

## Peak Emission Wavelength: 850nm

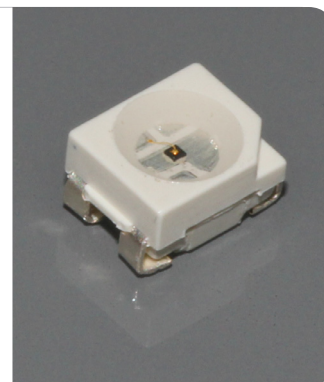
The 850nm IR emitter series is designed for applications requiring high output and precise optical / mechanical axis alignment. Custom package solutions and sorting are available.

### FEATURES

- > PLCC-4 Package
- > High Reliability
- > High Output Power
- > Wide Beam Angle

### APPLICATIONS

- > Optical Switches / Security Systems
- > Bar-code Reader
- > Fiber Optical Communications



## Absolute Maximum Ratings (Ta=25°C)

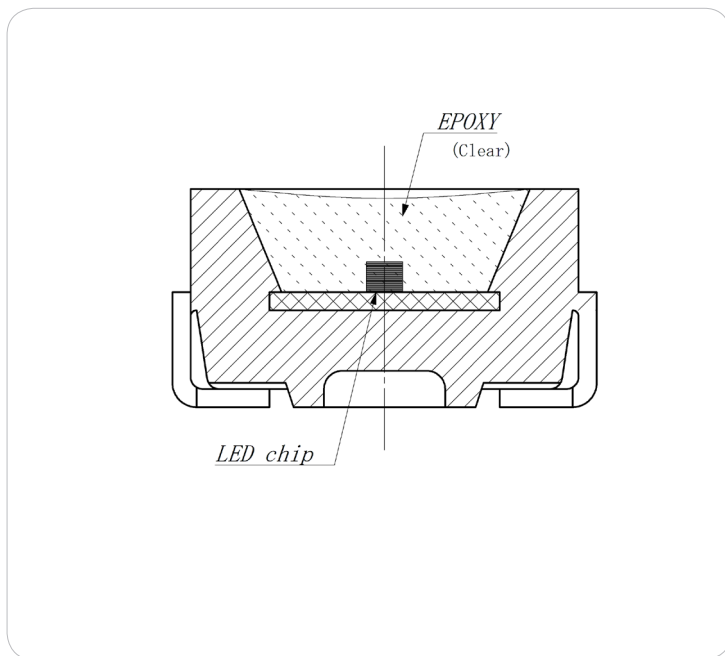
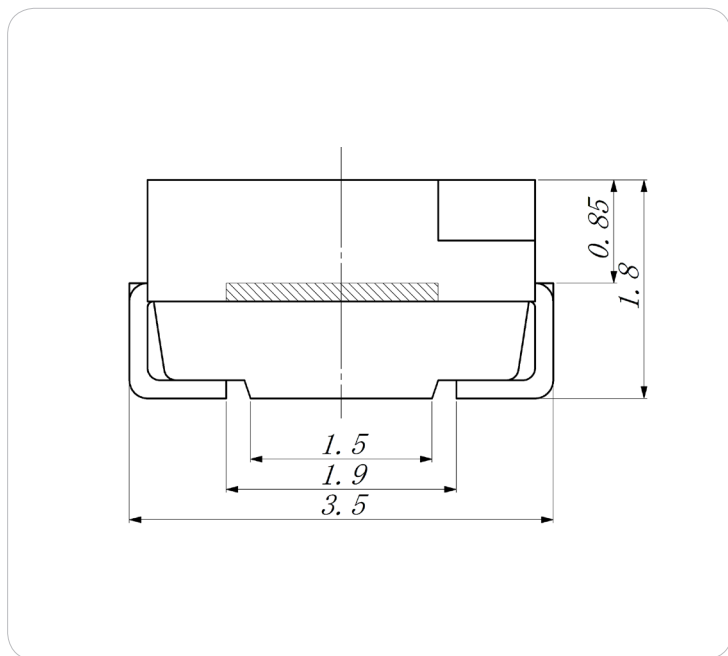
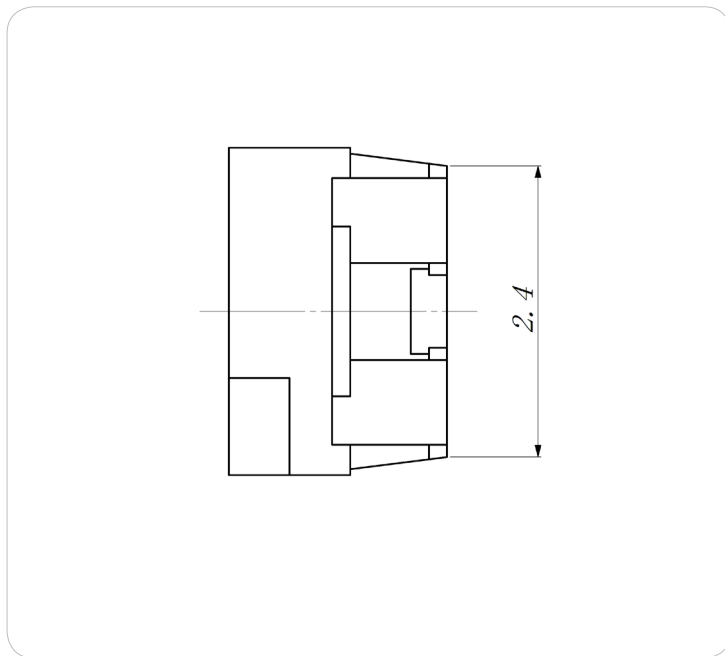
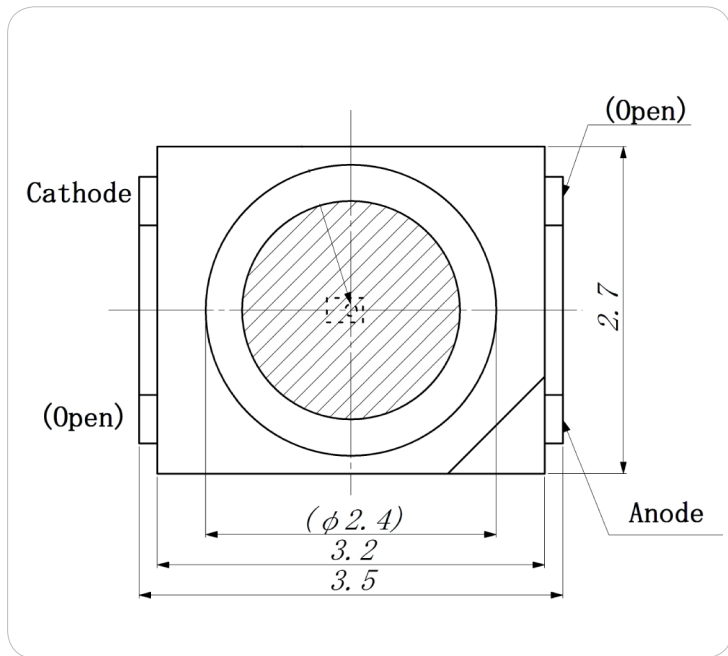


ITEMS	SYMBOL	RATINGS	UNIT
Forward Current	IF	80	mA
Forward Current (Pulse)*1	IFP	0.5	A
Reverse Voltage	VR	5	V
Power Dissipation	PD	180	mW
Operating Temperature Range	Topr	-20 ~ +80	°C
Storage Temperature Range	Tstg	-30 ~ +100	°C
Junction Temperature	Tj	100	°C
Lead Soldering Temperature*2	Tls	260	°C

