

LED Lamp

10W ES111



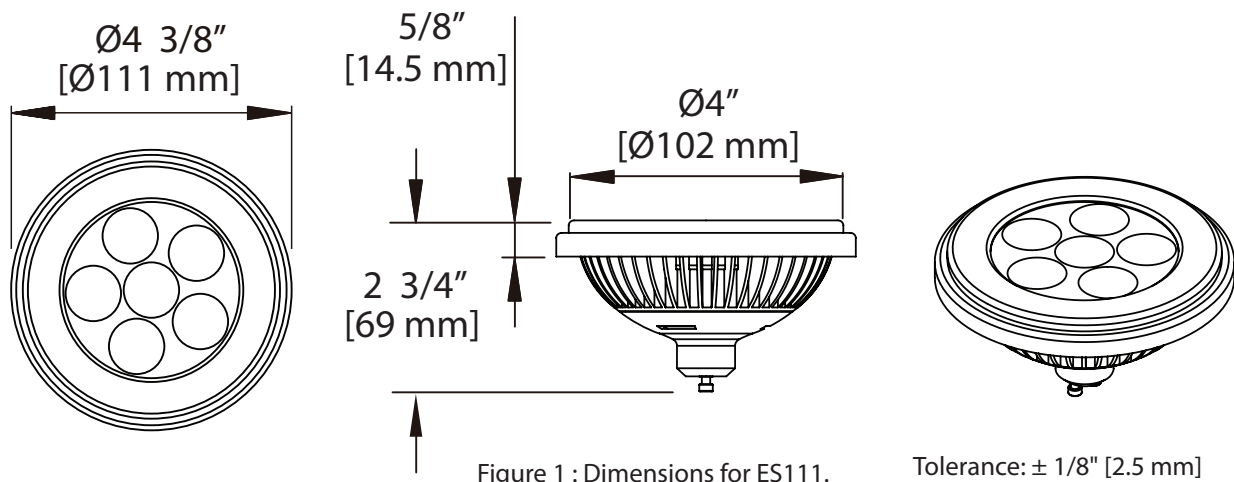
ES111 is an exceptionally high performance LED lamp built to last. It is a premium quality solid state lighting product precisely engineered and manufactured with state of the art technologies and materials. Proprietary driving circuit enables ES111 to replace traditional incandescent/halogen lamp, up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

- Solid State Lighting Technology
- Decrease Energy Consumption
- Reduce CO₂ Emission
- Superior Quality Light
- Ecologically Friendly
- Built to Last

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Dimensions



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
Power Input	AC	220~240	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

Power Consumption(W)	Part Number	Field Angles	CCT(Typ.)	Lux @ 1m (Min.)	Lux @ 1m (Typ.)	Lm (Min.)	Lm (Typ.)
10W	LB-ES111-10210x		5650~7000K	4140	4600	550	580
	LB-ES111-10220x	25°	3800~4500K	3640	4050	480	500
	LB-ES111-10230x		2670~3050K	3150	3500	400	430
	LB-ES111-10410x		5650~7000K	3000	3300	550	580
	LB-ES111-10420x	40°	3800~4500K	2500	2800	480	500
	LB-ES111-10430x		2670~3050K	2000	2300	400	430

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.

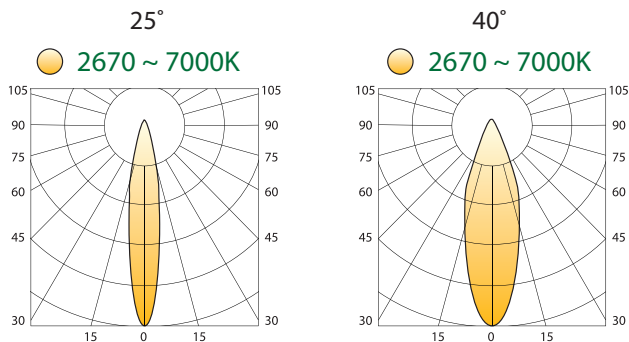


Figure 3 : Light patterns of ES111 for different angles.

