Preliminary

Marktech Optoelectronics

SWIR Emitter

Product No: **MTSM1901SMR2**

Peak Emission Wavelength: 1900nm

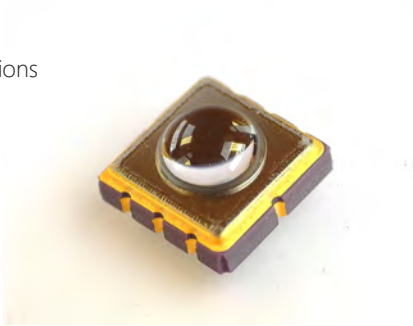
The MTSM1901SMR2 is a 1900nm SWIR Emitter in a Seam Welded Surface Mount package for applications requiring high output power and efficiency.

FEATURES

> 5mm x 5mm Seam Welded Surface Mount Package
> High Reliability
> High Output Power
> Hermetically Sealed Package

APPLICATIONS

> Bio Medical Applications
> Optical Sensors
> Aerospace
> Industrial Controls



Absolute Maximum Ratings (Ta=25°C)

ITEMS	SYMBOL	RATINGS	UNIT
Forward Current (DC)	IF	100	mA
Forward Current (Pulse)*1	IFP	1	A
Reverse Voltage	VR	5	V
Power Dissipation	PD	100	mW
Operating Temperature Range	Topr	-20 ~ +85	°C
Storage Temperature Range	Tstg	-30 ~ +100	°C

Note: Also available on PCB - Starboard MTSM1901SMR2S (See Page 3)

