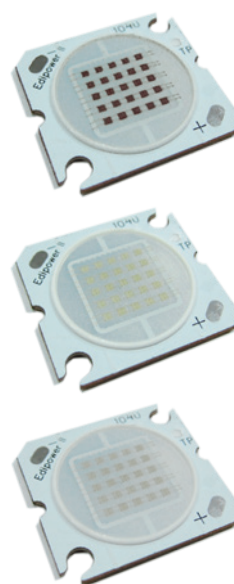


EdiPower® II Series

EdiPower® II Single Color Datasheet



Features :

- LED light engine
- High power operation
- Instant on
- Long lifetime



Lighting Design Manufacturing Service

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Introduction

Product Nomenclature

Table 1. EdiPower® II Series Nomenclature

Environmental Compliance

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LED Package Dimension

EPSx – x155 Emitter Dimensions

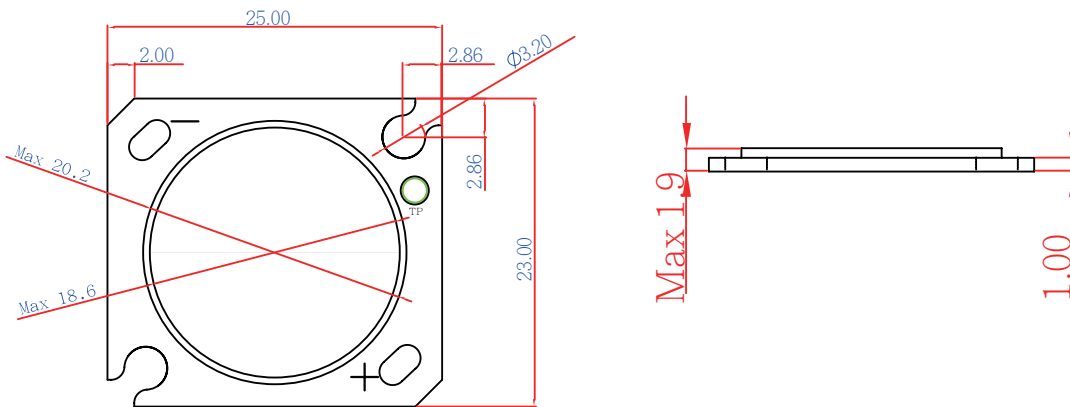


Figure 1. EdiPower® II EPSx – x155 Series Dimensions

Notes:

1. Unit : mm
2. Tolerance : ± 0.2 mm
3. Drawings are not to scale
4. TP : Thermal measurement point

EPSx – x155 Emitter Circuit Layout

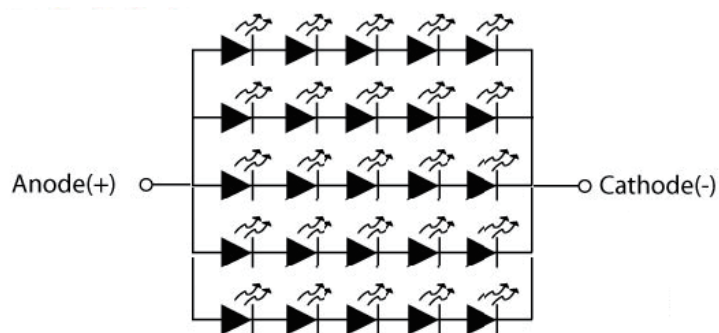


Figure 2. EdiPower® II EPSx – x155 series Circuit Layout

Absolute Maximum Ratings

The following table describes absolute maximum ratings of EdiPower® II series.

Table 2. EdiPower® II series absolute maximum ratings

Test	Parameter	Unit	Symbol
Reverse Voltage ²	Note 2	V	V_R
LED junction Temperature ³	150	°C	T_J
Operating Temperature	-40 ~ +110	°C	
Storage Temperature	-40 ~ +120	°C	
Thermal Measurement Point (T_p)	<80	°C	T_s
ESD Sensitivity	2,000	V	V_B
Isolation Voltage	1,000	V	

Notes:

1. DC forward current should not exceed LED's operating current; the current tolerance should be kept within a range of 5%.
2. LEDs are not designed to be driven in reverse bias.
3. Proper current derating must be observed to maintain junction temperature below the maximum at all time.

