Marktech Optoelectronics

Preliminary

High Power SWIR Emitter

Product No: **MTE5116C1**

Peak Emission Wavelength: 1650nm

The MTE5116C1 consists of a 1650nm high output infrared die in a water-clear 5mm plastic molded package. Custom package solutions and sorting are available.

FEATURES

> High Output Power
> High Reliability
> Compact

APPLICATIONS

> Optical Switches
> Optical Sensors
> Fiber Optical Communication

Absolute Maximum Ratings (Ta=25°C)

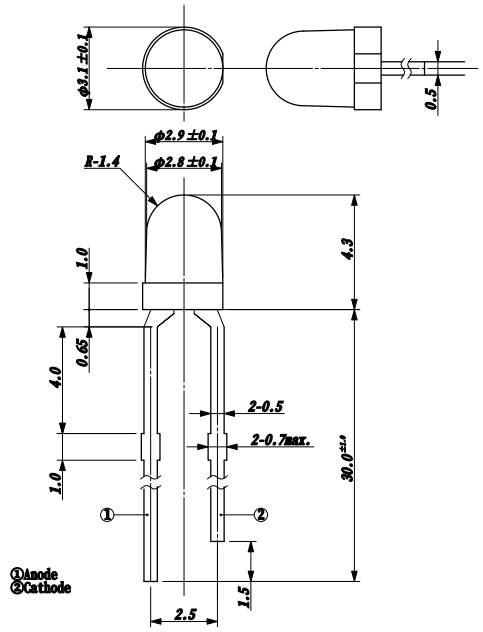
ITEMS	SYMBOL	RATINGS	UNIT
Forward Current	IF	100	mA
Forward Current (Pulse)*1	IFP	1	A
Reverse Voltage	VR	5	V
Power Dissipation	PD	--	mW
Operating Temperature Range	Topr	-20 ~ +85	°C
Storage Temperature Range	Tstg	-30 ~ +100	°C
Junction Temperature	Tj	100	°C
Lead Soldering Temperature*2	Tls	260	°C

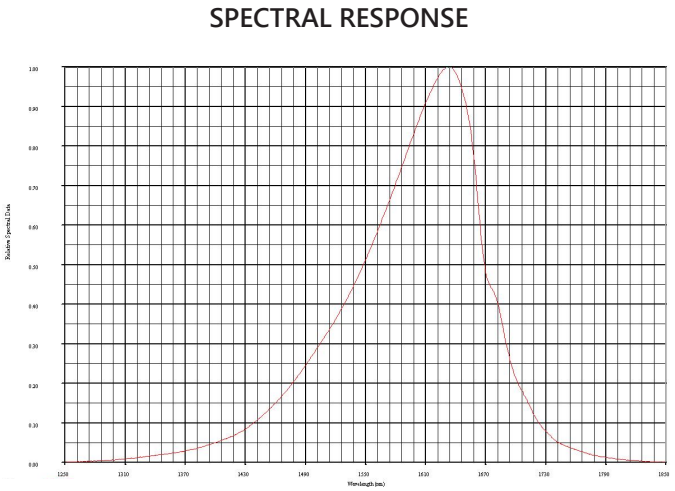
*1: Tw=10μsec, T=10msec; *2: Time 5 Sec max, Position: Up to 3mm from the body.

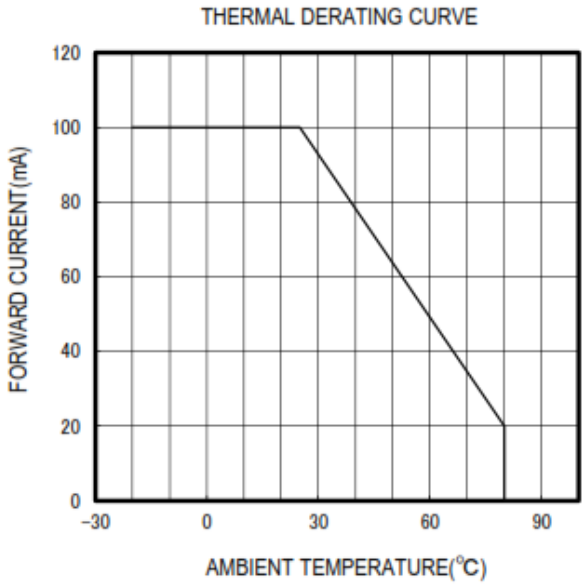
Electrical & Optical Characteristics (Ta = 25°C)