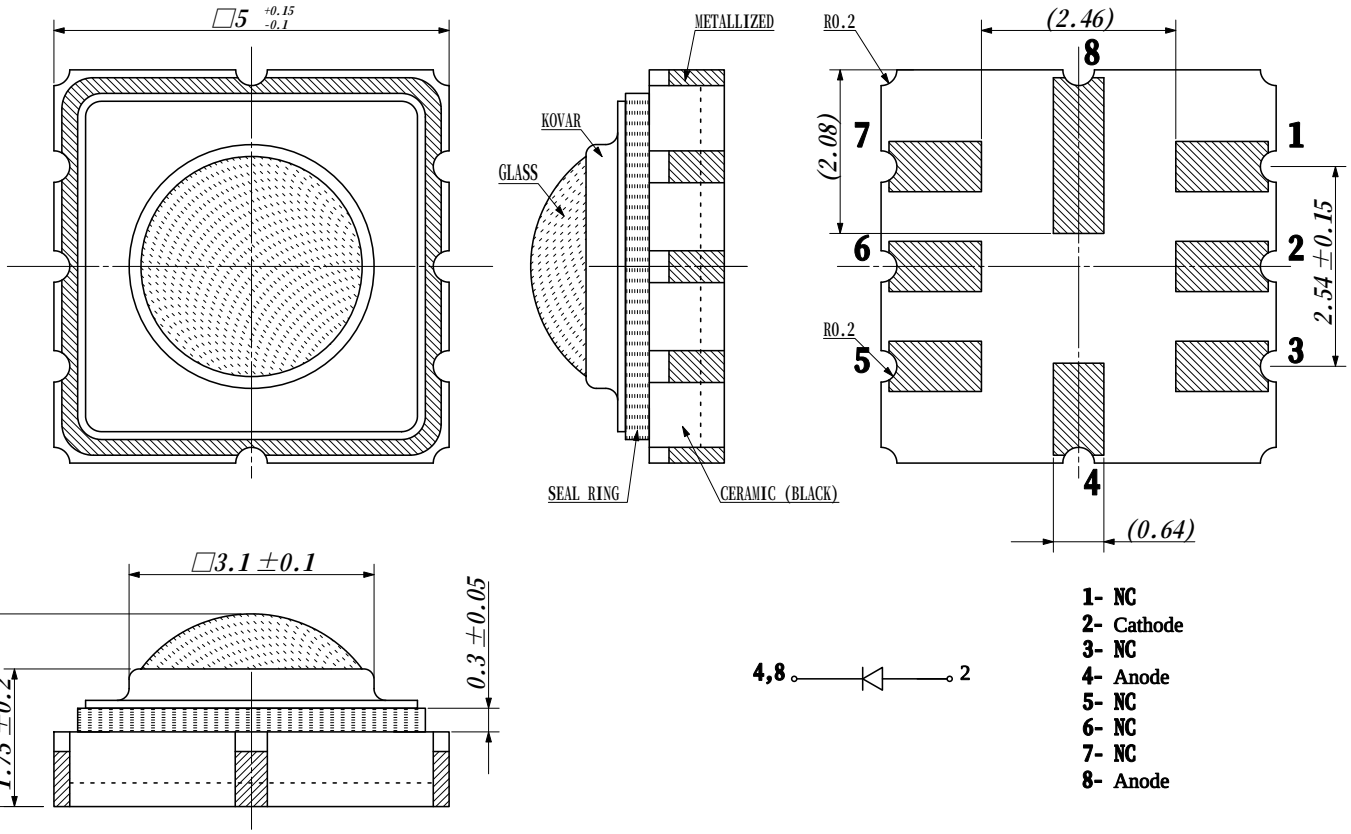
*1: Tw=10µsec, T=10msec

Electrical & Optical Characteristics (Ta = 25°C)

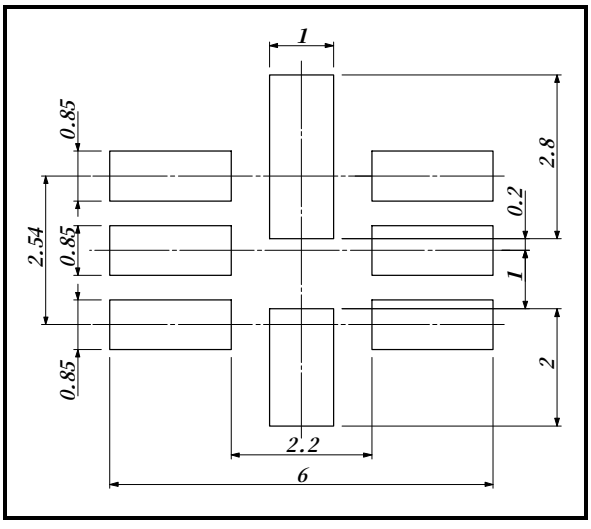
ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	VF	IF=50mA	--	0.73	--	V
Power Output	PO	IF=50mA	--	2.4		mW
Reverse Current	IR	VR=5V	--	--	10	µA
Peak Emission Wavelength	λp	IF=50mA	--	1870	--	nm
Spectral Line Half Width	Δλ	IF=50mA	--	100	--	nm
Half Intensity Beam Angle	Θ	IF=50mA	--	40	--	deg

2024-10-07

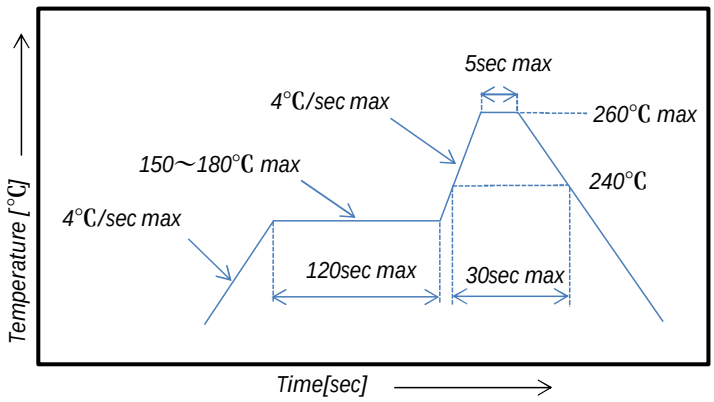
Package Dimensions



Recommended Soldering Pattern [mm]



