

### Peak Emission Wavelength: 945nm

The 945nm IR emitter series is designed for applications requiring high output and precise optical / mechanical axis alignment. Custom package solutions and sorting are available.

#### FEATURES

- > Ceramic Dome Surface Mount 3.5x2.2x1.91
- > Narrow Beam Angle
- > High Reliability

#### APPLICATIONS

- > Optical Switches / Security Systems
- > Linear & Rotary Encoder
- > Remote Controls / Robotics
- > Card Readers / Medical Electronics



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

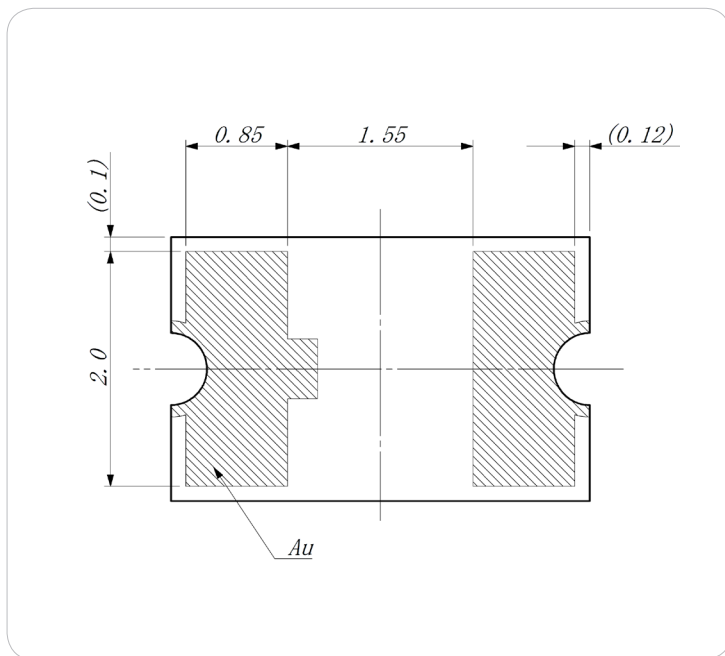
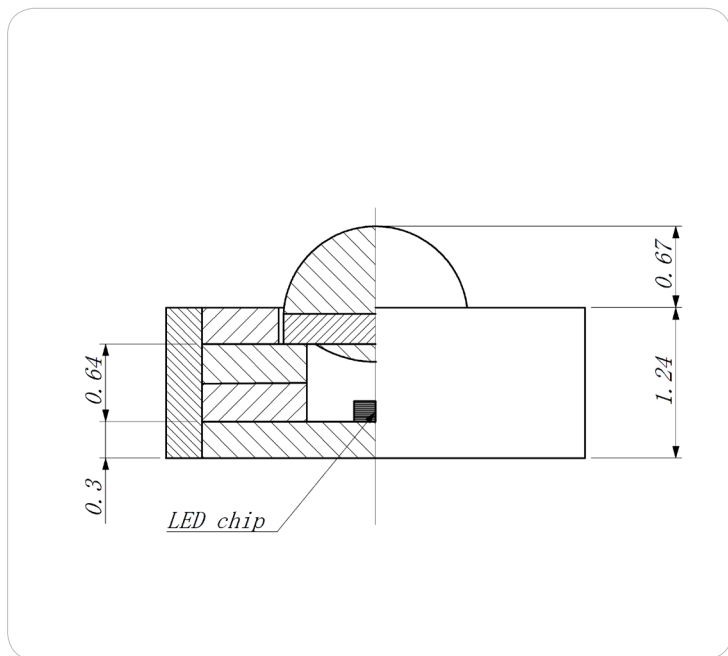
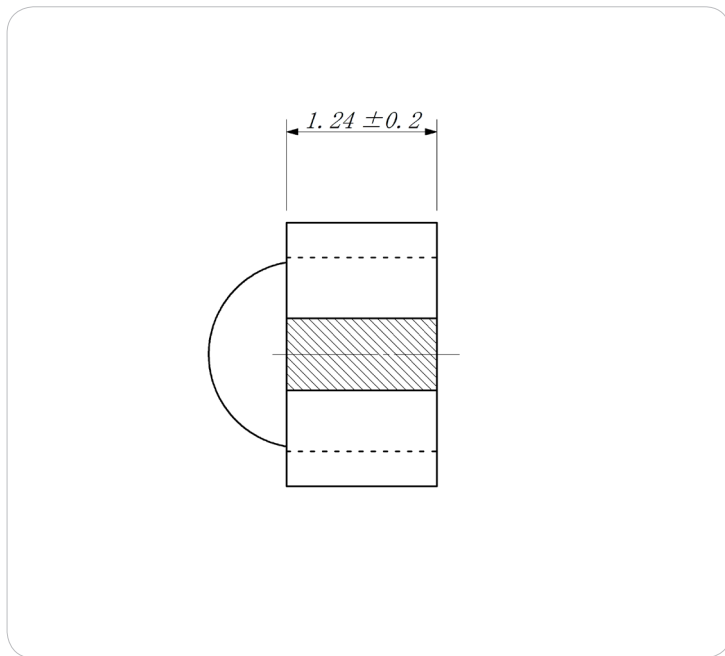
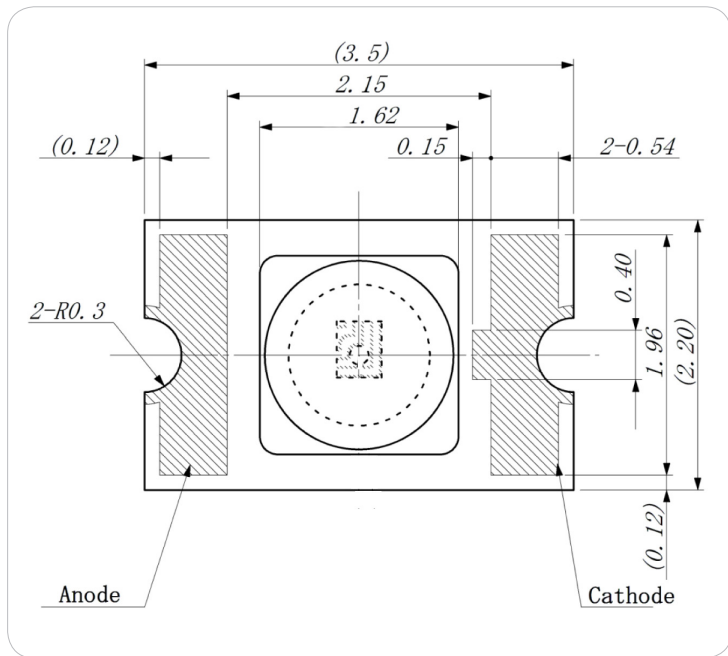


