

## FEATURES

Conventional LED design : Simple to use

High Flux and Low Cost : More competitive advantages in the LED industry

Special body frame : Excellent transiting heat from LED chip operating under 150mA.

## ADVANTAGES

Operating Current : 150mA .

Custom Design Light Sourcing Module for 0.4W/0.6W .

Excellent Heat Dissipation.

## TYPICAL APPLICATIONS

Reading Light / Flashlight / Track Lighting

Under Shelf / Task Lighting

Emergency Lighting / Traffic Signals

Bollards / Security / Garden Lighting

Full Color Sign Boards

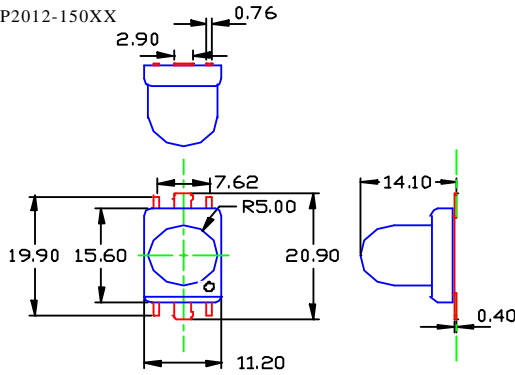
## ABSOLUTE MAXIMUM RATINGS $T_j=25^{\circ}\text{C}$

Parameter	EP20XX-150XX	Units
DC Forward Current	150	mA
Pulsed Forward Current	300	mA
Power Dissipation	380/600	mW
Dark Current ( $V_R=5V$ )	100	$\mu\text{A}$
Electrostatic Discharge Threshold	12	V
Operating Temperature Range	-20 to 80	$^{\circ}\text{C}$
Storage Temperature Range	-35 to 85	$^{\circ}\text{C}$
Soldering Temperature	235	$^{\circ}\text{C}$
Thermal Resistance R ( $^{\circ}\text{C}/\text{W}$ )	85	$^{\circ}\text{C}/\text{W}$
LED Junction Temperature	110	$^{\circ}\text{C}$

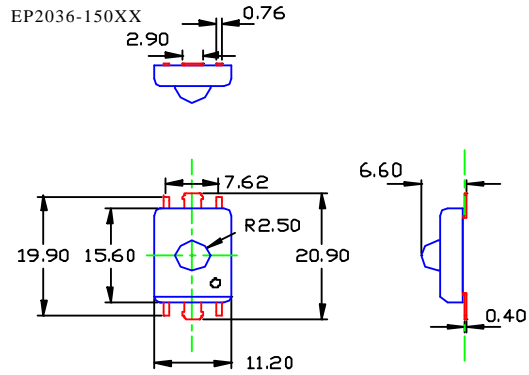
Operating conditions:

- 1.Red,Amber,Bule,Cyan,Green operating condition under  $f=0.5 \sim 2$  Hz and 1/2 duty factor .
2. 380mw 6 pins of E-Power LED must be mounted on PCB.  
600mw ( PCB:25.4 mm\*25.4 mm1.6t/two layers / 2.0 oz .)
- 3.Convective IR Reflow Soldering
- 4.LED Operating required Anti-electrostatic devices in all equipment , machinery , and manual assembly.
- 5.Heat-sink required

