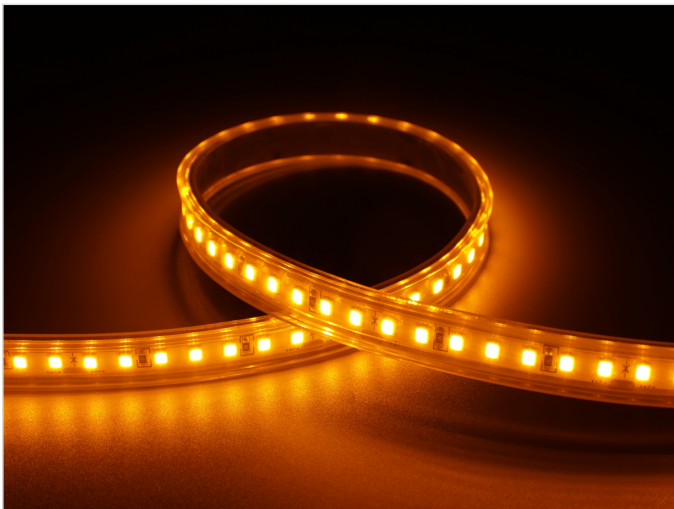


Wildlife Friendly Lighting Series

WLF-LD36S



Features

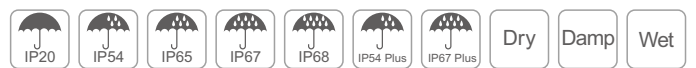
WLF-LD36S Wildlife-Friendly Series.

The WLF complies with FWC sea turtle guidelines utilizing a long wavelength of LED. With 4.39 watts per foot and either an amber look or red look color option, illuminating at night has never been easier. Available in IP67, IP67+, and IP68. 16.4' maximum run length, Cuttable in 1.97" segments. 24vdc.

5-year warranty.

Application

Wildlife-friendly turtle-safe linear lighting for the beach-front property and coastline applications.



LED Neon Strip

Lighting pollution

Lighting pollution is a serious threat to many types of wildlife. Each year, artificial light causes disruption of behavior, injury, and death to thousands of migrating birds, sea turtles and other reptiles, amphibians, mammals, and invertebrates.



CORAL

More than 130 different species of coral on the Great Barrier Reef spawn new life by moonlight. Bright urban lights can mask the moon's phases, throwing the corals' biological clocks out of sync.



SEA TURTLES

Sea turtles live in the ocean but hatch at night on the beach. Hatchlings find the sea by detecting the bright horizon over the ocean. Artificial lights draw them away from the ocean. In Florida alone, millions of hatchlings die this way every year.



FROGS AND TOADS

Glare from artificial lights can impact wetland habitats that are home to amphibians, such as frogs and toads, whose nighttime croaking is part of the breeding ritual. Artificial lights disrupt this nocturnal activity and interfere with reproduction, which reduces populations.



BIRDS

Birds that migrate or hunt at night navigate by moonlight and starlight. Artificial lights can cause them to wander off course towards dangerous nighttime landscapes of cities. Every year millions of birds die colliding with needlessly illuminated buildings and towers.



Lighting Solution

First and foremost, there is NO SUBSTITUTE FOR NATURALLY DARK HABITATS. Turning off unnecessary lights is the simplest, most effective, and most energy efficient solution to this issue. However, for situations where artificial lighting is absolutely required for human safety and security, there is another solution.

The Florida Fish and Wildlife Conservation Commission (FWC) and the U.S. Fish and Wildlife Service have teamed up to develop the Wildlife Lighting Certification Program. This program is designed to educate the public, building industries, and government officials on minimizing artificial light impacts to wildlife by identifying proper lighting methods and using appropriate lighting fixtures, lamps, and shields. Appropriate wildlife lighting meets ALL THREE of the criteria below.

Keep it LOW

Mount fixtures as low as possible. Low mounted fixtures provide more light directly on the ground where it is needed for human safety. This also reduces the potential of the light source or lamp from being directly visible.

