Eco-$mart, Inc.
(888)329-2705 ph
(941)377-9460 fx
www.eco-smart.com

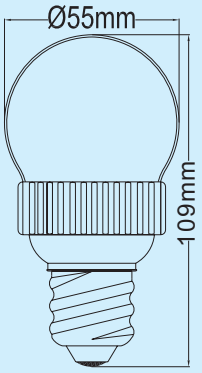
LED Bulb

A-19 3W HO (With Red and Amber Turtle Lamp Option)

Led bulb features

- Long lifespan, over 50,000 hours.
- Low electricity consumption, your electricity bill will be cut down sharply. Save 70—80% electric energy than incandescent lamp.
- Little maintenance cost, you don't need to worry about how to replace the failed bulb for 7 years.
- Safe, the light temperature is low.
- Environment friendly, no UV and infrared, no hazardous substance.
- Vibration-resistant, easy for transportation.
- It is used for replacing incandescent lamp.
- Wide applications:It is very suitable for decoration lighting in stations, clubs, stores, hotels, restaurants, gyms, airports, office buildings, factories, etc.

Products Picture



Application picture

Technical Specifications

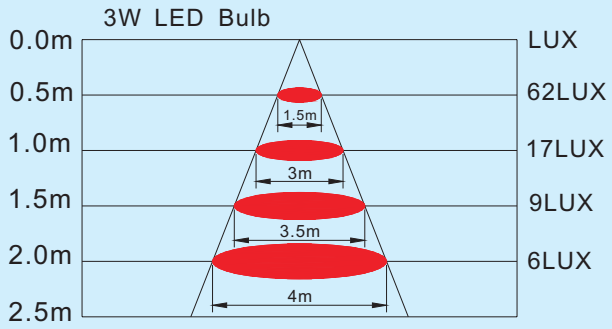
- Power Factor(PF):>0.55
- Total Harmonic Distortion:<15%
- Wavelength: Red - 650 NM, Amber - 585 NM
- Color Temperature: warm white2600K~4500K pure white 5000K~7000K
  (Remarks: Different requirements can be met: RGB Color, Watt, Lux, An-gle, etc.)

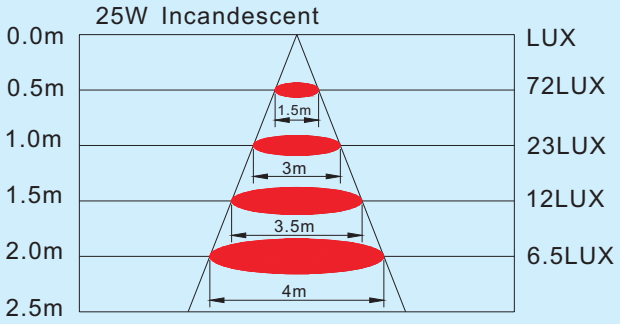
Item	Power	Voltage	Input Current	Work frequency	Color	Lumens	Package Size	Gross Weight
CTC-11	3W	AC90V~160V	40mA~31mA	60Hz	warm white /pure white Red, Amber	216lm/ 230 lm	87x87x130mm	125g
		AC190V~265V	20mA~17mA	50Hz				

Parameter Comparison

Characteristics	LED Bulb	Incandescent
Efficiency	3W	25W
Long Life	50000 Hour	1000 Hour
Reliability	Solid State	Weak tungsten
Environment	Returnable	Unrecoverable
Heat	<50℃	>150℃
Hart on body	Green Lighting	UV