Luminous Flux Characteristics

The following tables describe flux of EdiPower® II series under various current and different color.

Table 3. Luminous flux characteristics at $T_J=25^{\circ}\text{C}$ for EdiPower® II series.

Color	Part Name	Typical Luminous Flux(lm) $T_p=60^{\circ}\text{C}$	Typical Luminous Flux(lm) $T_J=25^{\circ}\text{C}$	Typical Forward Voltage V_F (V)	Forward Current (mA)
Red	EPSR-V155	310	350	10.6	1000
		380	420	11.0	1200
		470	520	11.4	1500
Green	EPST-F155	750	830	16.5	1000
		860	960	17.1	1200
		1030	1150	17.5	1500
Blue	EPSB-V155	220	240	15.5	1000
		270	300	16.0	1200
		320	350	16.5	1500



Lighting Design Manufacturing Service

Thermal Resistance Characteristics

Table 4. Temperature Coefficient of Forward Voltage & Thermal Resistance Junction to Case Characteristics at $T_J=25^{\circ}\text{C}$ for EdiPower® II series

Part Name	Test Current (mA)	$\Delta V_F/\Delta T$		$R\theta_{J-B}$	
		Typ.	Unit	Typ.	Unit
EPSR-V155	1500	-5 to -12	$\text{mV}/^{\circ}\text{C}$	0.5	$^{\circ}\text{C}/\text{W}$
EPST-F155					
EPSB-V155					

Characteristic Curve

Spectrum

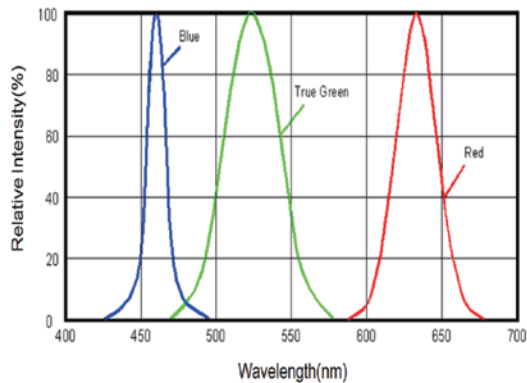


Figure 3. Color spectrum for EdiPower® II Series.

Forward Voltage & Forward Current

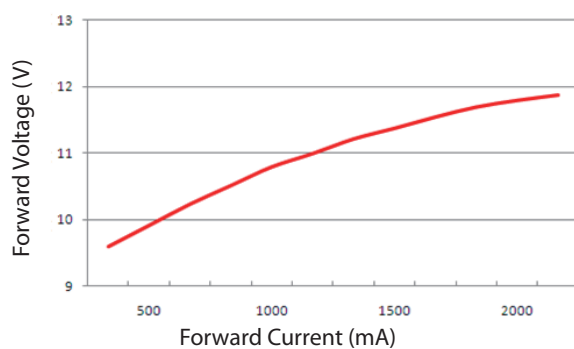


Figure 4. Forward voltage v.s forward current at $T_J=25^{\circ}\text{C}$ for EPSR-V155.

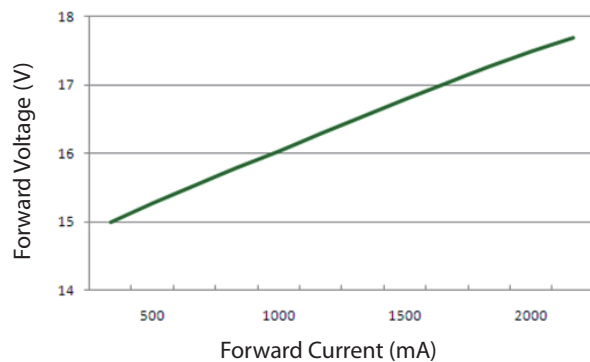


Figure 5. Forward voltage v.s forward current at $T_J=25^{\circ}\text{C}$ for EPST-F155.