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

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

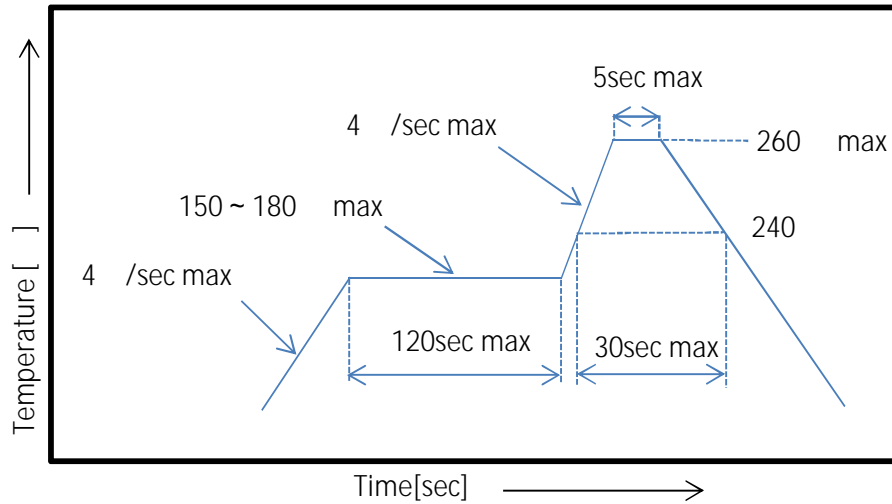
ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Power Output	PO	IF=50mA	--	27.0	--	mW
Forward Voltage	VF	IF=50mA	--	1.45	1.9	V
Reverse Current	IR	VR=5V	--	--	100	μA
Peak Emission Wavelength	λp	IF=50mA	--	850	--	nm
Spectral Line Half Width	Δλ	IF=50mA	--	30	--	nm
Half Intensity Beam Angle	Θ	IF=50mA	--	±55	--	deg
Switching Times	Tr, Tf	IF=50mA	--	150, 100	--	ns



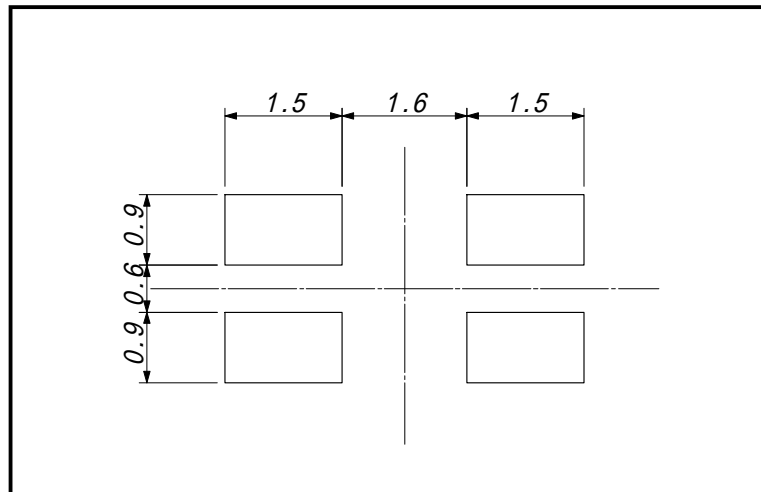
Unit: mm, Tolerance:  $\pm 0.2$

### PLCC4 Surface Mount LED

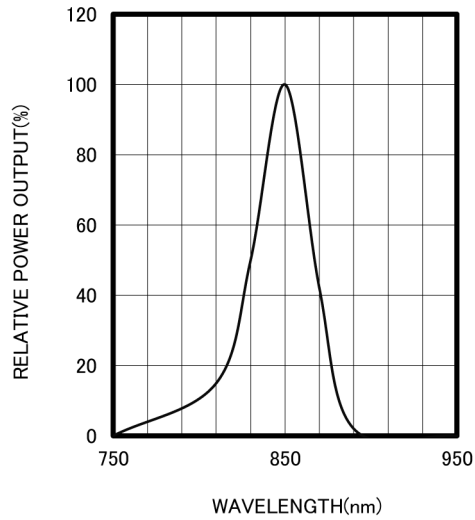
Reflow Soldering Temperature-Profile [Pb free Soldering] (Recommend condition)