Lux Parameter





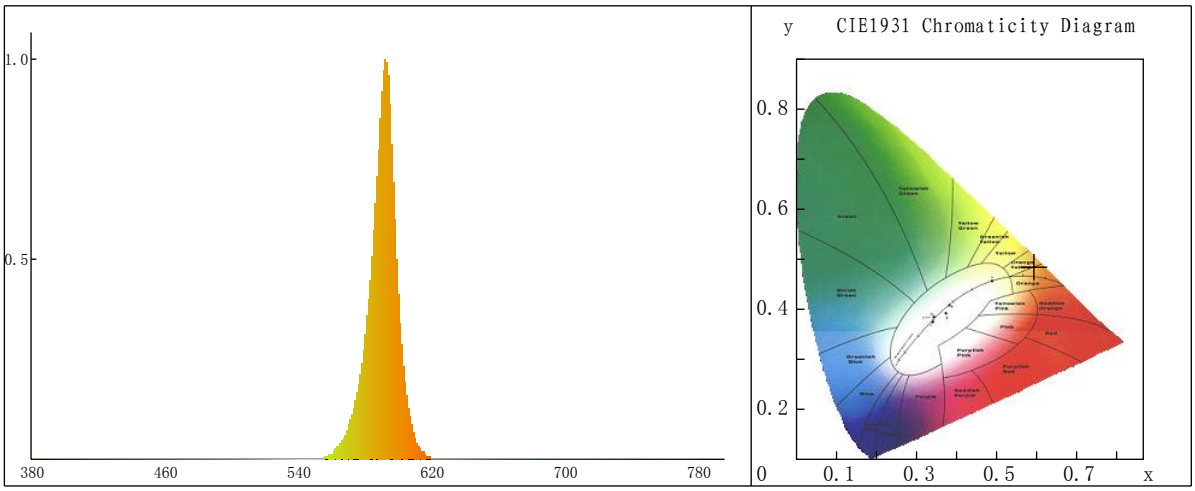
LED Test Report

Product Mark

Product Type : 3W　　Manufacturer :T

Temperature : 25℃　　Humidity : 55%

Operator : He　　Test Date 2014.05.30



Chroma Parameters

Chro. Coor.: x = 0.5711 y = 0.4282　u = 0.3265 v = 0.3672　duv = 0.0069

CCT: Tc = 1763K　Dominant Wave.: 590.3nm　Purity: 100.0%

R ratio: R = 9.7　Peak Wavelengh: 592.3nm　Half Width: 15.4nm

Rending Index　Ra = -30.6

R1 = -48	R2 = 43	R3 = 18	R4 = -78	R5 = -51
R6 = 22	R7 = -7	R8 = -141	R9 = -432	R10 = 13
R11 = -112	R12 = -39	R13 = -29	R14 = 45	R15 = -76

Photo Parameters

Flux: 119.71m　Effi.: 39.91m/W　Radiant: 595.3mW　Iv: 0.0mcd

Ele. Parameters

Voltage: U = 222.9V　Current: I = 0.064A

Power: P = 3W　Power Factor: PF = 0.545

Instrument state

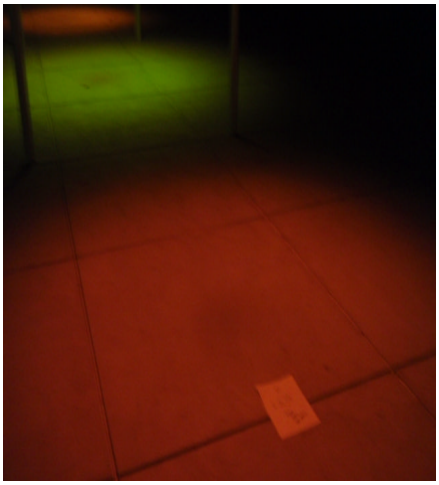
IntgeTime: 100.000ms　VPeak: 14988　VDark: 1089

Scan Range: 380-780nm

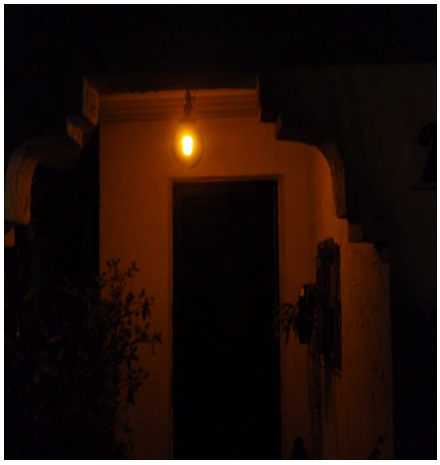
Eco-$mart Turtle Light
3W LED Red / Amber High Output
Model Number: **LED-A19-3-Red-HO**

Peak Spectral Output: 590(Amber) 625(Red) Nanometers

Lamp



Red Output



Amber Output

Florida Wildlife Program Approved
For more information, contact Eric Seckinger:
(850) 922-4330
eric.seckinger@myfwc.com

To order, contact:
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info@eco-smart.com

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Imperiled Species Management Section
Kipp Frohlich
Section Leader
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Managing fish and wildlife resources for their long-term well-being and the benefit of people.