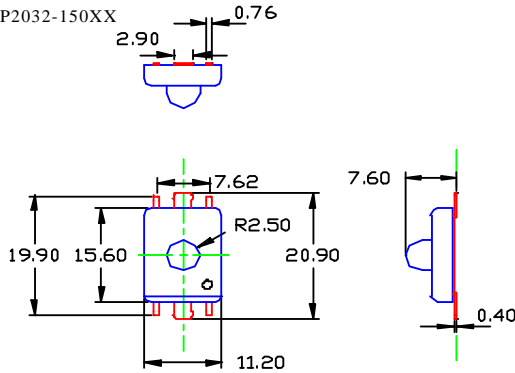
EP2012-150XX



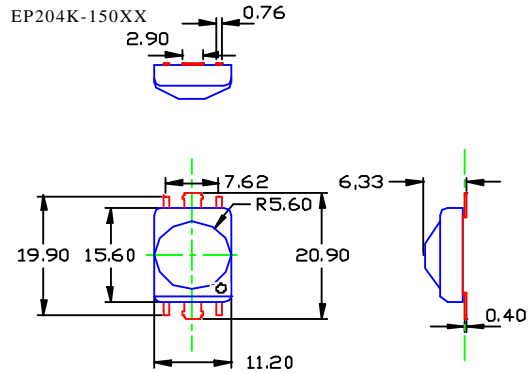
EP2036-150XX



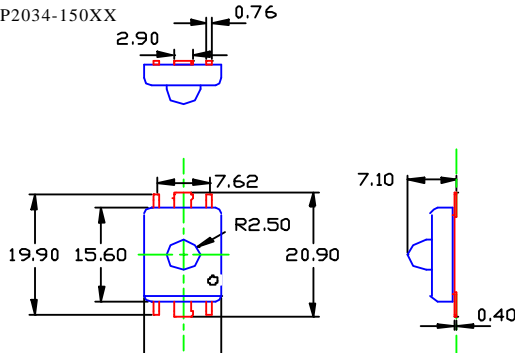
EP2032-150XX



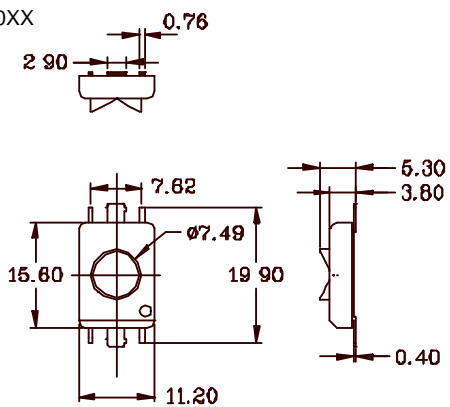
EP204K-150XX



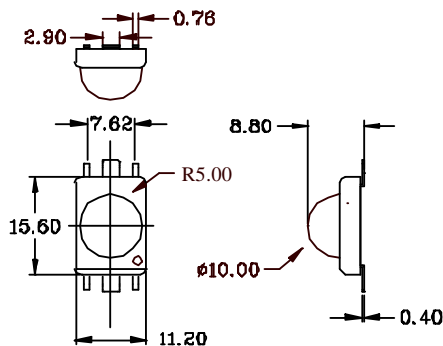
EP2034-150XX



EP202S-150XX



EP201C-150XX



**NOTE**

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.25$ mm unless Otherwise specified.
3. This specification is subject to Change without notice.

## ELECTRICAL CHARACTERISTICS

**Tj=25 IF=150mA**

Device Type	Forward Voltage VF (Volts) @IF=150mA	Dark Current VR=5V IR=(uA)	Intensity Iv (cd)	Total Flux φv (150mA)	Wavelength λD	Δλ1/2	Viewing Angle 2θ1/2 (Degrees)
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Unit	Min	Typ	Max	Max	Min	Typ	Typ.(lm)	Typ.(nm)		Typ.	
EP2012-150R1					30	50				10°	
EP201C-150R1					6	10				60°	
EP202S-150R1					-	1.2				Side View	
EP2032-150R1	2.0	2.4	2.8	10	100	18	30	3	620	20	10°
EP2034-150R1						14	24		Red Orange		20°
EP2036-150R1						9	15				30°
EP204K-150R1						2.4	4				100°
EP2012-150A1					30	50					10°
EP201C-150A1					6	10					60°
EP202S-150A1					-	1.2					Side View
EP2032-150A1	2.0	2.4	2.8	10	100	18	30	5	590	20	10°
EP2034-150A1						14	24		Amber		20°
EP2036-150A1						9	15				30°
EP204K-150A1						2.4	4				100°
EP2012-150B1					12	20					10°
EP201C-150B1					2	3.6					60°
EP202S-150B1					-	0.9					Side View
EP2032-150B1	3.0	3.4	4.0	10	100	9	15	1.5	470	20	10°
EP2034-150B1						3	6		Blue		20°
EP2036-150B1						2.5	5				30°
EP204K-150B1						1.5	3				100°

