

### Peak Emission Wavelength: 880nm

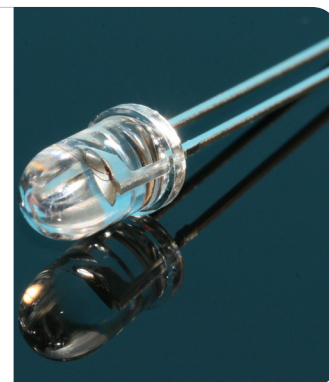
The MTE8800N1 consists of a 880nm high output infrared die in a water-clear 5mm plastic molded package. Custom package solutions and sorting are available.

#### 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
- > Currency Validation / Light Curtain



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

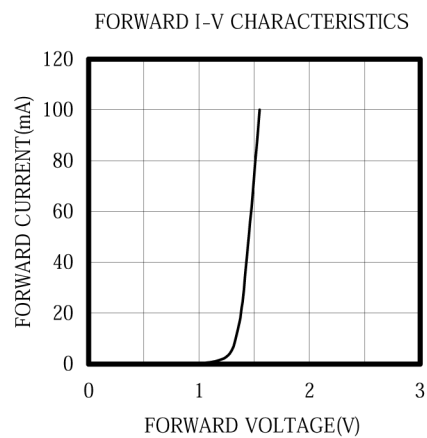
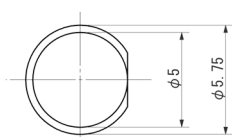
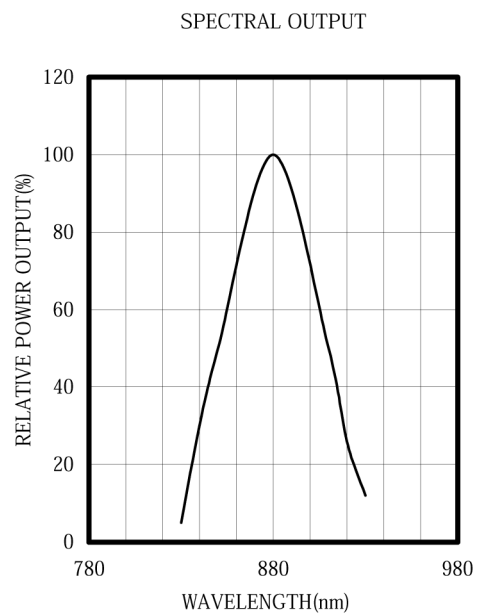
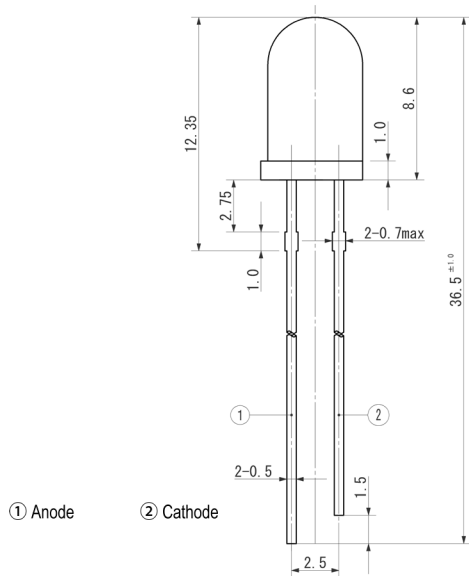


ITEMS	SYMBOL	RATINGS	UNIT
Forward Current (DC)	IF	100	mA
Forward Current (Pulse)*1	IFP	1	A
Reverse Voltage	VR	5	V
Power Dissipation	PD	180	mW
Operating Temperature Range	Topr	-20 ~ +80	°C
Storage Temperature Range	Tstg	-30 ~ +100	°C
Junction Temperature	Tj	100	°C
Lead Soldering Temperature*2	Tls	260	°C

