

Sensitivity Wavelength Range: 600nm ~ 1750nm

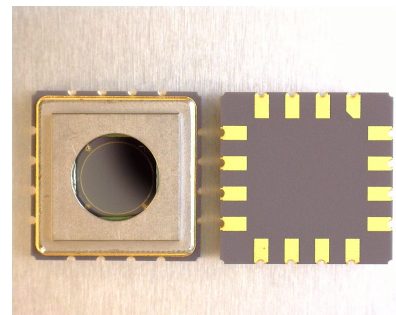
The 1346 series from Marktech, a high sensitivity and high reliability product series, is ideally suited for Optical Communication devices. Custom packaging options for this die are also available.

FEATURES

- > High Speed Response
- > 7.24 x 7.24mm Hermetically Sealed Package
- > Active Area of 3.00mm / High Sensitivity
- > Spectral Range 600nm - 1750nm

APPLICATIONS

- > High Speed Optical Communications
- > Optical LAN
- > Optical Switches
- > Ethernet Fiber Channel



Absolute Maximum Ratings (Ta=25°C)

ITEMS	SYMBOL	RATINGS	UNIT
Active Area	Φ	3.0	mm
Operating Temperature Range	Topr	-40 to +85	°C
Storage Temperature Range	Tstg	-40 to +125	°C

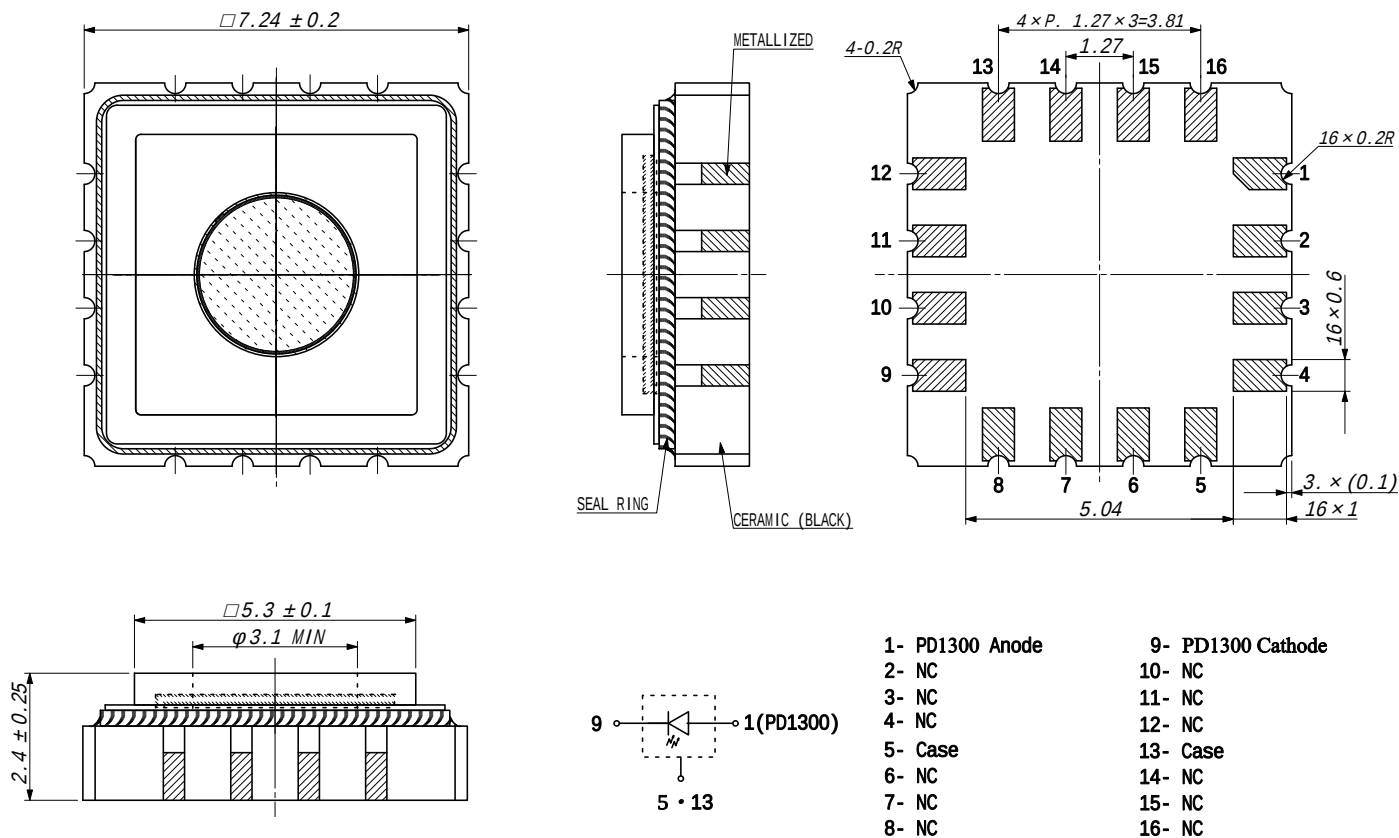
Note: Also available on PCB - Starboard MTSM1346SMF3-300S (See Page 3)