## ELECTRICAL CHARACTERISTICS

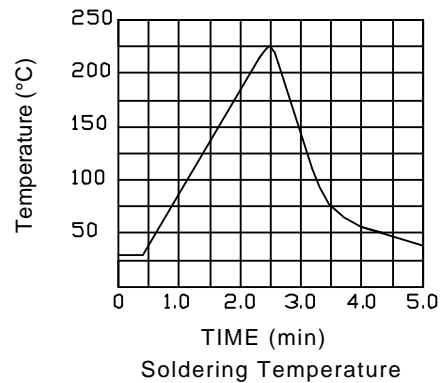
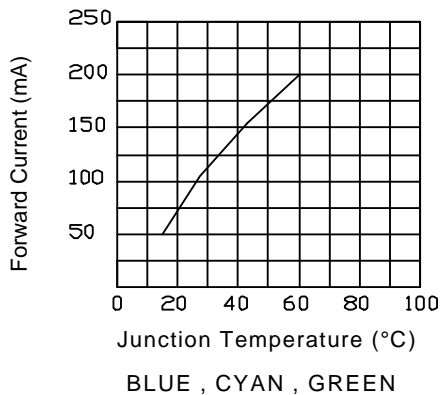
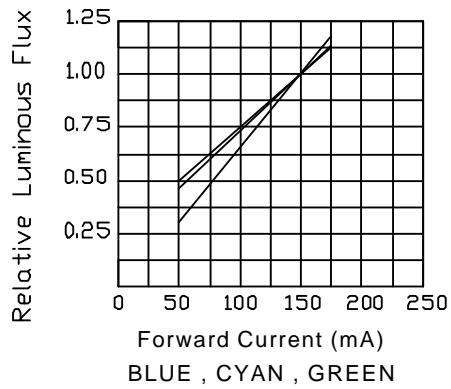
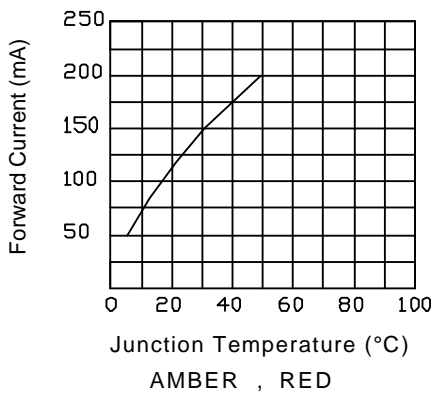
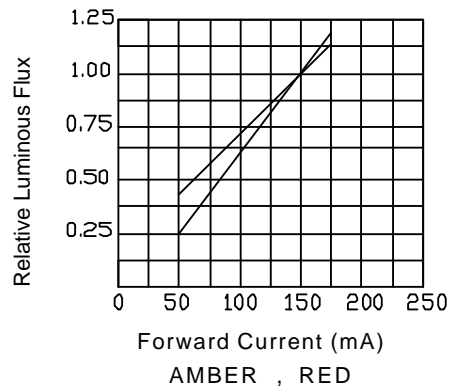
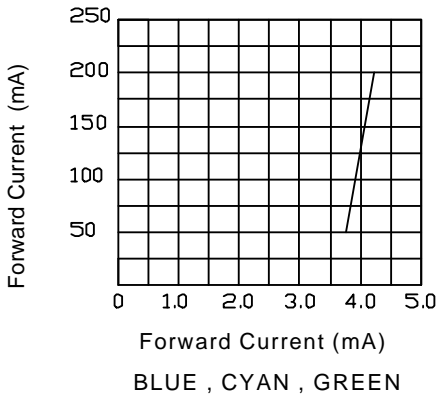
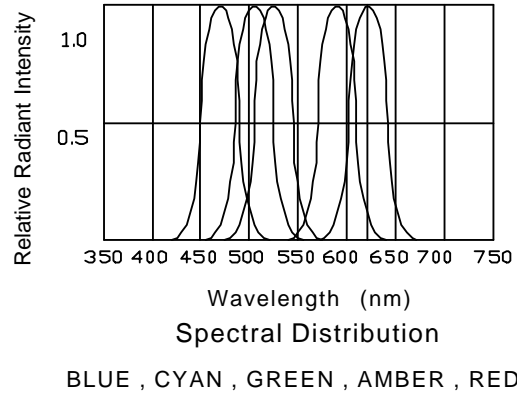
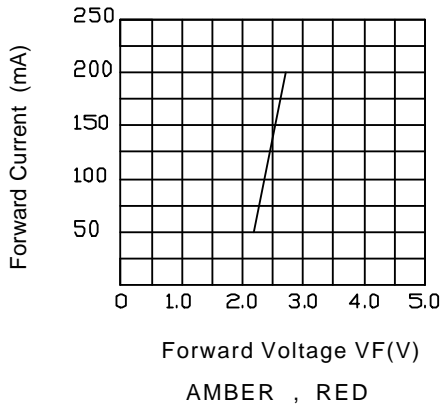
**Tj=25 IF=150mA**

