

## Peak Emission Wavelength: 650nm

The 650nm Point Source Series is designed for applications requiring high accuracy and precision. Custom package solutions and sorting are available.

### FEATURES

- > 3.5x2.2x1.24 Flat Top Ceramic SMT
- > Emitting Window Diameter  $\Phi$  150 $\mu$ m
- > High Reliability / High Output Power

### APPLICATIONS

- > Optical Sensing / Optical Instruments
- > Linear & Rotary Encoder
- > Machine Vision / CCD
- > Optical Switches



## Absolute Maximum Ratings (Ta=25°C)

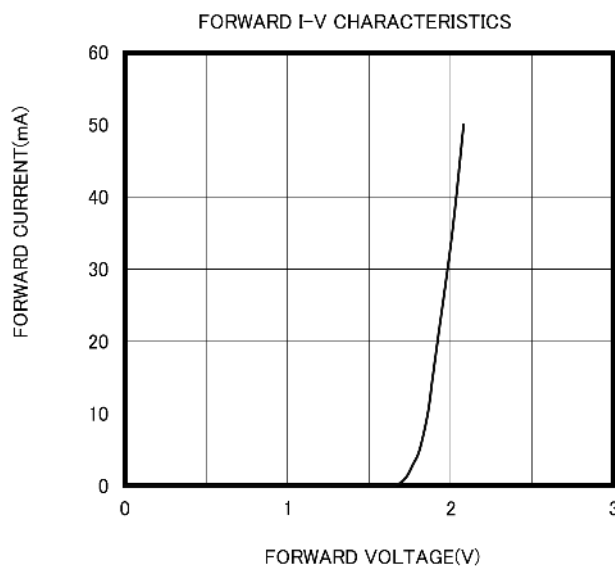
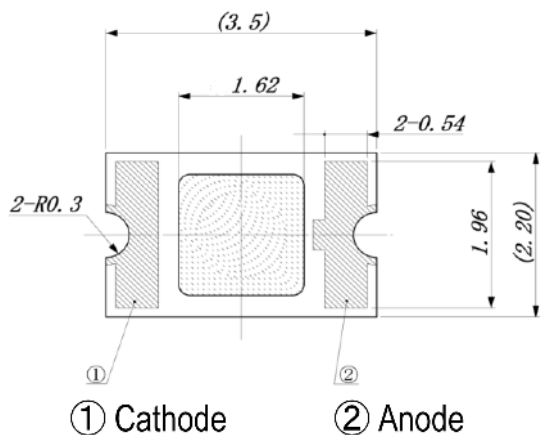
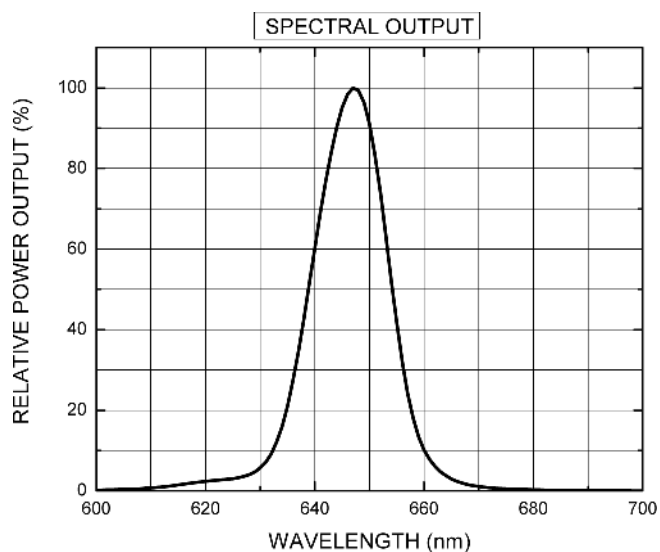
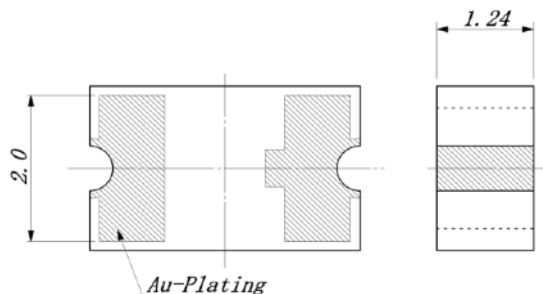


ITEMS	SYMBOL	RATINGS	UNIT
Forward Current (DC)	IF	50	mA
Forward Current (Pulse)*1	IFP	0.3	A
Reverse Voltage	VR	5	V
Power Dissipation	PD	120	mW
Operating Temperature Range	Topr	-20 ~ +80	°C
Storage Temperature Range	Tstg	-30 ~ +100	°C

\*1: Tw=10 $\mu$ sec, T=10msec.