Lifetime

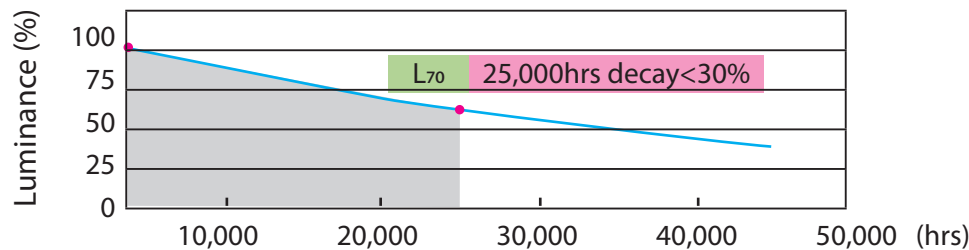


Figure 4 : Lifetime for ES111.

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.



Figure 5: Application for ES111.

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 CO₂ 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 CO₂ annually.

10W ES111 VS 75W Incandescent

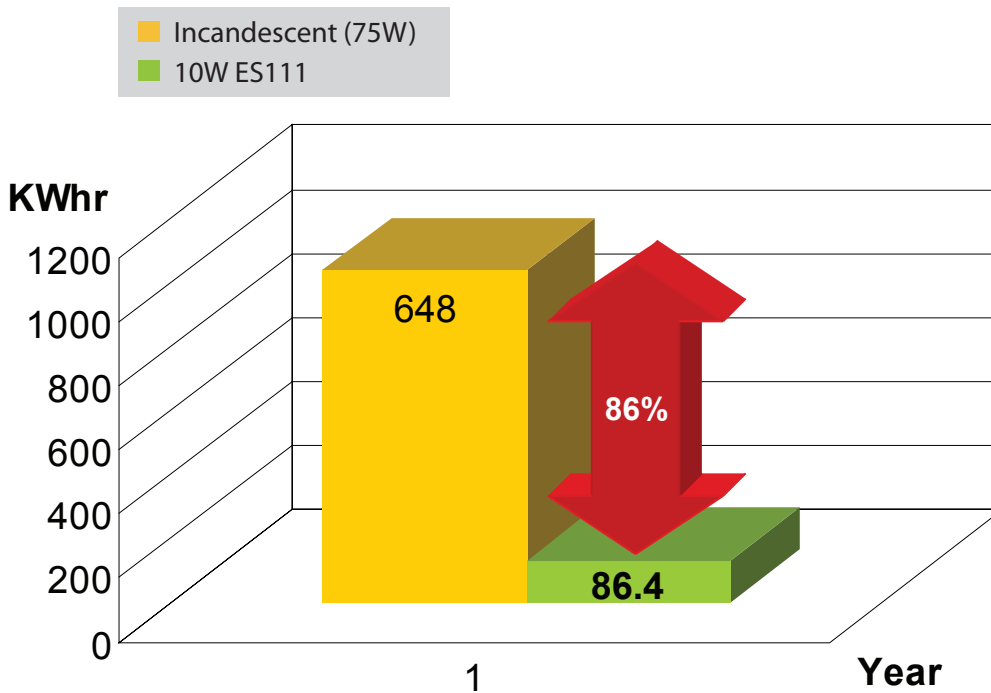
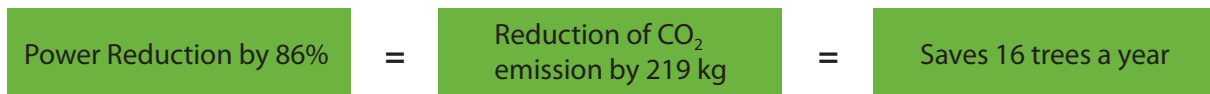


Figure 6 : 10W ES111 Environmentally Friendly.
 Note : 1.Calculation based on 24 hours of daily operation.

Economical



Power Consumption: **75W**
 Expected Lifetime: **2,000 hrs**



Power Consumption: **10W** Saving: 561.6 kWh / year
 Expected Lifetime: **40,000 hrs**