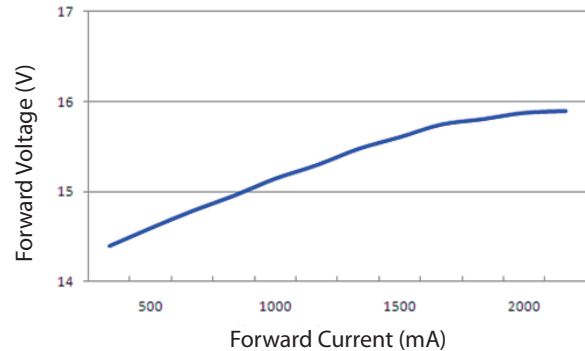


Figure 6. Forward voltage v.s forward current at $T_J=25^{\circ}\text{C}$ for EPSB-V155.

Wavelength & Forward Current

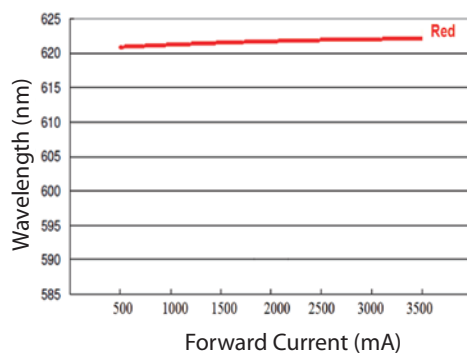


Figure 7. Forward Wavelength v.s forward current for Red.

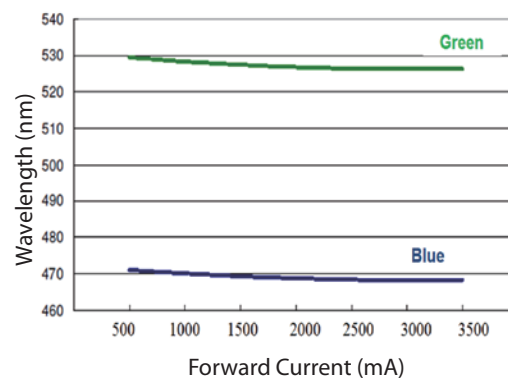


Figure 8. Forward Wavelength v.s forward current for Green and Blue.

Luminous Flux & Junction Temperature

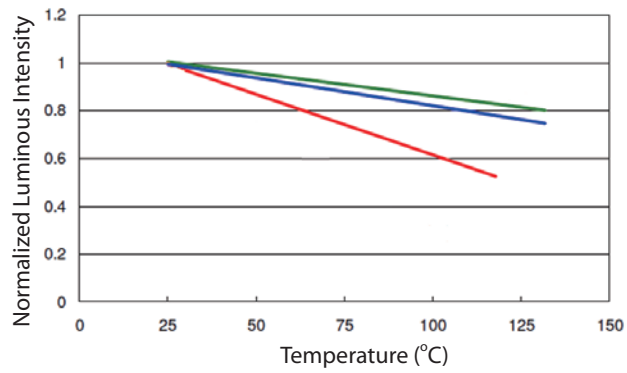
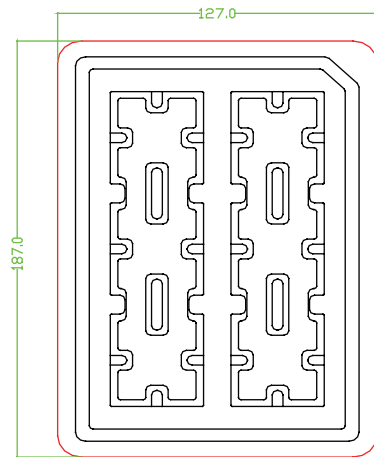


Figure 9. Relative luminous flux v.s thermal pad temperature for true Red, Green and Blue.