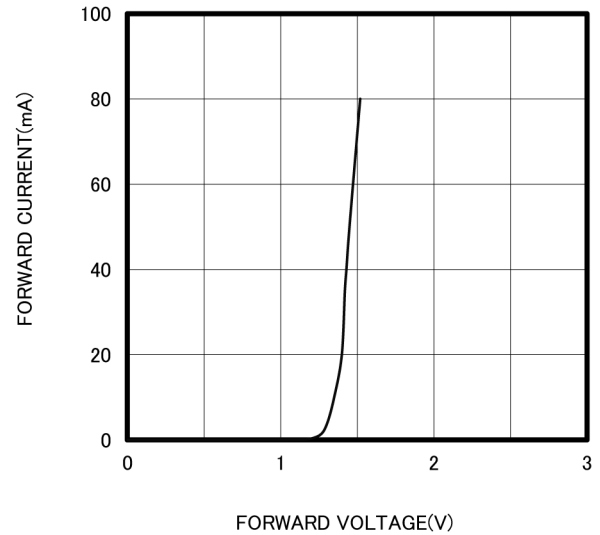
### Recommended Soldering Pattern [mm]



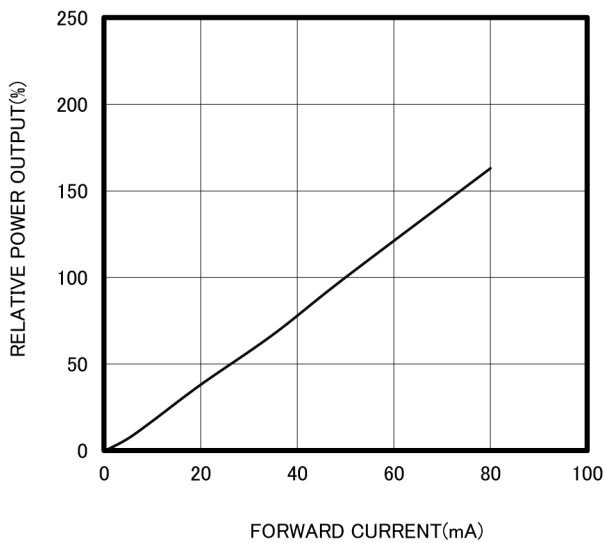
SPECTRAL OUTPUT



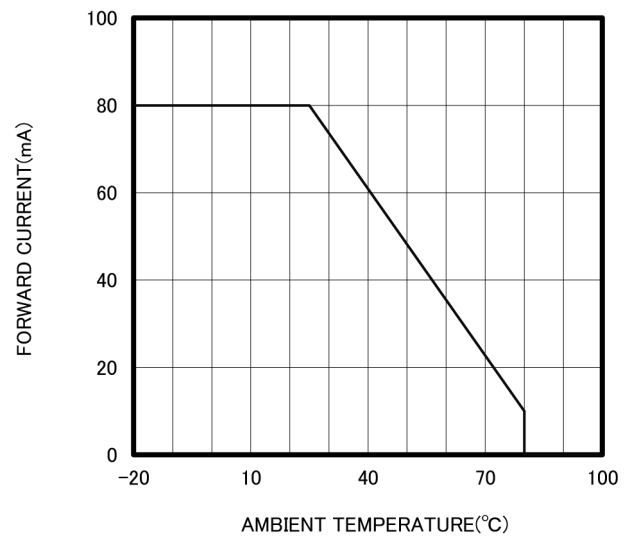
FORWARD I-V CHARACTERISTICS



RELATIVE POWER vs FORWARD CURRENT



THERMAL DERATING CURVE



RADIATION PATTERN