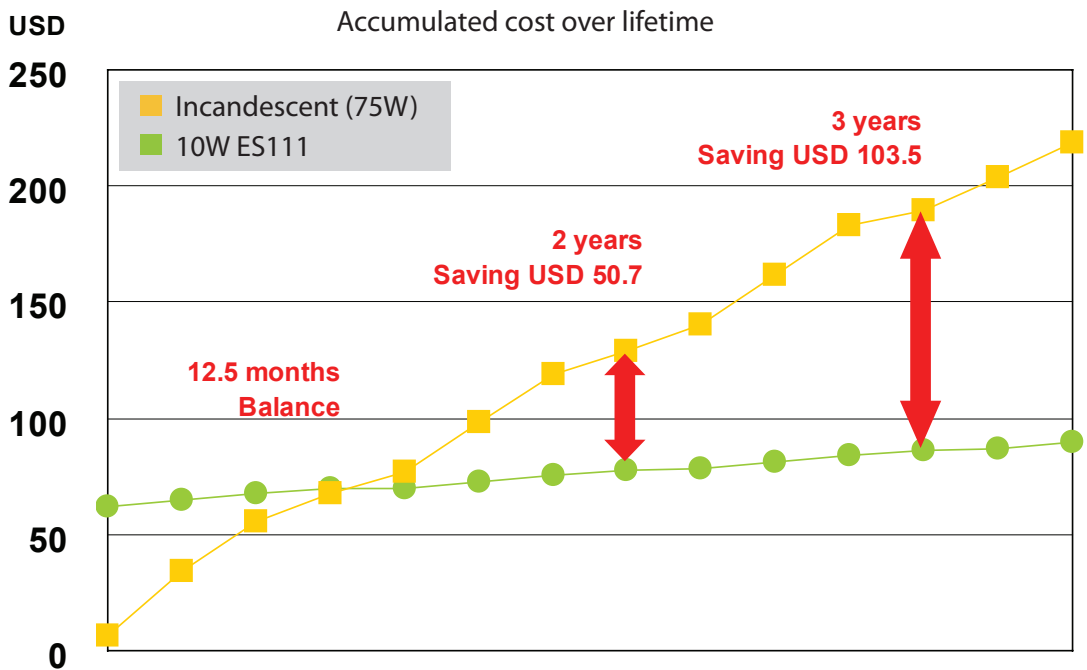
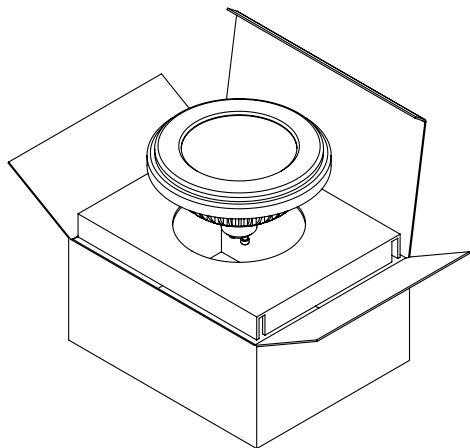


Figure 7 : 10W ES111 VS 75W Incandescent.

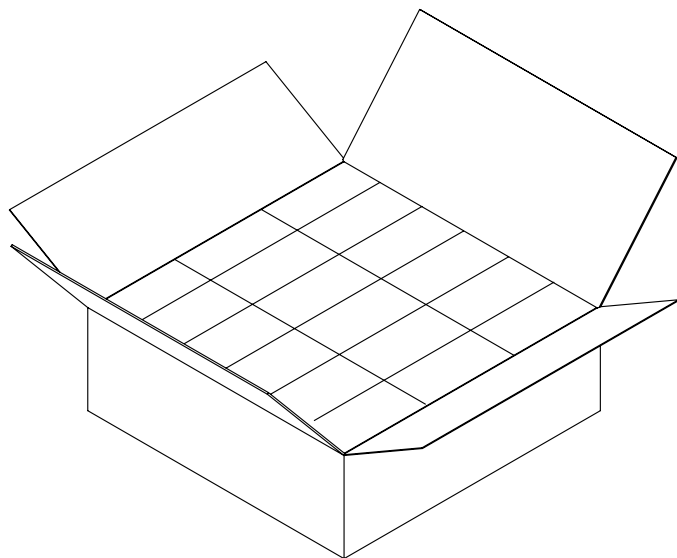
Notes : 1.Calculation based on 24 hours of daily operation (€9.41/kWh).
 2.Cost includes the replacement of 75W Incandescent ES111.

Package Information(Standard)

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



Interior Box (per each ES111 LED Lamp)



Exterior Box (18 Pcs. of ES111 LED Lamp)

Figure 8 : ES111 LED Lamp Package

List of the Modifications

Versions	Modification	Date
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	The dimensional drawing joins the British system the size.	2009.11.03
4	The Lifetime of L ₇₀ Modified as 25,000hrs	2010.04.02
5	Modify the Illuminance and Field Angles.	2010.07.07
6	Modify the Illuminance.	2011.03.03
7	Modify the Illuminance.	2011.09.07

Table 4 : list of the modifications for ES111.