



FEATURES

Conventional LED design : Simple to use

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

Special body frame: Excellent transiting heat from LED chip operating under 350mA.

ADVANTAGES

Operating Current : 350mA .

Custom Design Light Sourcing Module for 0.5W/0.55W

Excellent Heat Dissipation.

TYPICAL APPLICATIONS

Free air transmission system/optoelectronic switch

Charge Coupled Device/Infrared applied system/smoke detector

Light source for remote control devices

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

| Parameter | EP20XX-350IRX | Units |
|--|---------------|-----------------------------|
| DC Forward Current | 350 | mA |
| Pulsed Forward Current | 1000 | mA |
| Power Dissipation | 500/550 | mW |
| Dark Current ($V_R=5V$) | 100 | μA |
| Operating Temperature Range | -20 to 80 | $^{\circ}\text{C}$ |
| Storage Temperature Range | -35 to 85 | $^{\circ}\text{C}$ |
| Soldering Temperature | 245 | $^{\circ}\text{C}$ |
| Thermal Resistance $R_{\theta} (^{\circ}\text{C}/\text{W})$ | 85 | $^{\circ}\text{C}/\text{W}$ |
| LED Junction Temperature | 110 | $^{\circ}\text{C}$ |

Operating conditions:

1. IR1/IR4 Pluse width = 0.1msec, duty cycle = 1 % .

2. 500mw(IR1) . 6 pins of E-Power LED required soldering on PCB.

550mw(IR4) . (PCB : 25.4 mm * 25.4 mm 1.6 t / two layers / 2.0 oz .)

3. Convective IR Reflow Soldering

e-mail: e-power@para.com.tw <http://www.para.com.tw>

ELECTRICAL CHARACTERISTICS

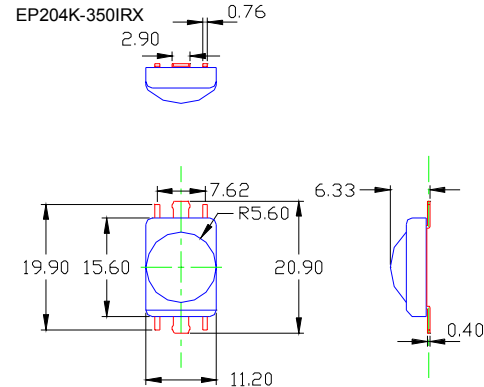
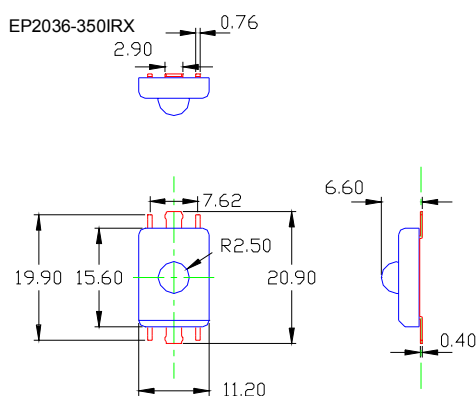
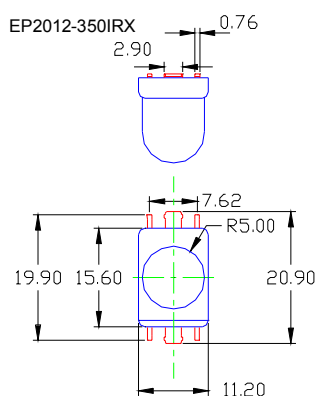
Tj=25°C If=350mA

| Device Type | Forward Voltage V_F (Volts) | Dark Current $V_R=5V$ $I_R=(\mu A)$ | Radiant Intensity I_e (mW/sr) | Radiant Power Φ_e (mW) | Peak Wavelength λ_P (nm) | $\Delta\lambda_{1/2}$ (nm) | Viewing Angle $2\theta_{1/2}$ (Degrees) |
|-------------|----------------------------------|---|---------------------------------------|-----------------------------------|--|-------------------------------|---|
|-------------|----------------------------------|---|---------------------------------------|-----------------------------------|--|-------------------------------|---|

| Unit | Min. | Typ. | Max | Max | Min. | Typ. | Typ | Typ. | Typ. | Typ. |
|---------------|------|------|-----|-----|------|------|-----|------|------|------|
| EP2012-350IR1 | | | | | 240 | 340 | | | | 10° |
| EP2036-350IR1 | - | 1.4 | 1.6 | 10 | 150 | 200 | 60 | 940 | 50 | 30° |
| EP204K-350IR1 | | | | | 30 | 40 | | | | 100° |
| EP2012-350IR4 | | | | | 720 | 850 | | | | 10° |
| EP2036-350IR4 | - | 1.6 | 1.9 | 10 | 290 | 350 | 100 | 850 | 50 | 30° |
| EP204K-350IR4 | | | | | 85 | 100 | | | | 100° |

This specification is subject to change without notice.

