Ledion
LIGHTING

A New Experience in Light

LED Lamp

10W ES111

ES111 is an exceptionally high performance LED lamp built to last. It is a premium quality solid state lighting product precisely engineered and manufactured with state of the art technologies and materials.
Proprietary driving circuit enables ES111 to replace traditional incandescent/ halogen lamp, up to 75 Watt, directly without additional modification or transformer.

- Solid State Lighting Technology
- Decrease Energy Consumption
- Reduce CO_2 Emission
- Superior Quality Light
- Ecologically Friendly
- Built to Last

Table of Contents

Dimensions

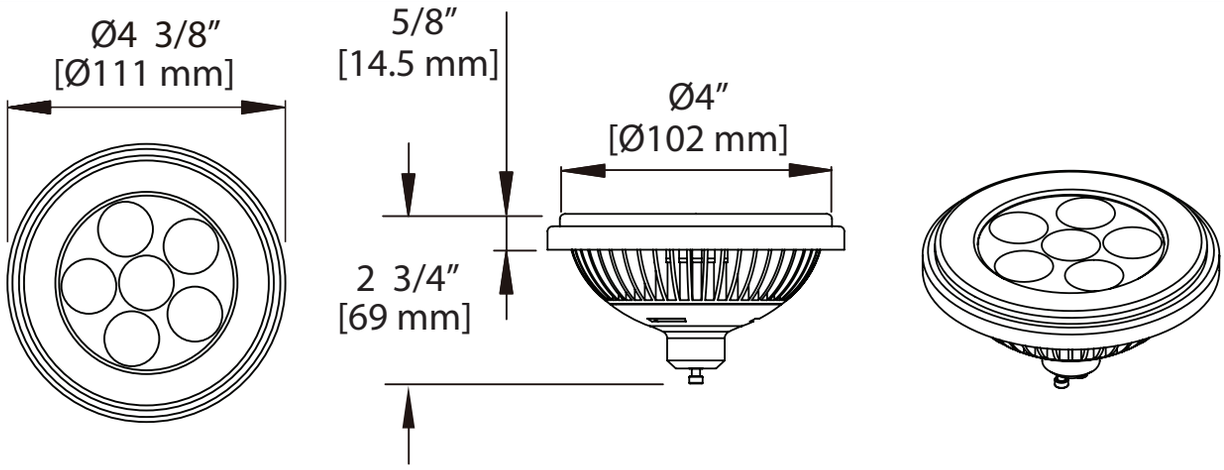


Figure 1: Dimensions for ES111.

Tolerance: ± 1/8" [2.5 mm]

Absolute Maximum Rating

The following table shows electrical characteristics and operating temperature of ES111.

Parameter	Symbol	Rating	Units
Plastic Housing Temperature	T_c	80	°C
Operating Temperature	T_{opr}	-20 ~ +40	°C
Storage Temperature	T_{stg}	-40 ~ +60	°C
AC Input Voltage	V	100~250	V
Equilibrium Temperature	T_{eq}	60	°C

Table 1: Absolute maximum rating for ES111.

Specifications

The following describes the choices of color temperature, angles, and CRI of ES111 for different demand.

Parameter	Rating	Units
Power Consumption	10	W
Field Angles	25 / 40	Degree
Color Temperature	3000 / 4000 / 6000	K
CRI	80 / 75 / 70	/
Weight	220 ± 5	g
Base	GU10	--

Table 2 : Specifications for ES111.

Illuminance and Field Angles

• Cool White / Neutral White / Warm White

Power Consumption(W)	Part Number	Field Angles	CCT(Typ.)	Lux @ 1m (Min.)	Lux @ 1m (Typ.)	Lm (Typ.)
10W	LB-ES111-10210x	25°	5650~7000K	3240	3800	420
	LB-ES111-10220x		3800~4500K	2650	3100	350
	LB-ES111-10230x		2670~3050K	2390	2800	320
	LB-ES111-10410x	40°	5650~7000K	2390	2800	450
	LB-ES111-10420x		3800~4500K	1960	2300	350
	LB-ES111-10430x		2670~3050K	1790	2100	320

Table 3 : Illuminance and field angles for ES111.

Notes:
1. Lux value is measured under thermal balanced condition. (i.e. after 1 hour continuous operation)
2. LED is a dynamic and constantly evolving technology. The final lux output of your ES111 may vary.
3. Input voltage = AC 100~250V

Nomenclature

The following table describes the available colors, and angles.

LB - ES111 - 10 2 1 00
X1 X2 X3 X4 X5 X6

X1 SSL Serises	X2 Product name	X3 Wattage
Ledion Bulb	ES111	10 = 10W

X4 Field Angle	X5 Color	X6 Cover
2 = 25° 4 = 40°	1 = Cool White 2 = Neutral White 3 = Warm White	00 = White 02 = Silver

Figure 2: Nomenclature for ES111.

Light Patterns

The diagrams present the light patterns with respect to different color temperature and angles.