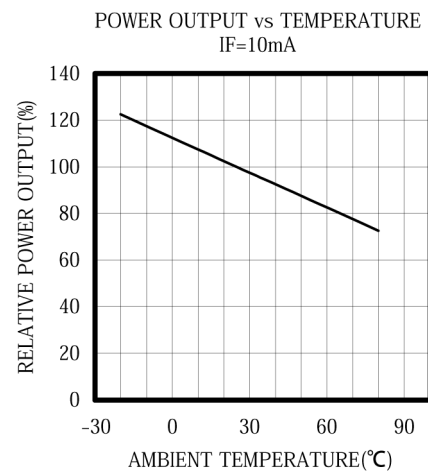
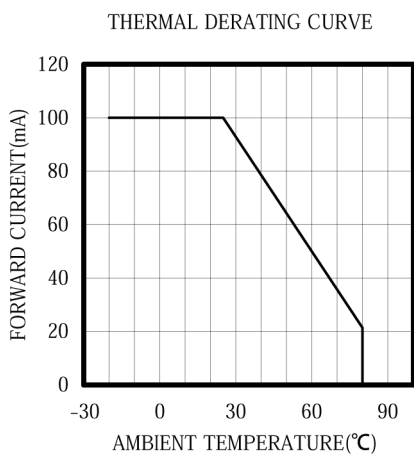
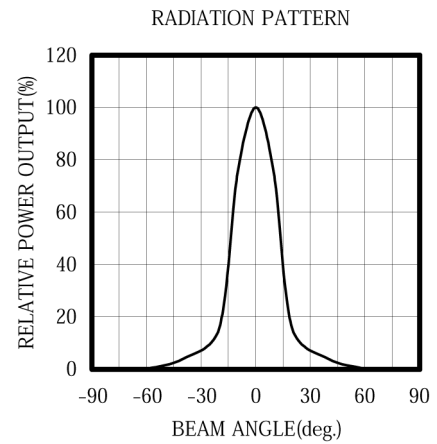
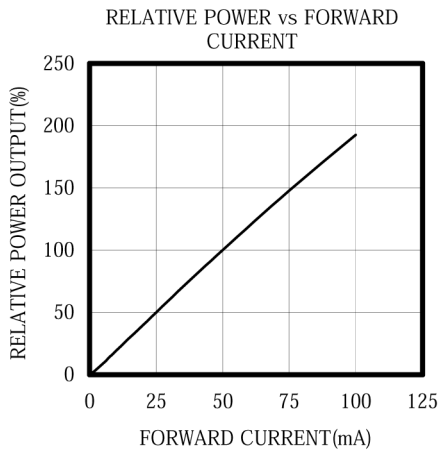
\*1: Tw=10μsec, T=10msec. \*2: Time 5 Sec max, Position: Up to 3mm from the body.

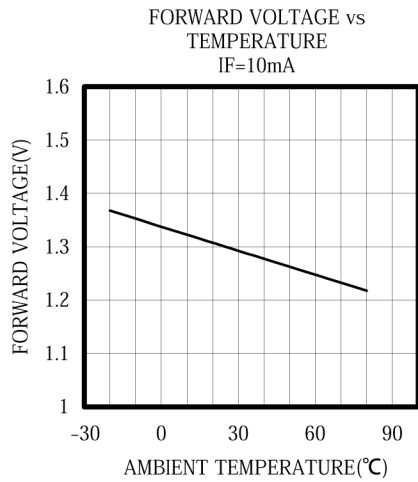
### Electrical & Optical Characteristics (Ta = 25°C)

ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Power Output	PO	IF=20mA	--	5.3	--	mW
Power Output	PO	IF=50mA	--	13.0	--	mW
Forward Voltage	VF	IF=50mA	--	1.45	1.8	V
Reverse Current	IR	VR=5V	--	--	10	μA
Peak Emission Wavelength	λp	IF=50mA	--	880	--	nm
Spectral Line Half Width	Δλ	IF=50mA	--	60	--	nm
Half Intensity Beam Angle	Θ	IF=50mA	--	±12	--	deg
Rise Time	Tr	IFP=50mA	--	1.5	--	μS
Fall Time	Tf	IFP=50mA	--	0.8	--	μS
Junction Capacitance	Cj	1MHz, V=0V	--	15	--	pF
Temperature Coefficient of PO	P/T	IF=10mA	--	-0.5	--	%/°C
Temperature Coefficient of VF	V/T	IF=10mA	--	-1.5	--	mV/°C



Unit: mm, Tolerance:  $\pm 0.2$





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