VR=1V	--	16	--	uA
Capacitance	C	VR=0V	--	12	--	pF
Capacitance	C	VR=1V	--	10	--	pF
Responsivity	R	λ=1650nm	--	0.74	--	A/W
Shunt Resistance	RS	VR=10mV	--	12	--	MOhm
Quantum Efficiency	QE	λ=1660nm	--	55	--	%

Note: Also available on PCB - Starboard MTSM1346SMF3-SP4-030S (See Page 4)

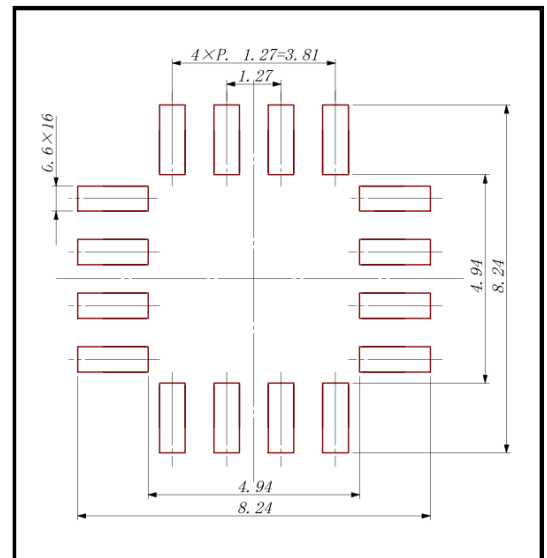
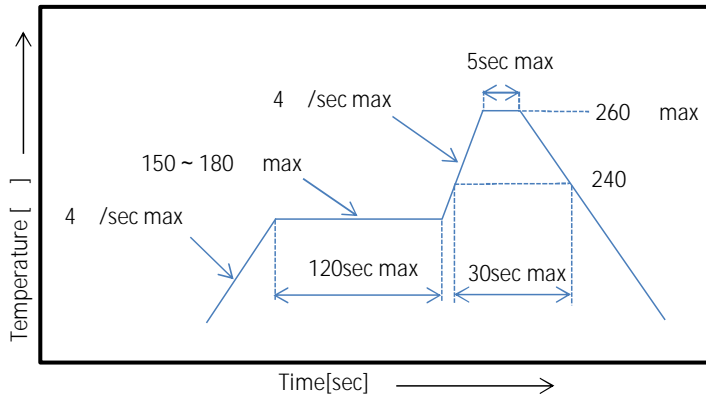
*1: Device specifications are (Per Element)

Package Dimensions



Recommended Soldering Pattern [mm]

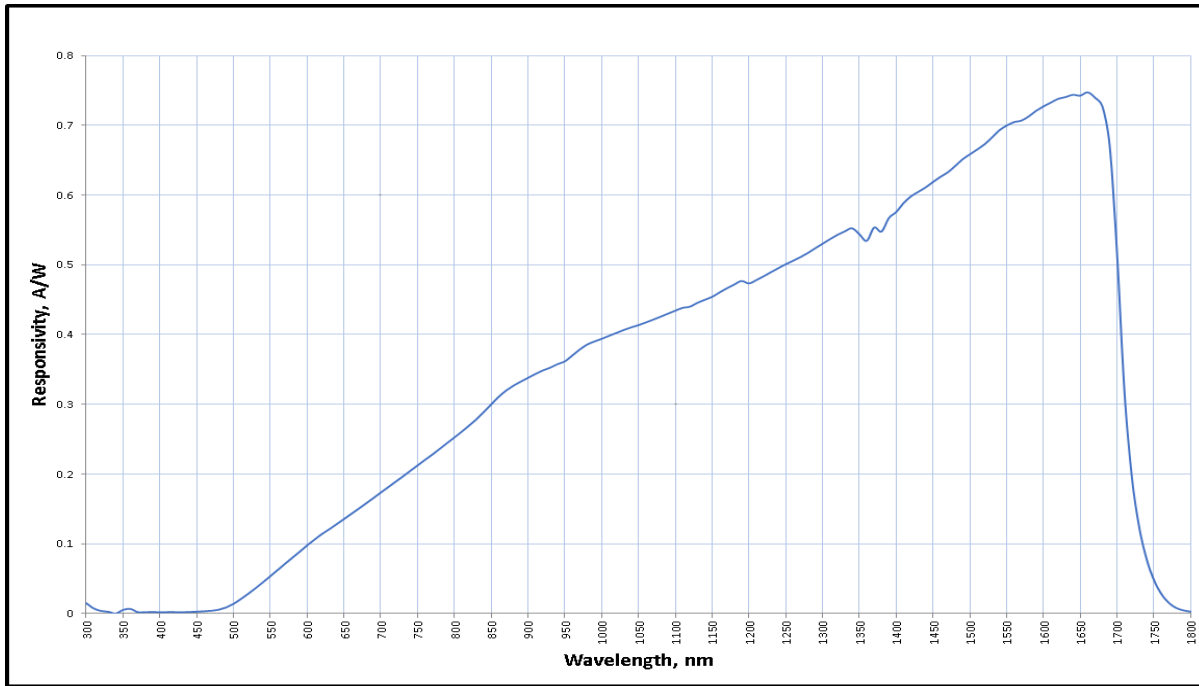
Reflow Soldering Temperature-Profile [Pb free Soldering] (Recommend condition)