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

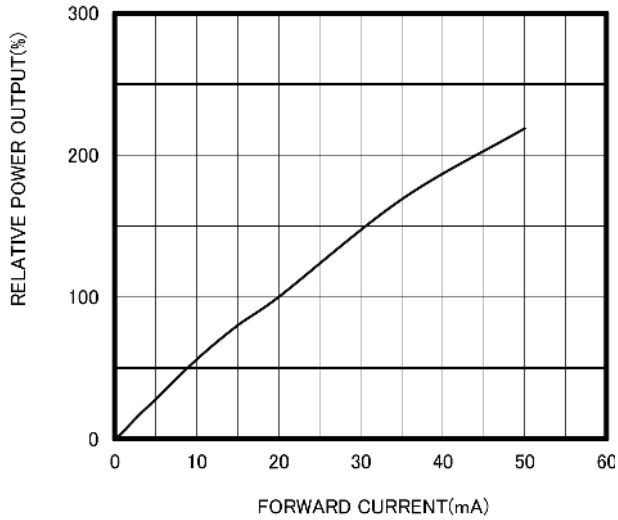
ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Power Output	PO	IF=20mA	--	1.6	--	mW
Forward Voltage	VF	IF=20mA	--	1.9	2.4	V
Reverse Current	IR	VR=5V	--	--	100	$\mu$ A
Peak Emission Wavelength	$\lambda_p$	IF=20mA	--	650	--	nm
Spectral Line Half Width	$\Delta\lambda$	IF=20mA	--	15	--	nm
Half Intensity Beam Angle	$\Theta$	IF=20mA	--	$\pm 45$	--	deg



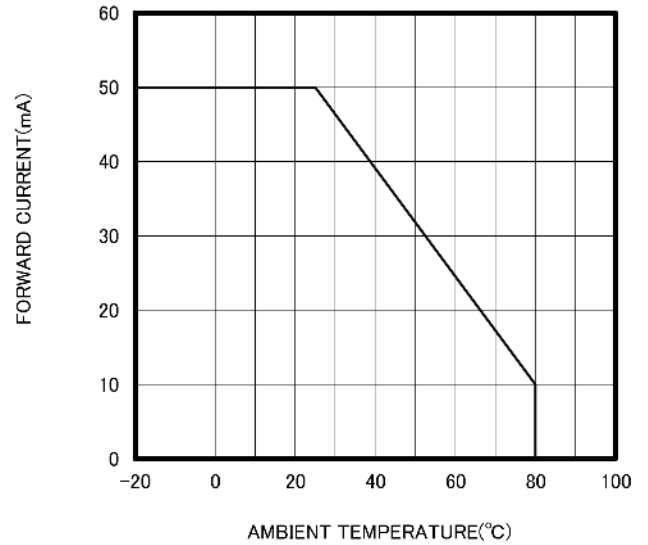
Unit: mm

2014-02-15

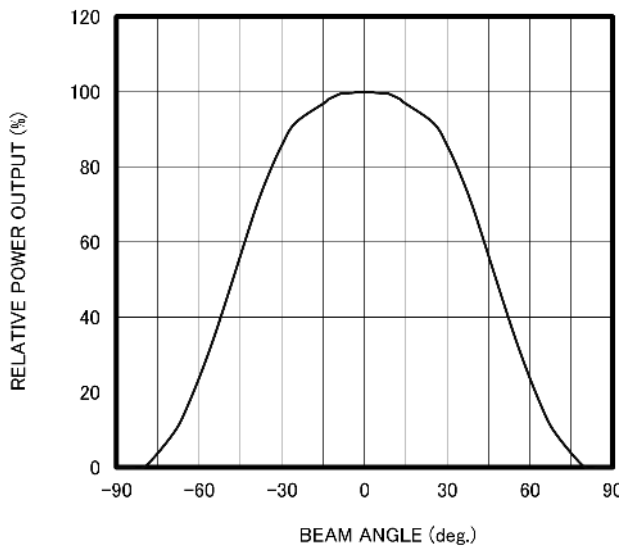
RELATIVE POWER vs FORWARD CURRENT



THERMAL DERATING CURVE



RADIATION PATTERN



**Soldering Conditions:**

**(1) Reflow Soldering**

- a. Please implement the following temperature profile.
- b. Please do not handle the product until it has returned to ambient temperature.

**(2) Hand Soldering**

- a. Soldering tip temperature must be under 320°C.
- b. Soldering must be done within 3 seconds each.
- c. When soldering, do not add pressure to the resin portion.
- d. Please do not handle the product until it has returned to ambient temperature.

Reflow Soldering Temperature-Profile [Pb free Soldering] (Recommend condition)