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=1V	--	265	--	uA
Capacitance	C	VR=1V; *2	--	--	2090	pF
Responsivity	R	$\lambda=1.6\mu\text{m}$	--	0.50	--	A/W
Shunt Resistance	RS	VR=10mV	--	0.360	--	kOhm
Quantum Efficiency	QE	$\lambda=1.6\mu\text{m}$	--	0.40	--	%
Light Current	IL	$\lambda=1.6\mu\text{m}$; *1	--	35.4	--	μA
Rise and Fall Time	Tr,Tf		--	102	--	ns
Bandwidth	BW		--	4.3	--	MHz

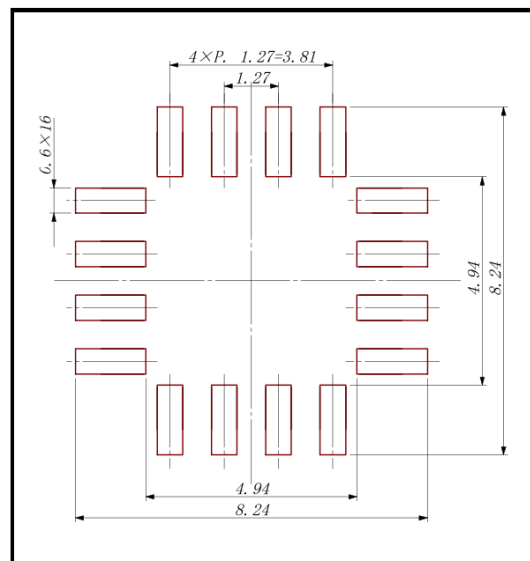
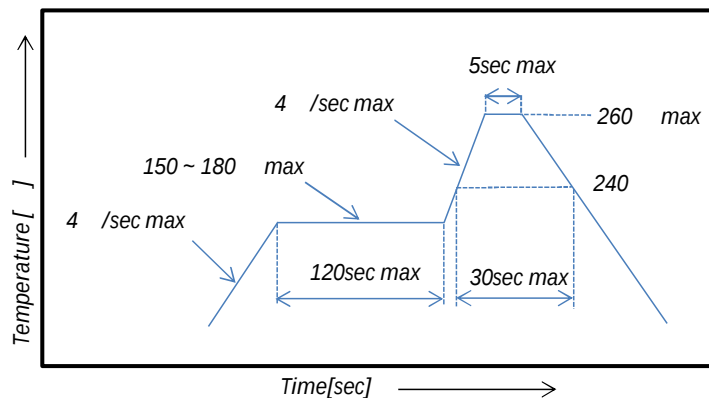
*1: Ee=1mW/cm² *2: f=100kHz/1kHz

Package Dimensions



Recommended Soldering Pattern [mm]

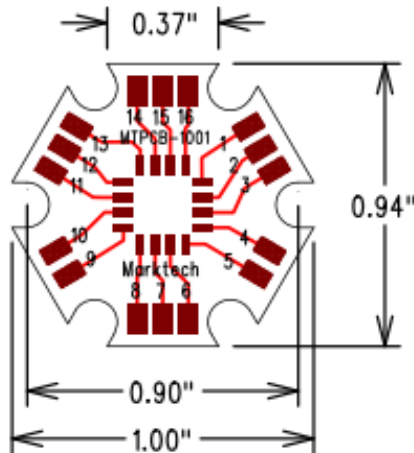
Reflow Soldering Temperature-Profile [Pb free Soldering] (Recommend condition)



The information contained herein is subject to change without notice.

2025-10-20

Starboard Dimensions



Starboard PCB Pin Out

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

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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Spectral Response Graph