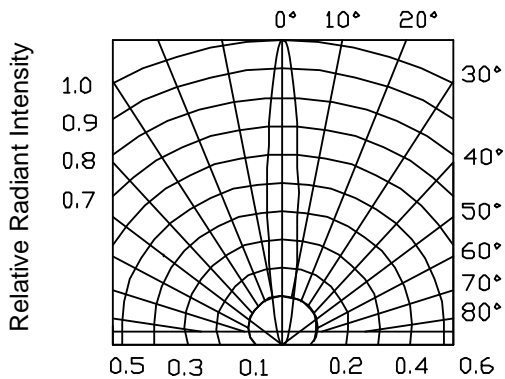
Device Type	Forward Voltage VF (Volts) @IF=150mA			Dark Current VR=5V IR=(uA)		Intensity Iv (cd)		Total Flux φv (150mA)	Wavelength λD	Δλ1/2	Viewing Angle 2θ1/2 (Degrees)
	Unit	Min	Typ	Max	Max	Min	Typ	Typ.(lm)	Typ.(nm)		Typ.
EP2012-150C1						30	40				10°
EP201C-150C1						10	16				60°
EP202S-150C1						-	3				Side View
EP2032-150C1	3.0	3.4	4.0	10	100	20	30	3.5	505	25	10°
EP2034-150C1						9	15		Cyan		20°
EP2036-150C1						8	12				30°
EP204K-150C1						6	10				100°
EP2012-150G1						30	40				10°
EP201C-150G1						13	21				60°
EP202S-150G1						-	3				Side View
EP2032-150G1	3.0	3.4	4.0	10	100	20	30	3.5	525	30	10°
EP2034-150G1						9	15		Green		20°
EP2036-150G1						8	12				30°
EP204K-150G1						6	10				100°

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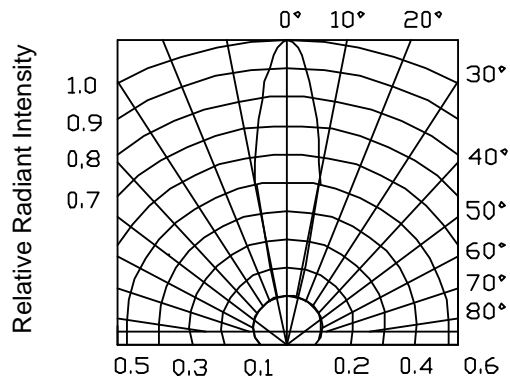
## CHARACTERISTICS CURVE

T<sub>j</sub>=25

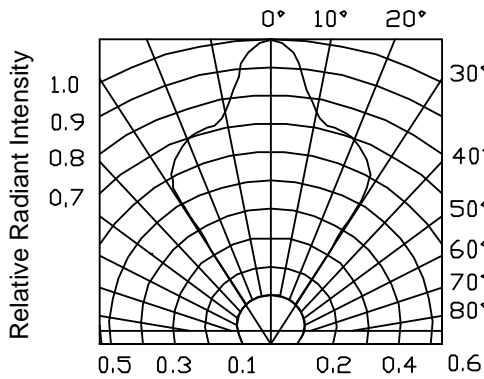




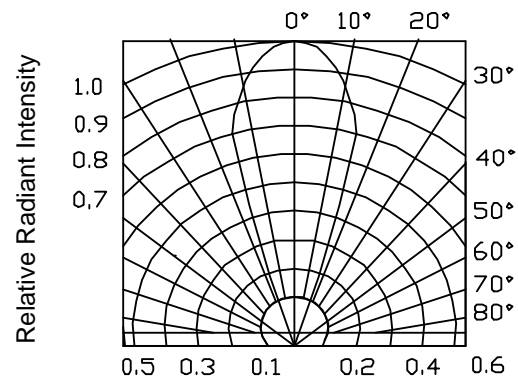
VIEW ANGLE  
EP2012-150XX  
EP2032-150XX