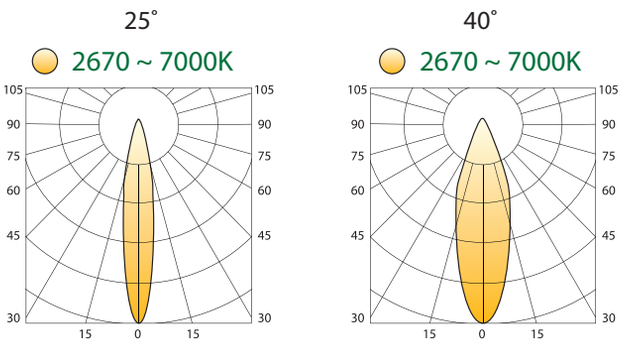


Figure 3: Light patterns of ES111 for different angles.

Lifetime

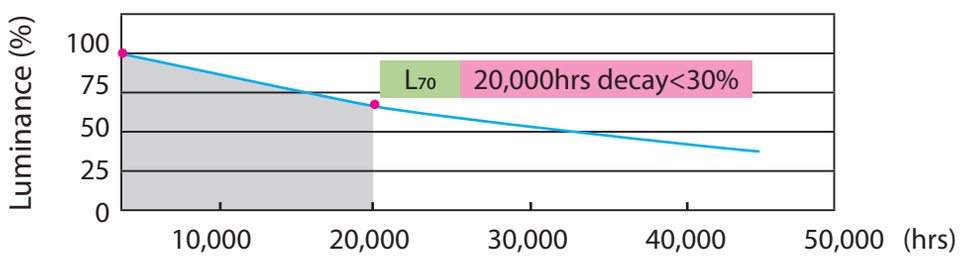


Table 4 : Lifetime for ES111

Application Notes

The compact and integral design of the ES111 LED Lamp make it ideal for a wide variety of lighting applications, including retail store spotlight, ceiling downlight, as well as many other accent lightings.

Various color temperature and beam pattern options are suitable for an array of scenarios. ES111 provides white color for customers' usages.

Note : As part of its policy of continuous research and development, Ledion Lighting reserves the right to change or withdraw specifications without prior notice.

Environmentally Friendly

With the increasing demand for energy and the effect on global warming, Ledion Lighting plays a role in preserving the forest by reducing energy consumption, and CO_2 emission one step at a time.

Replacing traditional halogen lamp with Ledion Lighting 10W ES111 lighting application, one can help in reducing global warming by 219 kg of CO_2 annually.

10W ES111 VS 75W Incandescent

Power Reduction by 86%	=	Reduction of CO_2 emission by 219 kg	=	Saves 16 trees a year

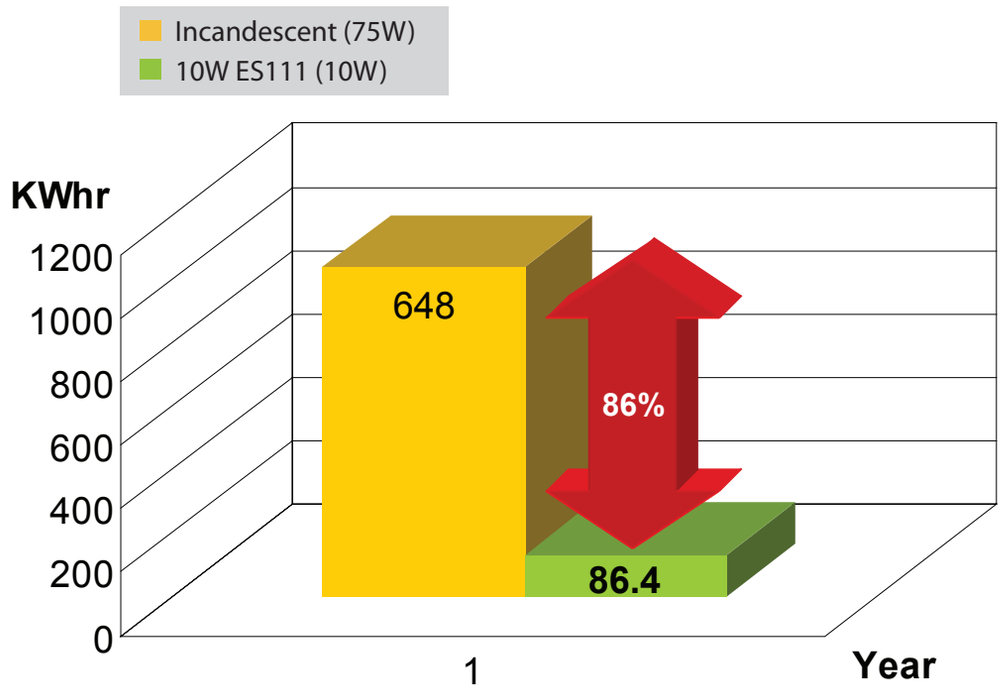


Figure 5 : 10W ES111 Environmentally Friendly.

Note : 1.Calculation based on 24 hours of daily operation.