620 South Meridian Street
Tallahassee, Florida
32399-1600
Voice: (850) 488-4676

Hearing/speech impaired:
(800) 955-8771 (T)
(800) 955-8770 (V)

MyFWC.com

July 14, 2009

Mr. Matt Ross
Eco-$mart™ Inc.
4411 Bee Ridge Road #344
Sarasota, FL 34233

RE: Wildlife Lighting Analysis

Dear Mr. Ross

Thank you for the opportunity to review the 3 watt red LED turtle light for approval in the Wildlife Lighting Program. Eco $mart™ Inc. provided one (1) 3 watt red LED for analysis. I am pleased to report the above lamp met or exceeded the keep it long criteria for Wildlife Lighting. This lamp, fitted in a wildlife friendly fixture, is recommended for use in areas where artificial lighting is needed adjacent to ecologically sensitive areas, sea turtle nesting beaches, migratory corridors, and Dark Sky Friendly communities.

The 3 watt red LED turtle light produced a peak spectral output of 600-750 nanometers, which falls in the optimal wavelength range of sea turtle friendly lighting.

The 3 watt red LED turtle light provided by Eco-$mart™ Inc. is Wildlife Lighting Approved when installed in a wildlife friendly fixture and used to meet minimal lighting standards. This certification authorizes the use of the Official Wildlife Lighting logo device only with the specified lamps. The Wildlife Lighting Program was developed by the Department of the Interior's U.S. Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission to address light pollution issues in ecologically sensitive areas while ensuring human safety and security.

If I can be of further assistance in any way, please contact me at (850) 922-4330 or email me directly at karen.shudes@myfwc.com. I look forward to working together.

Sincerely,

Karen Shudes,
Environmental Specialist II
Imperiled Species Management Section

Cc: Lorna Patrick, USFWS

WILDLIFE LIGHTING CERTIFICATE

PROTECTING WILDLIFE THROUGH RESPONSIBLE LIGHTING PRACTICES

Keep it Low

Mount the fixture as low as practicable for the illumination task. Path lights, shielded bollard lighting and louvered step lights are good examples. Avoid floodlights and pole mounted fixtures whenever possible. The higher the fixture is mounted – the harder to shield and the more atmosphere the photons must pass through. Keep it low also refers to the lumens output. Use only the amount of light needed to take advantage of natural human night adaptive - mesopic and scotopic - vision.

Keep it Shielded

Fixtures must be fully shielded and downward directed. The IES Classification of full cut-off (FCO) is a good starting point. No filament, bulb, or glowing lens should be directly visible from the wilderness area, wetland, natural buffer, beach, park, or migratory corridor.

Keep it Long

Long wavelength light sources have been found to be less disruptive to many nocturnal animals. These light sources appear yellow, amber or red to the human eye. Examples include Amber LED bulbs, low- pressure sodium lamps, Red LED bulbs, some low wattage yellow "bug" lamps, and TSL filtered compact fluorescent. Energy efficient lamps also increase the total score on the Wildlife Lighting review because they help protect natural resources by decreasing energy consumption.

Wildlife Lighting Approved Models by

MANUFACTURER: *Eco-Smart™ Inc.*
4411 Bee Ridge Road #344
Sarasota, FL 34233

MODEL NAME#: *3 watt red LED turtle light*

APPROVED LIGHTING PLAN
This approval is limited to the exterior lights depicted on the stamped plans. This approval does not relieve the applicant from the responsibility to obtain any other approvals or permits which may be required by Federal, State, County or Municipal law.

Karen Lyle 7/14/09 2009-005
REVIEWED STAFF Project # NO.