Product Packaging Information

• Tray Packing for EdiPower® II



• Tray Packing for EdiPower® II

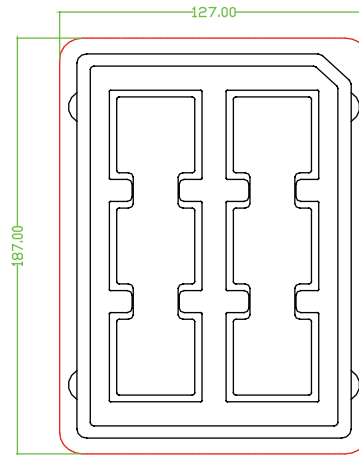


Figure 10. Tray package dimension.

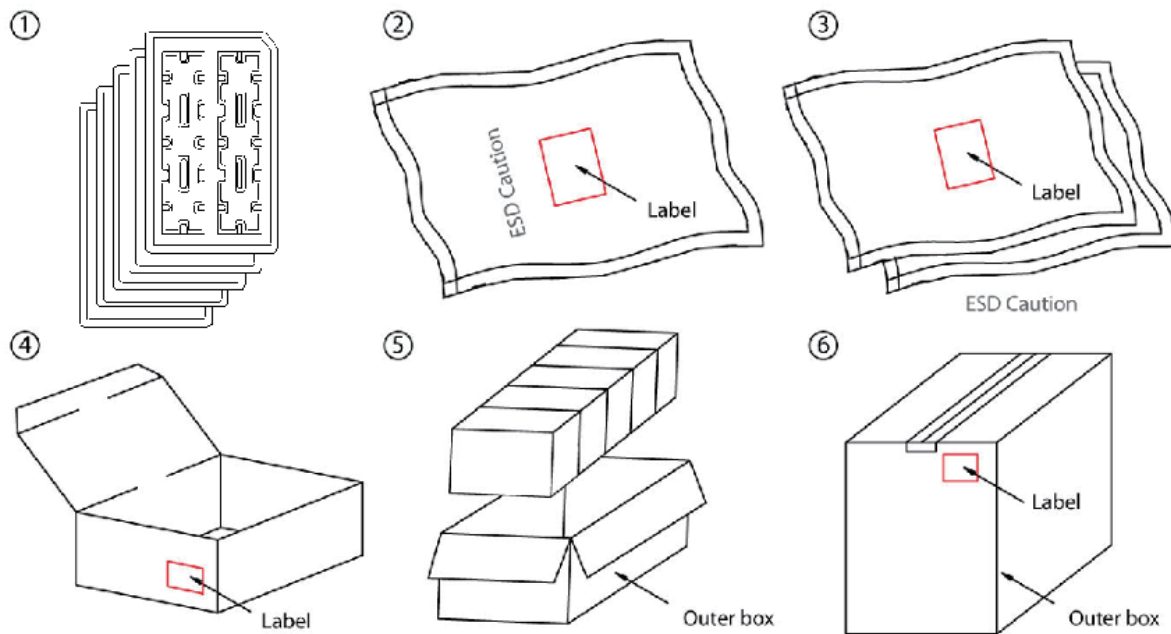


Figure 11. Packaging steps.

Notes:

1. All dimensions are in mm.
2. There are EdiPower II RTB Emitter 6pcs emitters in a full tray.
3. There are 5 trays in a bag.
4. There are 5 bags in an inner box.
5. There are 5 inner boxes in an outer box.
6. A bag contains one humidity indicator card and drying agent.

Revision History

Table 5. Revision history of EdiPower II® series datasheet

Version	Description	Release Date
1	1. Establish a datasheet	2011/01/20
2	1.Update dimensions on p.4 2.Update luminous flux on p.6	2012/02/21

About Edison Opto

Edison Opto is a leading manufacturer of high power LED and a solution provider experienced in LDMS. LDMS is an integrated program derived from the four essential technologies in LED lighting applications- Thermal Management, Electrical Scheme, Mechanical Refinement, Optical Optimization, to provide customer with various LED components and modules. More Information about the company and our products can be found at www.edison-opto.com

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