Use the lowest wattage or lumen output necessary for the needed purpose.

Keep it LONG

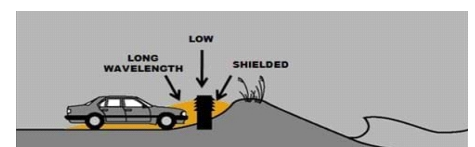
Use long wavelength (greater than 560 nm AND absent wavelengths below 560 nm) light sources such as amber, orange, or red LEDs without the use of filters, gels, or lenses. Using long wavelength light sources is less disruptive to marine turtles than white or multi-colored lights.

Short wavelength light sources, PC Ambers, RGBs, dual lighting boards, and color change options are not acceptable.

Keep it SHIELDED

The fixture must meet or exceed full cutoff. This is defined as no light emitting above a 90-degree plane.

The fixture must be shielded so that the lamp or glowing lens is not directly visible.



LED Neon Strip

FWC (The Florida Fish and Wildlife Conservation Commission) Sea Turtle Lighting Guidelines

These guidelines provide general information for all property owners living adjacent to sea turtle nesting beaches, but they are specifically designed to help property owners required to avoid and minimize lighting impacts to sea turtles as part of the State permitting programs, such as Coastal Construction Control Line (CCCL) permits and Environmental Resource Permits (ERP). In the permitting process, property owners must minimize all lights that may be visible from the beach, including all exterior, structural, decorative, and landscape lighting. This includes interior light visible through glass windows, doors and walls (either facing or perpendicular to the beach) as well as light from pools, fire pits, electronic devices such as televisions, tiki torches, etc.

FWC recommends beachfront property owners follow the **three golden rules**, “**Low - Shielded - Long**” when installing or modifying lights. All three must be used in combination to be effective, as they are all equally important!



Minimizing Light



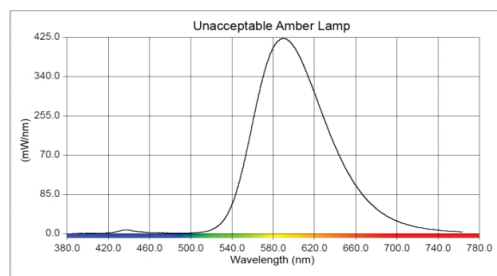
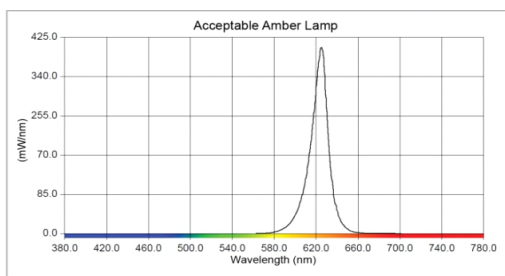
Even though a fixture/lamp combination may be Low-Shielded-Long, too many fixtures may still result in sea turtles becoming disoriented. In addition to the lowest wattage necessary for safety, light can also be minimized by installing fewer fixtures.

- Use the lowest wattage necessary.
- Use a minimal number of fixtures.
- Use only if needed for safety

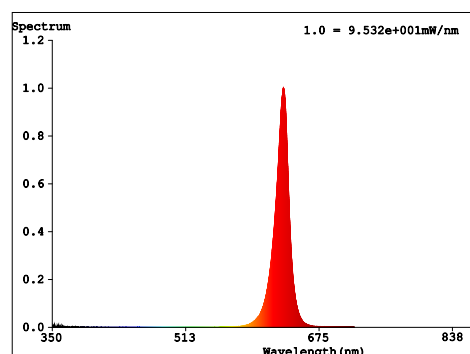
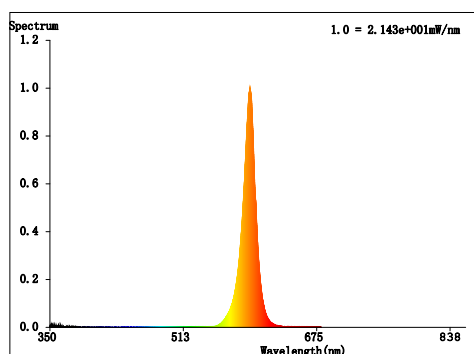
Long-Wavelength Light Source

Specifications for the wavelength is available from the manufacturer. Specifically, you can request a spectral distribution graph, as seen below.