Fixtures must meet all three Wildlife Lighting Criteria to be considered acceptable. Only those fixtures and lamps submitted to the USFWS and/or FWCC that successfully pass lighting inspection (No uplighting and minimal blue/uv light emissions) and wavelength analysis receive certification and permission to use the Official Wildlife Lighting logo device in marketing materials.

Light Only What Needs to be Lit
Use Only As Much Light as is Required

Light Only When You need it Lit
Use Only Full Cutoff Fixtures

Florida Fish and Wildlife Conservation Commission

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Ronald M. Bergeron
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MyFWC.com

December 27, 2010

Mr. Matt Ross
Eco-$mart, Inc.
4411 Bee Ridge Road, #344
Sarasota, FL 34233

RE: Wildlife Lighting Certification

Dear Mr. Ross:

Thank you for the opportunity to review the following bulb: 3W LED Amber HO Turtle Light for approval in the Wildlife Lighting Program. This bulb produced a peak spectral output of 585 nm to 750 nm, which falls in the optimal wavelength range of sea turtle friendly lighting; therefore, this LED bulb is considered to be Wildlife Lighting when installed in a well shielded, downward directed fixture and used to meet minimal lighting standards. This certification authorizes the use of the Official Wildlife Lighting logo device only with this specified amber LED bulb.

In order to keep pace with current research and to constantly improve our wildlife lighting website, we have added an expiration date for wildlife lighting certified products. This is to ensure that if FWC changes the wildlife lighting certification requirements because of new information, then certified products will need to meet or exceed these changes once the certification expires. Wildlife lighting certified products will be valid for 2 years from the date of issuance.

The Wildlife Lighting Program was developed by the Department of the Interior's U.S. Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission to address light pollution issues in ecologically sensitive areas while ensuring human safety and security.

If I can be of further assistance in any way, please contact me at (850) 922-4330 or email me directly at Eric.Seckinger@MyFWC.com. I look forward to working together.

Sincerely,

Eric Seckinger

Eric Seckinger, Environmental Specialist II
Imperiled Species Management Section

cc: Richard Zane, USFWS

WILDLIFE LIGHTING CERTIFICATE

PROTECTING WILDLIFE THROUGH RESPONSIBLE LIGHTING PRACTICES

Keep it Low

Mount the fixture as low as practicable for the illumination task. Path lights, shielded bollard lighting and louvered step lights are good examples. Avoid floodlights and pole mounted fixtures whenever possible. The higher the fixture is mounted – the harder to shield and the more atmosphere the photons must pass through. Keep it low also refers to the lumens output. Use only the amount of light needed to take advantage of natural human night adaptive - mesopic and scotopic - vision.

Keep it Shielded

Fixtures must be fully shielded and downward directed. The IES Classification of full cut-off (FCO) is a good starting point. No filament, bulb, or glowing lens should be directly visible from the wilderness area, wetland, natural buffer, beach, park, or migratory corridor.

Keep it Long

Long wavelength light sources have been found to be less disruptive to many nocturnal animals. These light sources appear yellow, amber or red to the human eye. Examples include Amber LED bulbs, low- pressure sodium lamps, Red LED bulbs, some low wattage yellow "bug" lamps, and TSL filtered compact fluorescent. Energy efficient lamps also increase the total score on the Wildlife Lighting review because they help protect natural resources by decreasing energy consumption.

Wildlife Lighting Approved Models by

Manufacturer: Eco-$mart, Inc.
4411 Bee Ridge Road, #344
Sarasota, FL 34233

Model Name/#: 3W LED Amber HQ Turtle Light

Florida Fish and Wildlife Conservation Commission

This lighting plan meets recommendations to minimize impacts to marine turtles.

This does not relieve the applicant from the responsibility to obtain any approvals or permits which may be required by Federal, State, County or Municipal law.

FWC Reviewer _____ Date 12/28/2010 Permit No. 2010-026

Expiration Date: 12/28/2012

Fixtures must meet all three Wildlife Lighting Criteria to be considered acceptable. Only those fixtures and lamps submitted to the USFWS and/or FWCC that successfully pass lighting inspection (No uplighting and minimal lateral light trespass) and wavelength analysis receive certification and permission to use the Official Wildlife Lighting logo device in marketing materials

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Use Only As Much Light as is Required

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