Economical

Power Consumption: 75W

Expected Lifetime: 2,000 hrs

Power Consumption: 10W | Saving: 561.6 kWh / year

Expected Lifetime: 40,000 hrs

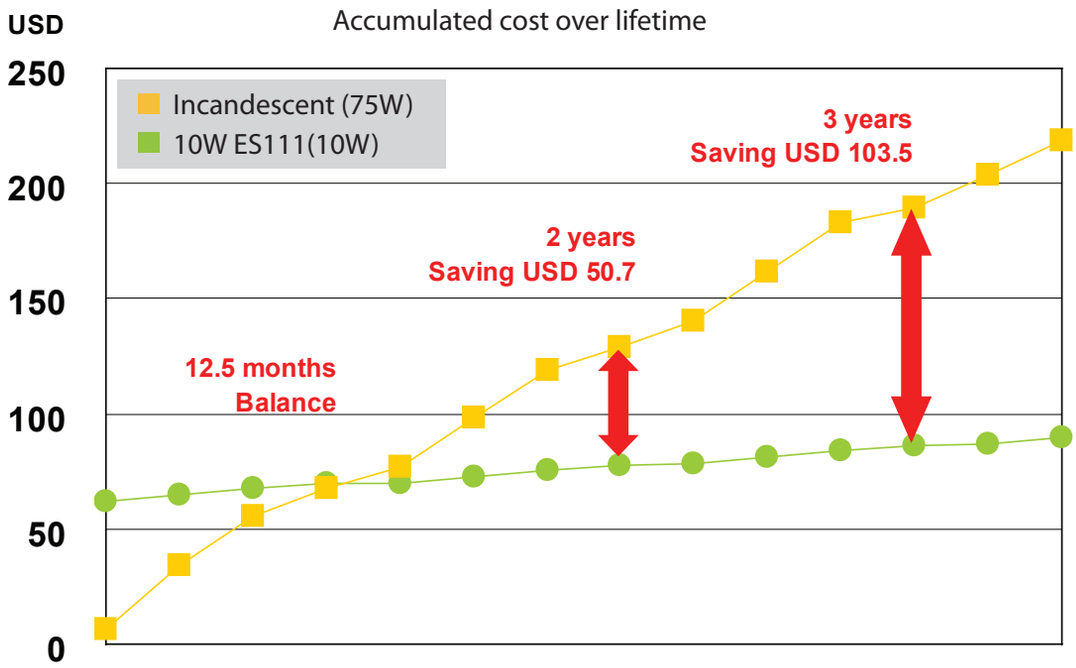
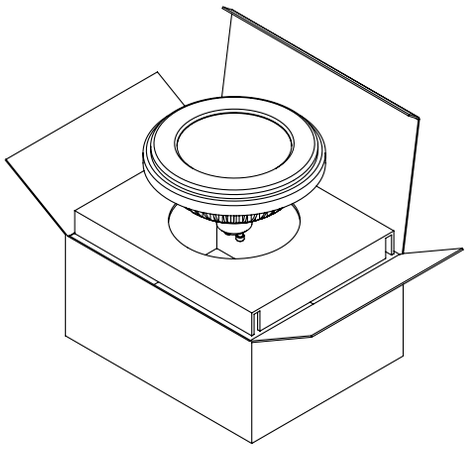


Figure 6 : 10W ES111 VS 75W Incandescent.

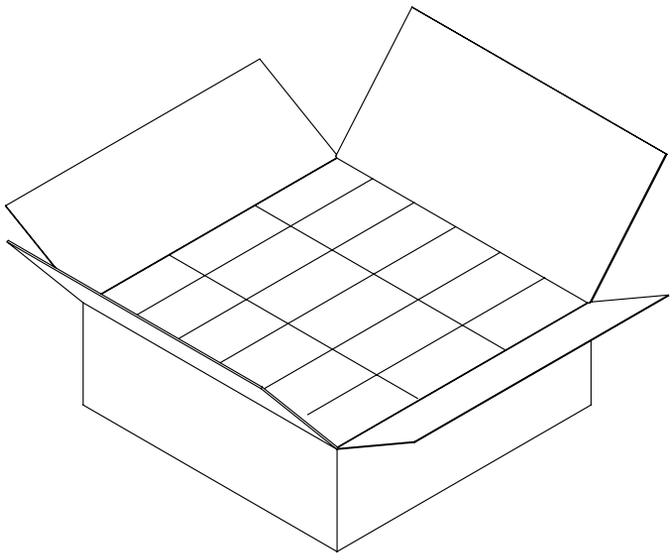
Notes : 1.Calculation based on 24 hours of daily operation (¢9.41/kWh).
2.Cost includes the replacement of 75W Incandescent ES111.

Package Information(Standard)

Note : Interior Box Dimensions : 160mm(length)*130mm(width)*75mm(height)
Outerior Box Dimensions : 520mm(length)*425mm(width)*195mm(height)



Interior Box (per each ES111 LED Lamp)



Outerior Box (18 Pcs. of ES111 LED Lamp)

Figure 4: ES111 LED Lamp Package

List of the Modifications

Versions	Modification	Date
1	1. Establish a Datasheet.	2009.07.25
2	1. Update the Illuminance and Field Angles. 2. Add the Figure for Nomenclature. 3. Update the Package Information.	2009.10.09
3	1. The dimensional drawing joins the British system the size.	2009.11.03

Table 5: list of the modifications for ES111.