ITEMS	SYMBOL	RATINGS	UNIT
Forward Current (DC)	IF	100	mA
Forward Current (Pulse)*1	IFP	1	A
Reverse Voltage	VR	5	V
Power Dissipation	PD	180	mW
Operating Temperature Range	ToPr	-20 ~ +85	°C
Storage Temperature Range	Tstg	-30 ~ +100	°C
Junction Temperature	Tj	100	°C

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

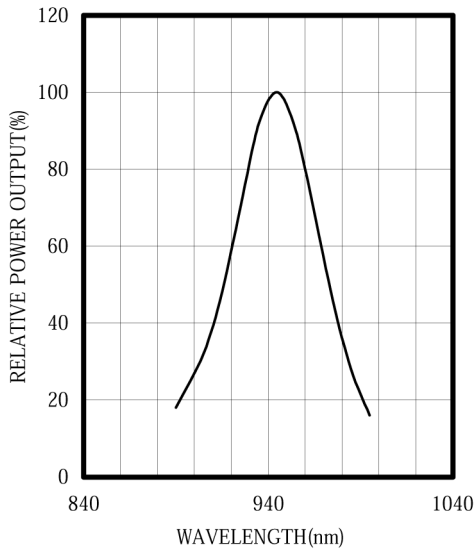
### Electrical & Optical Characteristics (Ta = 25°C)

ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Power Output	PO	IF=50mA	--	2.8	--	mW
Forward Voltage	VF	IF=50mA	--	1.35	1.7	V
Reverse Current	IR	VR=5V	--	--	10	μA
Peak Emission Wavelength	λp	IF=50mA	--	945	--	nm
Spectral Line Half Width	Δλ	IF=50mA	--	55	--	nm
Half Intensity Beam Angle	Θ	IF=50mA	--	±14	--	deg
Rise Time	Tr	IFP=50mA	--	1.0	--	μs
Fall Time	Tf	IFP=50mA	--	1.0	--	μs
Junction Capacitance	Cj	1MHz, V=0V	--	20	--	pF
Temperature Coefficient of PO	P/T	IF=10mA	--	-0.5	--	%/°C
Temperature Coefficient of VF	V/T	IF=10mA	--	-1.3	--	mV/°C

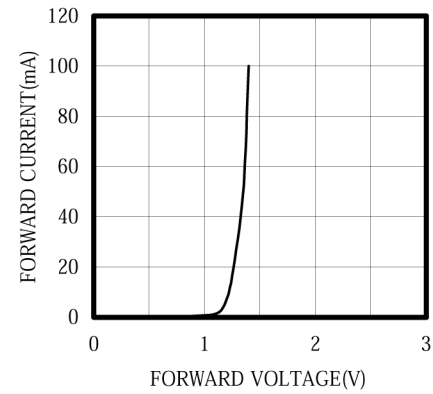


Unit: mm, Tolerance:  $\pm 0.2$

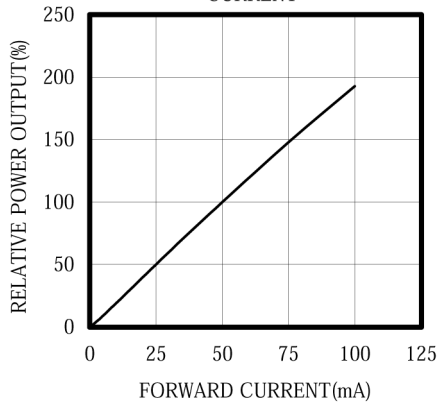
SPECTRAL OUTPUT



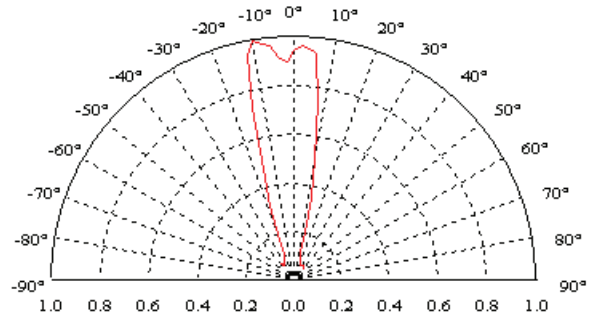
FORWARD I-V CHARACTERISTICS



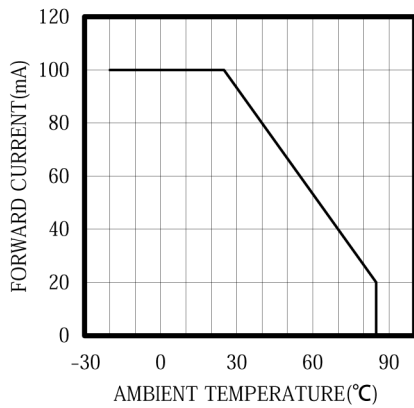
RELATIVE POWER vs FORWARD CURRENT



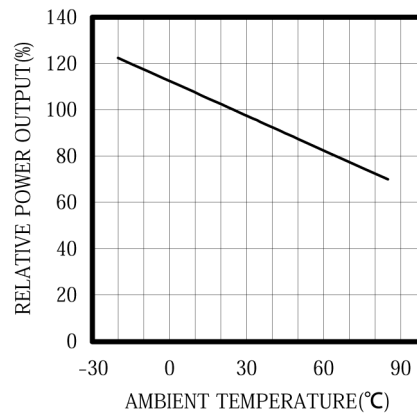
RADIATION PATTERN



THERMAL DERATING CURVE



POWER OUTPUT vs TEMPERATURE  
IF=10mA



FORWARD VOLTAGE vs TEMPERATURE  
IF=10mA