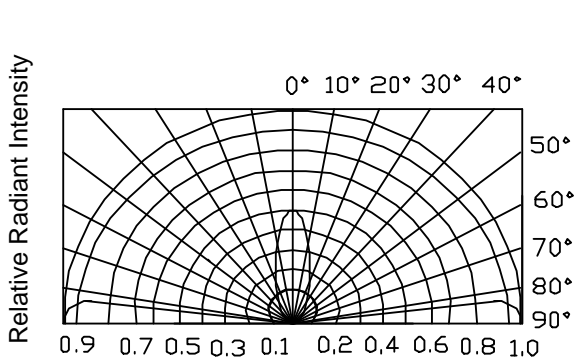
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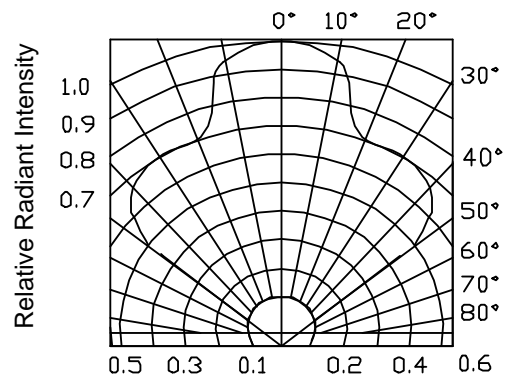
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EP201C-150XX



VIEW ANGLE  
EP2036-150XX

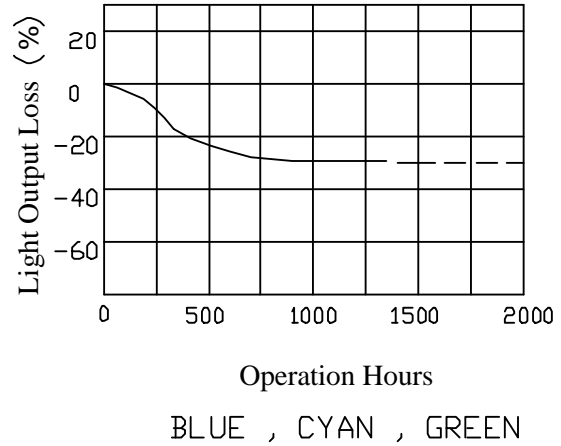
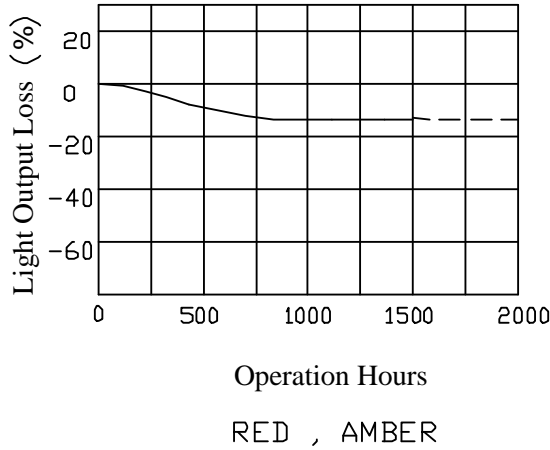