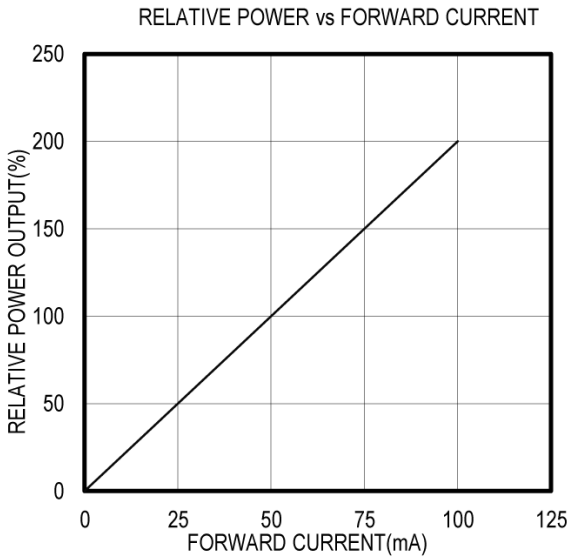
ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Power Output	PO	IF=50mA	--	4.4	--	mW
Forward Voltage	VF	IF=50mA	--	1.0	--	V
Reverse Current	IR	VR=5V	--	--	100	μA
Peak Emission Wavelength	λp	IF=50mA	--	1635	--	nm
Spectral Line Half Width	Δλ	IF=50mA	--	120	--	nm
Half Intensity Beam Angle	Θ	IF=50mA	--	±25	--	deg

2023-10-20


φ3.1±0.1
0.5
φ2.9±0.1
R-1.4
φ2.8±0.1
4.3
1.0
0.65
4.0
2-0.5
2-0.7max.
30.0±1.0
1.0
①
②
①Anode
②Cathode
1.5
2.5


SPECTRAL RESPONSE


THERMAL DERATING CURVE
FORWARD CURRENT(mA)
120
100
80
60
40
20
0
-30
0
30
60
90
AMBIENT TEMPERATURE(°C)


RELATIVE POWER vs FORWARD CURRENT
RELATIVE POWER OUTPUT(%)
250
200
150
100
50
0
0
25
50
75
100
125
FORWARD CURRENT(mA)

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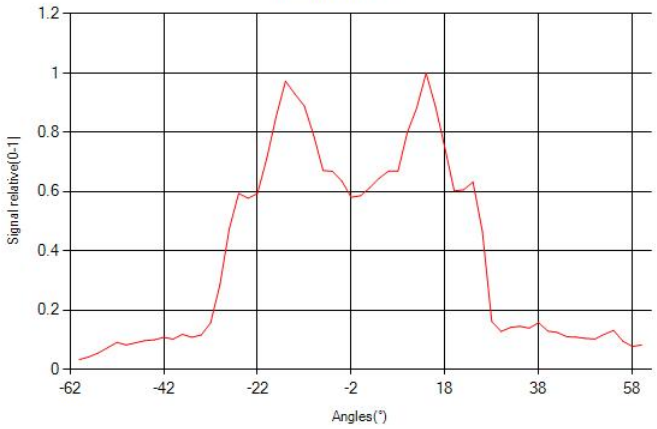
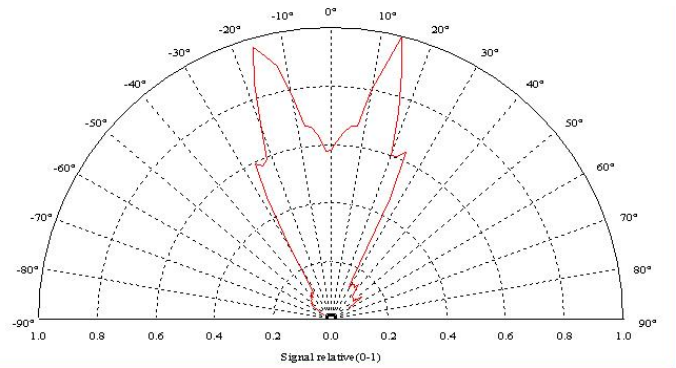
RADIATION DISTRIBUTION



VIEW ANGLE



The information contained herein is subject to change without notice.

2023-10-20