The graph on the left displays an **acceptable** wavelength reading for a long-wavelength light source (i.e. amber lamp), with wavelength readings above 560 nm or higher. The graph on the right displays an **unacceptable** wavelength reading, with wavelength readings below the 560 nm cutoff.

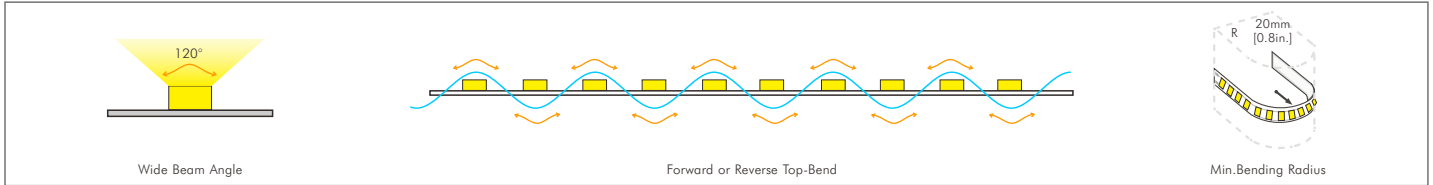


Our LED Source Solution

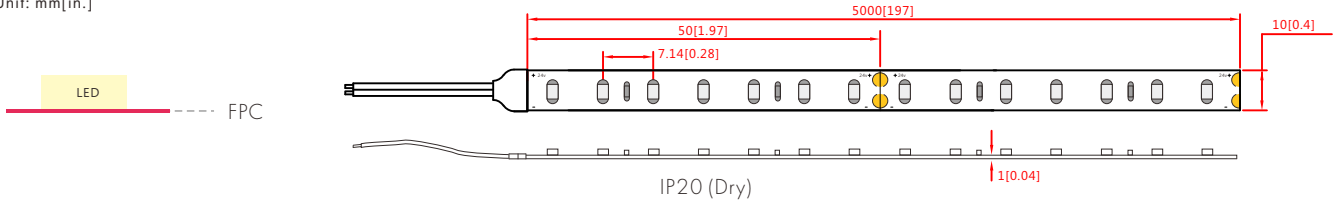


LED Neon Strip

Diagram & Dimension



Unit: mm[in.]



Specification

Part No.	Dimension (L*W*H)	IP Rating	Lumen Flux±10% @Yellow	Light Eff. @CRI80&4000K	Lumen Flux±10% @Red	Light Eff. @CRI90&4000K
WLF-LD36S-xxk-CU-67	5000*12*4mm [197*0.48*0.16in.]	IP67[wet]	430*95%lm/M [131*95%lm/ft.]	\	760*95%lm/M [232*95%lm/ft.]	\
WLF-LD36S-xxk-CU-68	5000*12*4mm [197*0.48*0.16in.]	IP68[wet]	430*95%lm/M [131*95%lm/ft.]	\	760*95%lm/M [232*95%lm/ft.]	\
WLF-LD36S-xxk-CU-67P	5000*12*5mm [197*0.48*0.2in.]	IP67 Plus [wet]	430*95%lm/M [131*95%lm/ft.]	\	760*95%lm/M [232*95%lm/ft.]	\

Notice: (1) The lumen flux value above is base on 1M[3.28ft.] length, it need to be measured and considered separately for other longer lengths.

