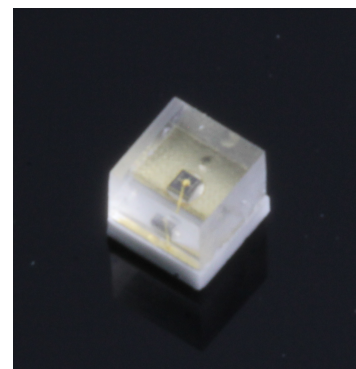


### Peak Emission Wavelength:

The MTSM1301SM1 is a SWIR Emitter designed for applications requiring high power and efficiency and is packaged in a 1.6mm square SMD package.

#### FEATURES

- > 1.6mm square SMD Package
- > CSP (Chip Scale Packaging)
- > High Reliability
- > Lambertian Radiation Pattern
- > Maximum drive current: up to 60mA
- > Cathode-up design



### Absolute Maximum Ratings (Ta=25°C)

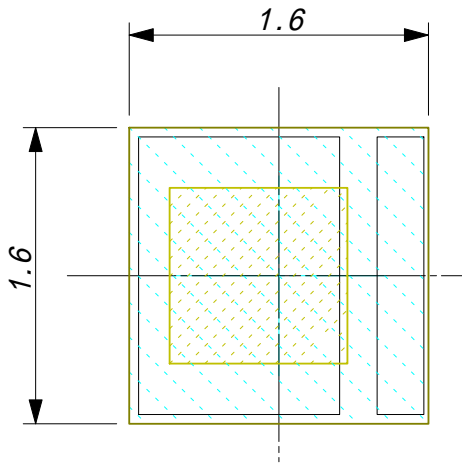


ITEMS	SYMBOL	RATINGS	UNIT
Forward Current (DC)	IF	60	mA
Forward Current (Pulse)*1	IFP	--	mA
Reverse Voltage	VR	5	V
Operating Temperature Range	Topr	-40 ~ +100	°C
Storage Temperature Range	Tstg	-40 ~ +120	°C
Junction Temperature	Tj	150	°C

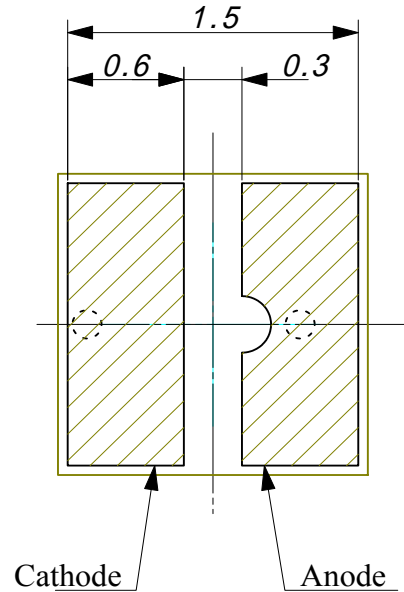
\*1 Tw=10usec, T=10msec

### Electrical & Optical Characteristics (Ta = 25°C)

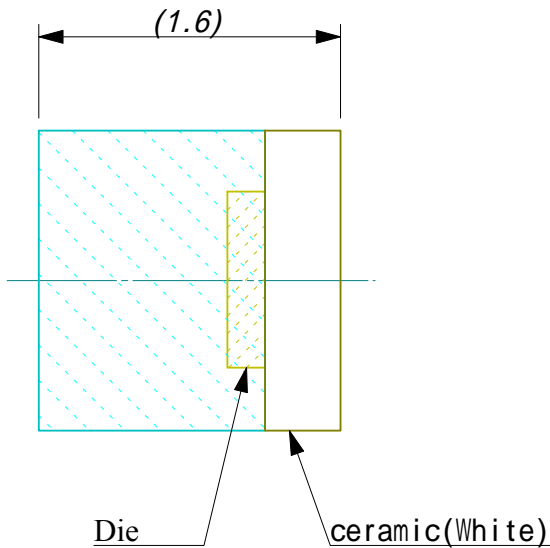
ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Power Output	PO	IF=50mA	--	9	--	mW
Forward Voltage	VF	IF=50mA	--	1.05	--	V
Peak Emission Wavelength	$\lambda_p$	IF=50mA	--	1300	--	nm
Spectral Line Half Width	$\Delta\lambda$	IF=50mA	--	76	--	nm
Reverse Current	IR	VR=5V	--	--	10	$\mu$ A
Half Intensity Beam Angle	$\Theta$	IF=50mA	--	130	--	deg



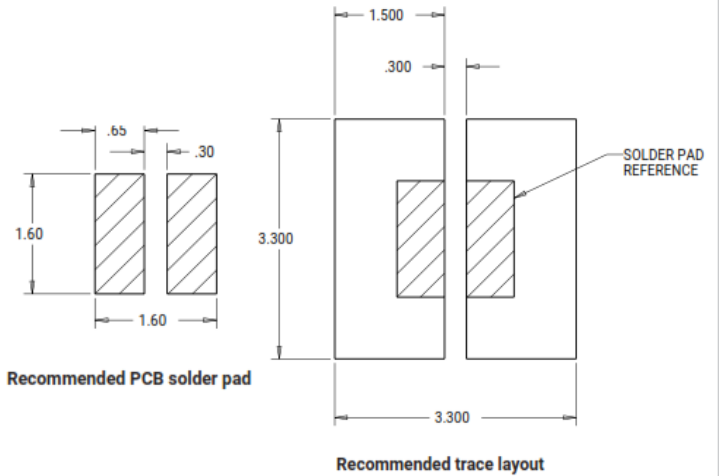
[Top View]