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



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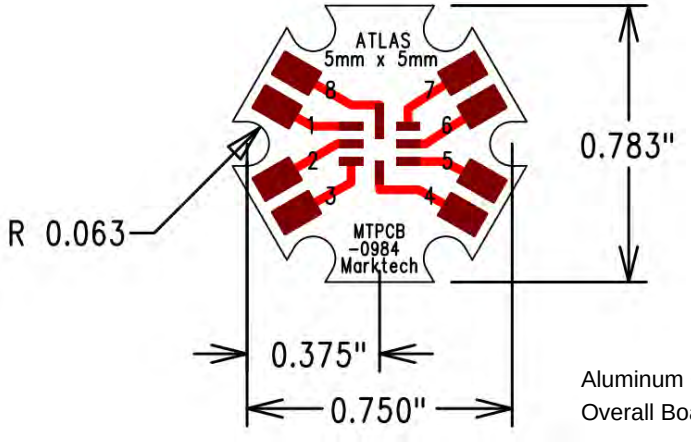
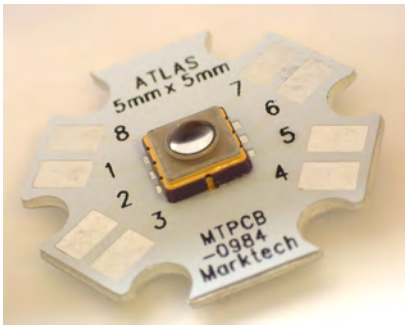
Starboard Dimensions



Pin 1	NC
Pin 2	Cathode
Pin 3	NC
Pin 4	Anode
Pin 5	NC
Pin 6	NC
Pin 7	NC
Pin 8	Anode



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

RoHS COMPLIANT Pb-Free

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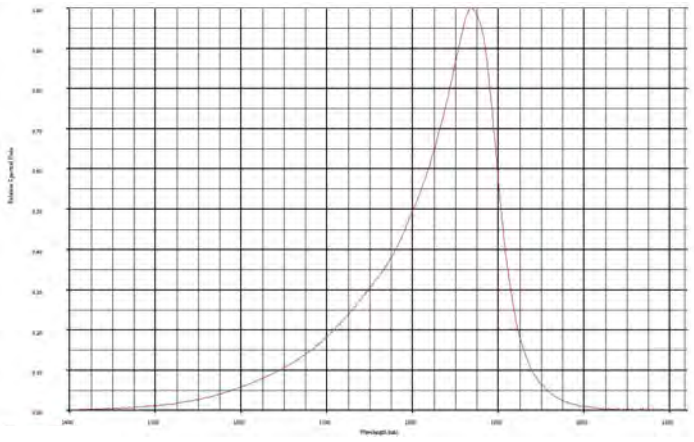
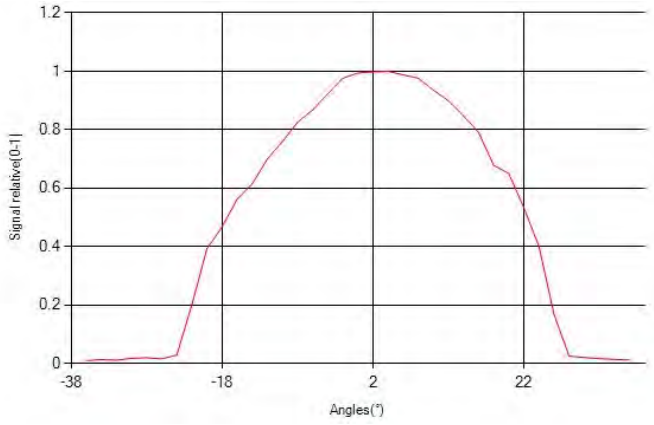
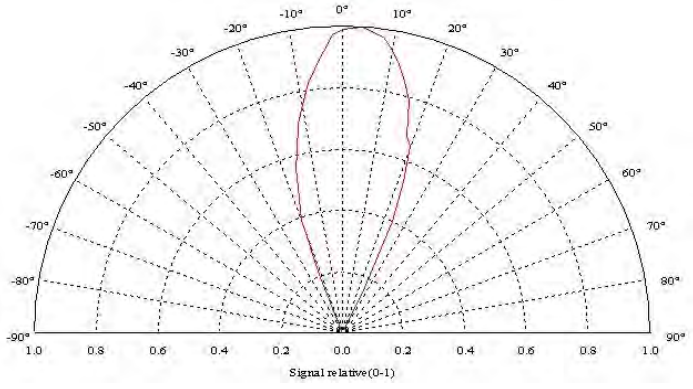
SPECTRAL RESPONSE



RADIATION DISTRIBUTION



VIEW ANGLE



The information contained herein is subject to change without notice.

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