Marktech Optoelectronics

High Power Infrared LED

Product No: **MTE8760N5**

Peak Emission Wavelength: 870nm

The MTE8760N5 consists of a 870nm high output infrared die in a water-clear 5mm plastic molded package. Custom package solutions and sorting are available.



FEATURES

> High Output Power
> Narrow Beam Angle
> High Reliability
> Excellent Optical / Mechanical Axis Alignment

APPLICATIONS

> Optical Switches & Sensors
> Optical Position Sensing / Security Systems
> Medical Applications / Optical Communication
> Bar-code Reader / Smoke Detector

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	180	mW
Operating Temperature Range	Topr	-20 ~ +80	°C
Storage Temperature Range	Tstg	-30 ~ +100	°C
Junction Temperature	Tj	100	°C
Lead Soldering Temperature*2	Tls	260	°C

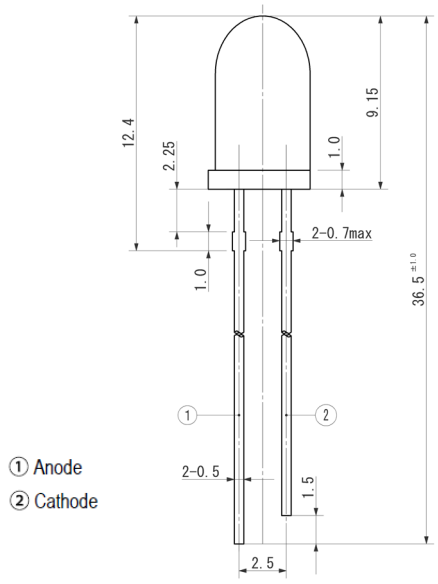
*1: Tw=10µsec, T=10msec. *2: Time 5 Sec max, Position: Up to 3mm from the body.

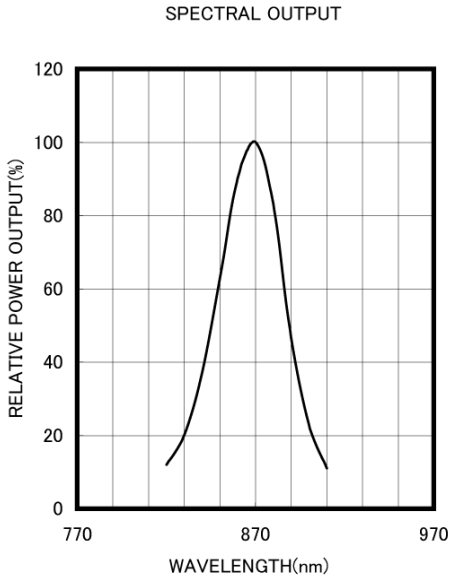
Electrical & Optical Characteristics (Ta = 25°C)

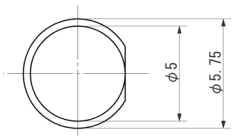
ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Power Output	PO	IF=50mA	--	24.0	--	mW
Forward Voltage	VF	IF=50mA	--	1.45	1.8	V
Reverse Current	IR	VR=5V	--	--	10	µA
Peak Emission Wavelength	λp	IF=50mA	--	870	--	nm
Spectral Line Half Width	Δλ	IF=50mA	--	45	--	nm
Half Intensity Beam Angle	Θ	IF=50mA	--	±7	--	deg
Temperature Coefficiency of PO	P/T	IF=10mA	--	-0.3	--	%/°C
Temperature Coefficiency of VF	V/T	IF=10mA	--	-2.1	--	mV/°C

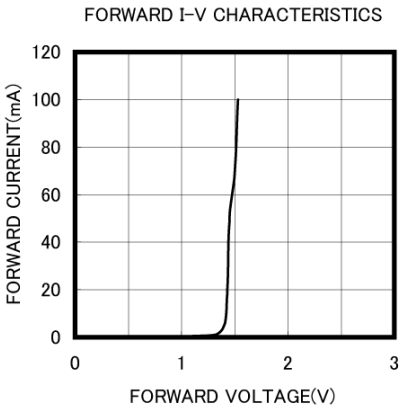
2011-09-22

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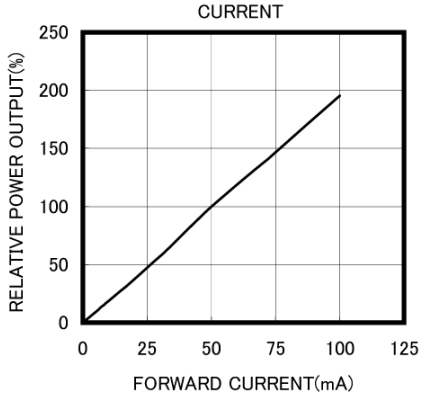




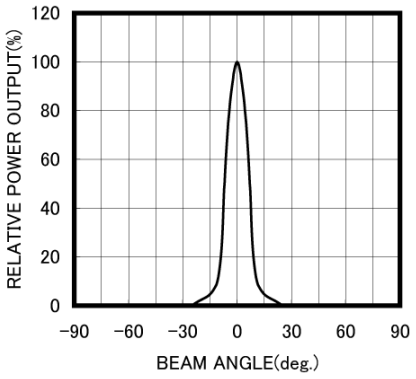
Unit: mm, Tolerance: ±0.2

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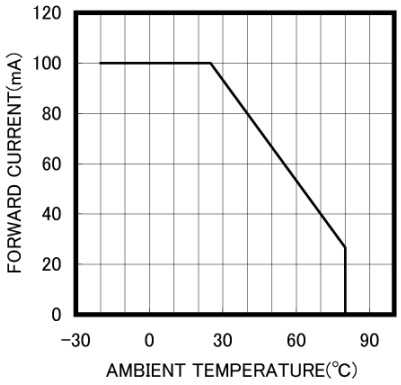
RELATIVE POWER vs FORWARD CURRENT



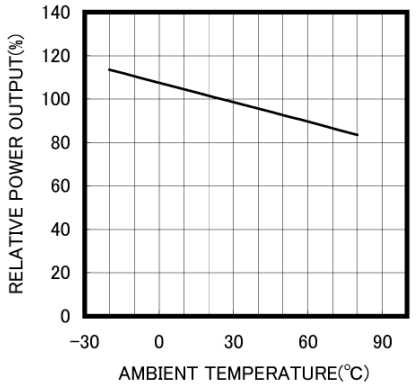
RADIATION PATTERN



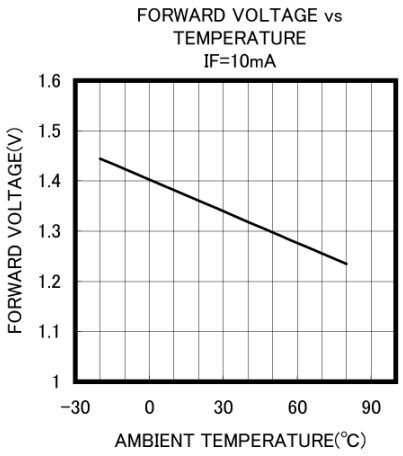
THERMAL DERATING CURVE



POWER OUTPUT vs TEMPERATURE
IF=10mA



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The information contained herein is subject to change without notice.

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