

Model No. AE770M1

Visible Light Emitting Diode

RoHS Compliant

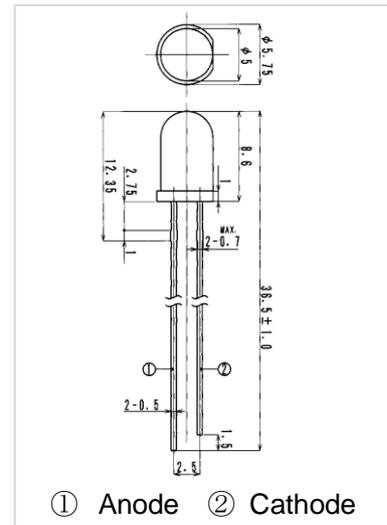
◆ **FEATURES**

- High Output Power
- Narrow Beam Angle
- High Reliability

◆ **APPLICATIONS**

- Optical Switch
- Optical Sensor
- Medical Application

◆ **Absolute Maximum Ratings**



Ta = 25°C

Parameter	Symbol	Value	Unit
Forward Current (DC)	I _F	50	mA
Pulse Forward Current ^{*1}	I _{FP}	0.5	A
Reverse Voltage (DC)	V _R	5	V
Power Dissipation	P _D	100	mW
Operating Temperature	T _{opr}	-20 ~ +80	°C
Storage Temperature	T _{stg}	-30 ~ +100	°C
Junction Temperature	T _j	100	°C
Lead Soldering Temperature ^{*2}	T _{ls}	260	°C

^{*1} : Tw = 10 μs, T=10mS ^{*2} : within 3sec / up to 2.0mm from the body

◆ **Electro-optical Characteristics**

Ta = 25°C

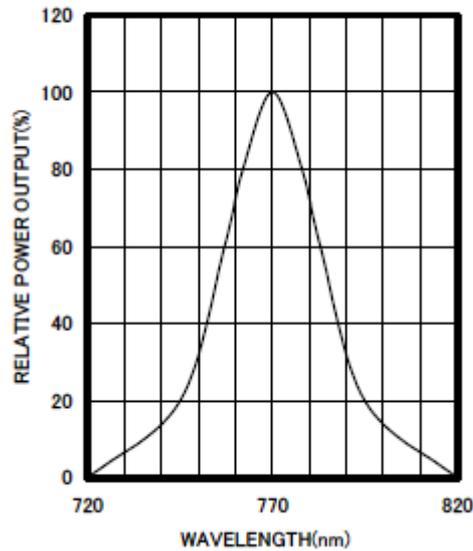
Parameter	Symbol	MIN	TYP	MAX	Unit	Conditions
Power Output	P _O	--	5.5	--	mW	I _F = 20mA
Forward Voltage	V _F	--	1.55	1.95	V	I _F = 20mA
Reverse Current	I _R	--	--	100	μA	V _R = 5V
Peak Wavelength	λ _p	--	770	--	nm	I _F = 20mA
Spectral Line Half Width	Δλ	--	25	--	nm	I _F = 20mA
Half Intensity Beam Angle	θ	--	±12	--	deg.	I _F = 20mA
Junction Capacitance	C _j	--	35	--	pF	1MHz, V=0V
Temp. Coefficient of P _O	P/T	--	-0.6	--	%/°C	I _F = 10mA
Temp. Coefficient of V _F	V/T	--	-2.0	--	mV/°C	I _F = 10mA

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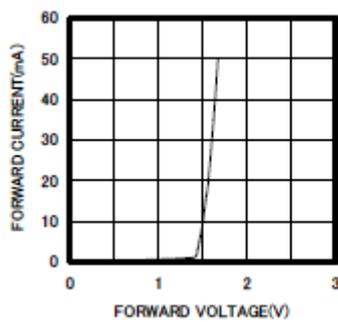
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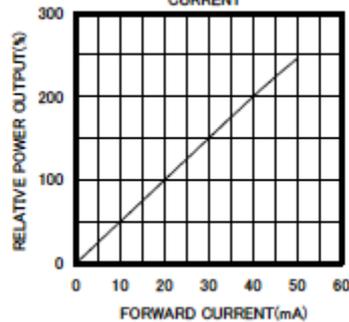
SPECTRAL OUTPUT



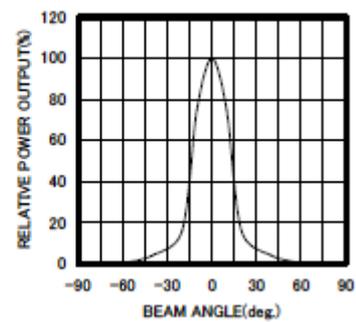
FORWARD I-V CHARACTERISTICS



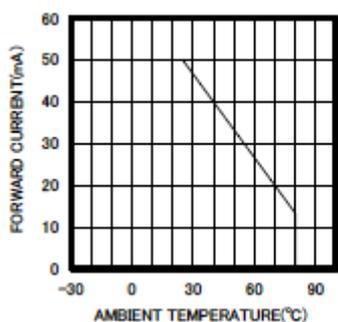
RELATIVE POWER vs FORWARD CURRENT



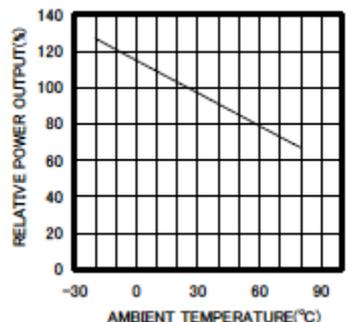
RADIATION PATTERN



THERMAL DERATING CURVE



POWER OUTPUT vs TEMPERATURE
IF=10mA



FORWARD VOLTAGE vs TEMPERATURE
IF=10mA