General Parameters		Photoelectric Parameters	
Standard Length	5M [16.4ft.] (power fed on one side)	Power±10%	14.4W/M [4.39W/ft.]
Min. Unit & LED QTY	50mm [1.97in.] & 7LEDs	Input Voltage	24VDC
LED Type	SMD2835 amber/red LED	LED Current	30mA/LED
LED QTY	140 LEDs/M [42 LEDs/ft.]	LED CCT & Wavelength	Amber: 585-595, Red: 615-625nm
PCB Type	3oz white FPC, OSP	SDCM	\
Operating Ambient	Ta(working): -20~45°C [-4~113°F] & Tstg(storage): -20~60°C [-4~140°F]	CRI	\
Warranty	5 years	Beam Angle	120°
Lifespan	\	Dimming Method	PWM (dimmable driver like RF, Bluetooth, 0/1-10V, Triac, DALI, DMX, WIFI etc.)
Certification	CE, UL, CB, SAA, RoHS, LM80		

Note:

- 1: Dimension, CCT and lumen flux etc. of waterproof type will be different, compared with IP20 type.
- 2: Applying with extra heat sink is not necessary with self-cooling capacity.
- 3: 3M 300LSE yellow adhesive tape attached on backside, is standard configuration.
- 4: One end of 200mm red/white silicon cable or waterproof connector kit according to specific IP rating, is standard configuration of Plus Series.
- 5: Transparent reel and silvery ESD bag, are standard configuration.
- 6: Installation accessories such as clip, screw, plug etc. are all optional base on specific demand.

Ordering Information

Example: WLF-LD36S-R-CU-IP67-24

Max run 16.4ft

Part No.	Watts/ft		Color Temp		Length		IP Rating		Voltage	
WLF-LD36S	43	4.3w/ft.	A R	Amber Red	16 CU	16.4ft Custom Length*	IP67 IP68 IP67+	Outdoor	24	24VDC

Accessories

IP67 Outdoor

FS-WLF-LD36S-WL67 Wire lead connector, for IP67 static white strip

FS-WLF-LD36S-MBKT Mounting brackets



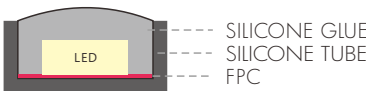
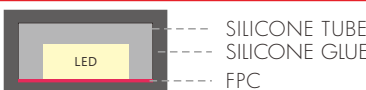

Power Supplies

Dimmable with 0-10v, ELV, MLV, TRIAC

Item Number	Description	Max/Min Load	Input Voltage	Output Voltage	Dimmable	Dimensions
PS-TSLC-UNV-24V-30WDHV2	30W	30W / 3W	100-277V AC	24V DC	Yes*	6.49"L x 3.6"W x 1.02"H
PS-TSLC-UNV-24V-60WDHV2	60W	60W / 6W	100-277V AC	24V DC	Yes*	7.4"L x 3.6"W x 1.02"H
PS-TSLC-UNV-24V-96WDHV2	96W	96W / 9.6W	100-277V AC	24V DC	Yes*	8.66"L x 3.6"W x 1.61"H
PS-TSLC-UNV-24V-288WDHV2	288W (3 x 96W)	288W / 28.8W	100-277V AC	24V DC	Yes*	11.85"L x 4.25"W x 1.8"H

LED Strip

IP Rating & Coding

CODE	IP RATING	SKETCH MAP	FEATURE
	IP67 DC L.V. Series Wet Location	 <p>SILICONE GLUE SILICONE TUBE FPC</p>	<p>Silicone Pouring Process Immerse In Water For Short Time (depth ≤ 1 meter & less than 30 minutes) Full-Seal</p>
	IP68 DC L.V. Series Wet Location	 <p>SILICONE TUBE SILICONE GLUE FPC</p>	<p>Silicone Injection Process Immerse In Water For Long Time (depth ≤ 1 meter & within the warranty period) Full-Seal</p>
	IP67 Plus DC L.V. Series Wet Location	 <p>SILICONE TUBE FPC</p>	<p>Silicone Extrusion Process Immerse In Water For Short Time (depth ≤ 1 meter & less than 30 minutes) Tiny Color Shift Full-Seal</p>