VIEW ANGLE  
EP202S-150XX



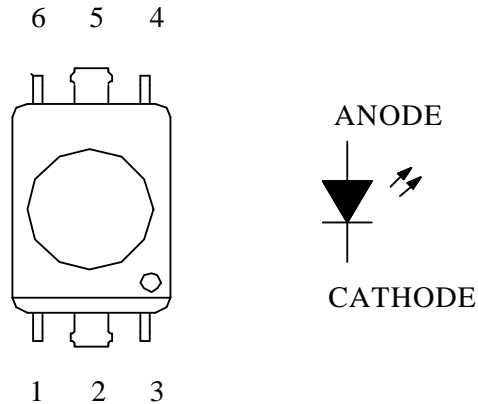
VIEW ANGLE  
EP204K-150XX

## Operation Life



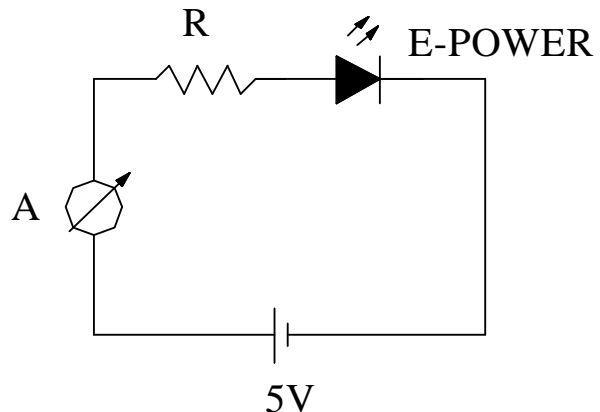
## PIN CONNECTION

COLOR	R	G	B	C	A
ANODE	6	6	6	6	6
CATHODE	2 5	3	3	3	2 5



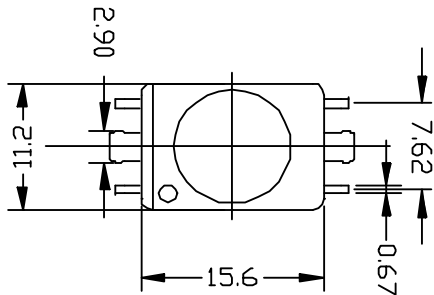
## TEST CIRCUIT

COLOR	Vf (min)	R(100mA)	R(150mA)
R	2V	30	20
A	2V	30	20
B	3.5V	15	10
C	3.5V	15	10
G	3.5V	15	10

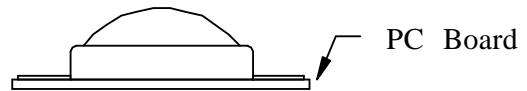
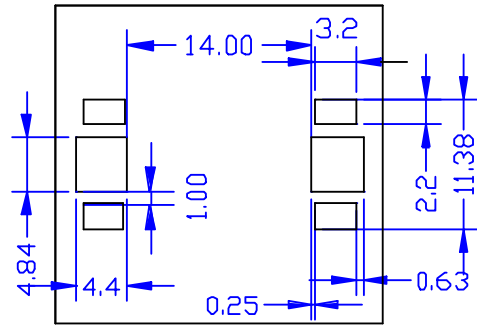


**How to use E-power LED**

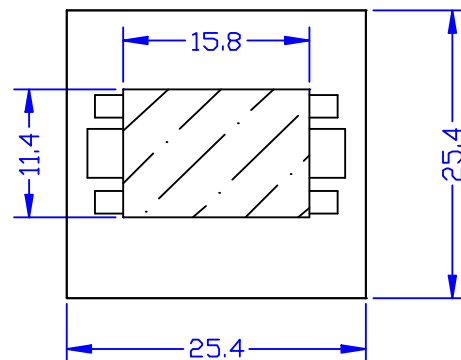
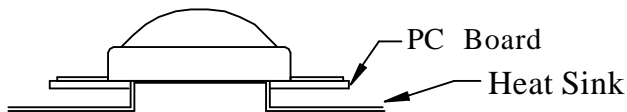
(1) E-Power LED dimensions



(3) Recommended layout pattern



(2) Accelerate heat dissipation



All dimensions are in millimeters.

**PART NO. SYSTEM OF E-Power LED**

**EP 2 01 2-150 XX**

**1--2-3-4-5-----6-----7**

**1.E -Power LED**

**2.YEAR 2002**

**3.PACKAGE TYPE:01=10mm LENS;03=5mm LENS;04=11 mm LENS**

**4.VIEWING ANGLE:2\* 5=10°**

**5.CURRENT:150mA**

**6.I D: R1=620nm(Red),A1=590nm(Amber),B1=470nm(Blue),C1=505nm(Cyan),**

**G1=525nm(Green)**