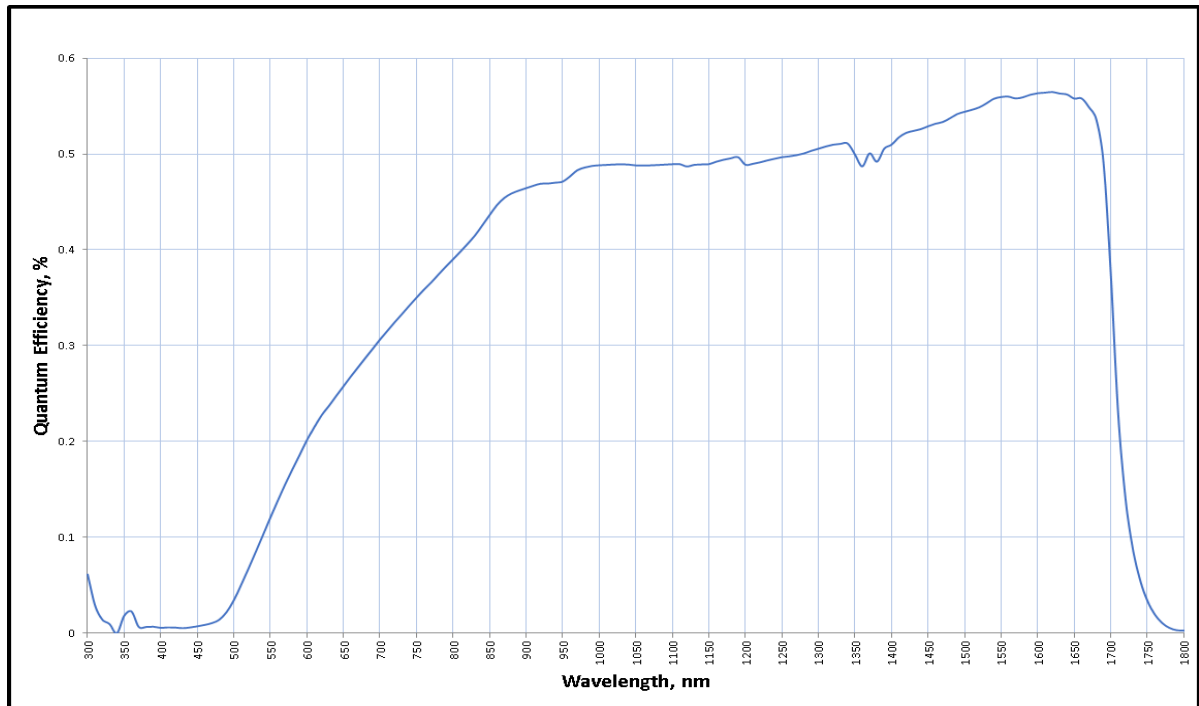
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Spectral Responsivity



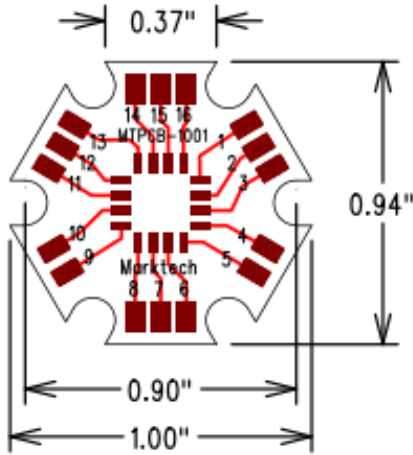
Quantum Efficiency



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Starboard Dimensions



Starboard Pin Out

- | | |
|----------------|-----------------|
| 1- NC | 9- NC |
| 2- NC | 10- NC |
| 3- PD1 Anode | 11- PD3 Anode |
| 4- PD1 Cathode | 12- PD3 Cathode |
| 5- Case | 13- Case |
| 6- NC | 14- NC |
| 7- PD4 Anode | 15- PD2 Anode |
| 8- PD4 Cathode | 16- PD2 Cathode |



Aluminum Core Board 0.040" (1.02mm) Thickness
Overall Board Dimensions: +/- 0.010" (0.254mm)



We reserve the right to make changes to improve technical design and may do so without further notice. Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer.

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