Cathode Anode  
[Bottom View]



[Side View]



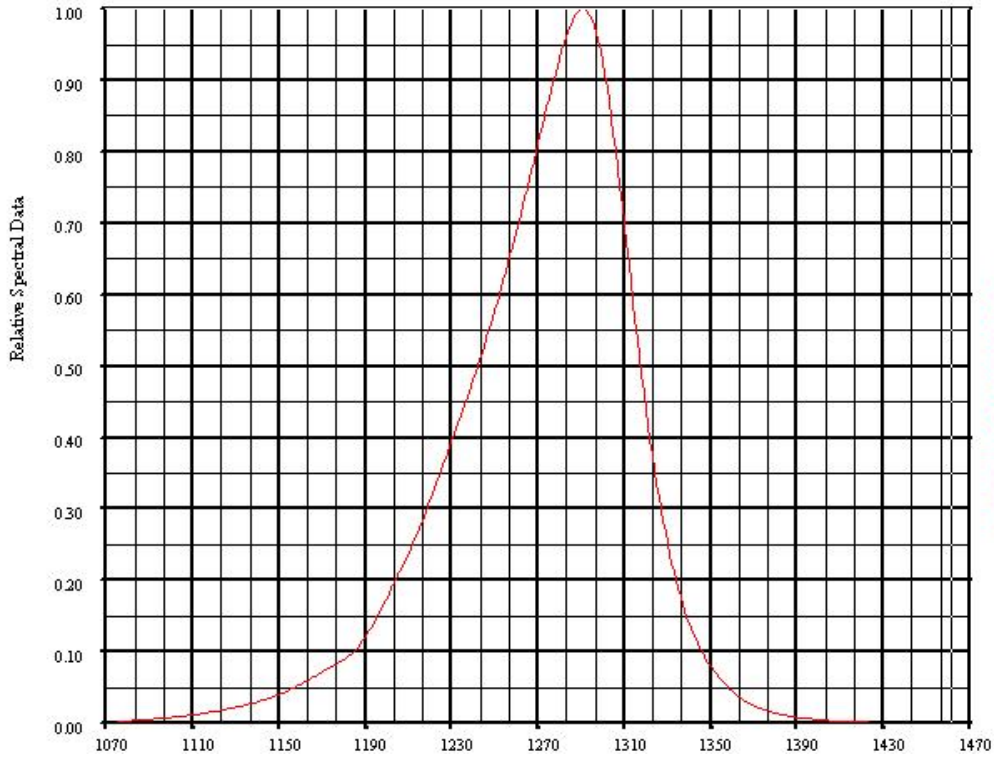
Recommended PCB solder pad

Recommended trace layout

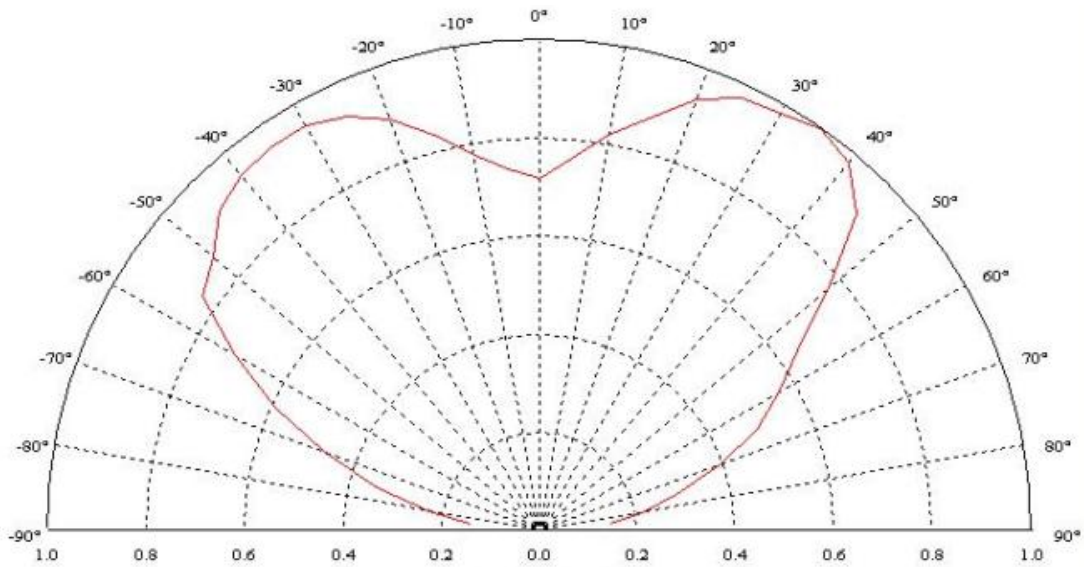
The information contained herein is subject to change without notice.

2021-03-10

**Relative Spectral Power Distribution**



**Radiation Pattern**



The information contained herein is subject to change without notice.

2021-03-10