OUTLINE DRAWINGS

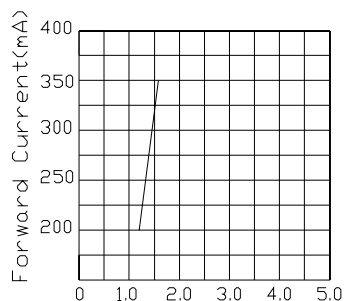


NOTE

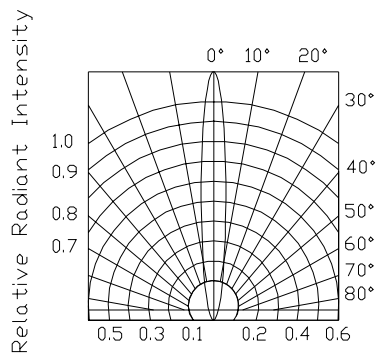
1. All dimensions are in millimeters.
 2. Tolerance is $\pm 0.25\text{mm}$ unless Otherwise specified
 3. This specification is subject to Change without notice.
- e-mail: e-power@para.com.tw <http://www.para.com.tw>

CHARACTERISTICS CURVE

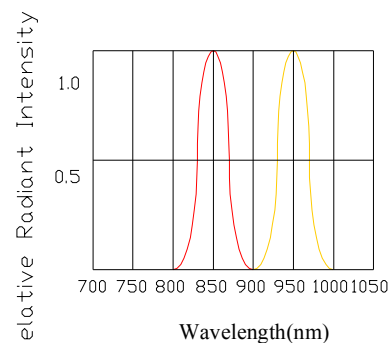
Ta=25°C



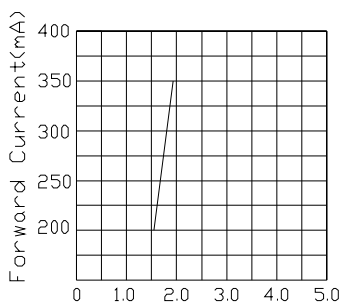
Forward Voltage VF(V)
IR1



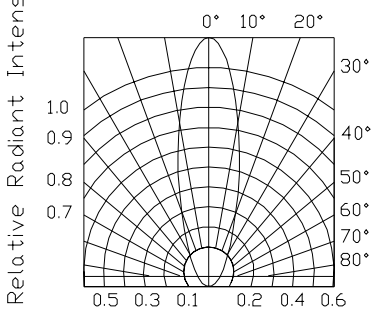
VIEW ANGLE
EP2012-350IRX



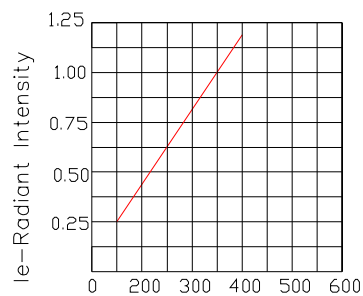
Spectral Distribution
IR4 , IR1



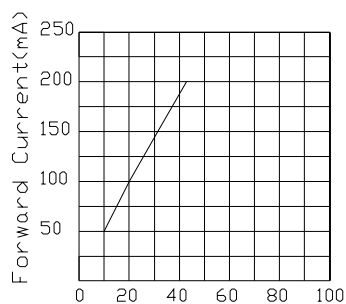
Forward Voltage VF(V)
IR4



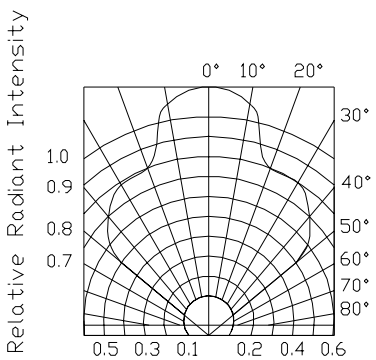
VIEW ANGLE
EP2036-350IRX



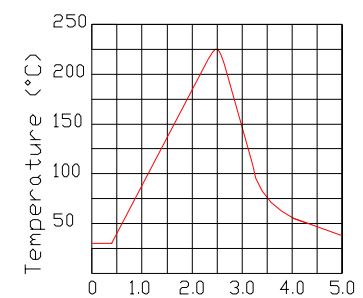
Forward Current (mA)
IR1,IR4



Junction Temperature (°C)
IR1,IR4

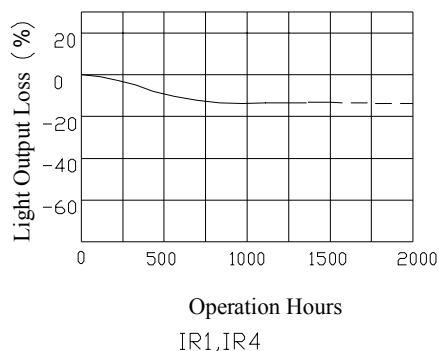


VIEW ANGLE
EP204K-350IRX



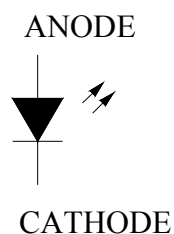
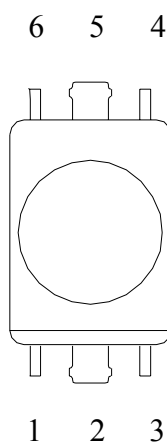
TIME(min)
Soldering Temperature

Operation Life



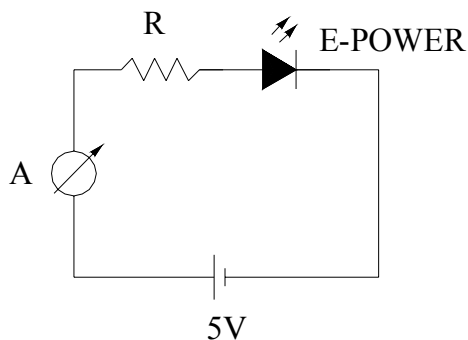
PIN CONNECTION

| COLOR | IR1 | IR4 |
|---------|-----|-----|
| ANODE | 6 | 6 |
| CATHODE | 2 | 2 |
| | 5 | 5 |



TEST CIRCUIT

| COLOR | Vf (min) | R(350mA) |
|-------|----------|----------|
| IR1 | 1.2V | 10.9 |
| IR4 | 1.4V | 10.3 |



PART NO. SYSTEM OF E-Power LED

EP 2 01 2-350 IR1

1---2-3-4---5---6

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:350mA

6. (p: IR1=940nm;IR4=850nm