

# MiaSolé

## CUSTOMER CASE STUDY

### ClearWorld Advanced Solar LED Lighting and MicroGrid Solution

#### CUSTOMER PROFILE

ClearWorld, LLC, headquartered in Harahan, Louisiana, has a bold mission: to harness the cleanest, most abundant renewable energy source available—solar energy—to provide outdoor lighting that preserves resources, requires no moving parts, and is virtually maintenance-free. Their challenge: To find a solar panel that would allow them to generate sufficient power, easily retrofit onto existing lightpoles, work well on new poles, and perform well in the environment as well as be aesthetically pleasing.

#### MIASOLÉ SOLUTION

MiaSolé's flexible, powerful lightweight FLEX modules were the ideal fit for this application. The bendable panels wrap around the light pole, eliminating the solar rectangle "wing" design of typical solar street light panels. This reduces the chance of vandalism and theft, because the flexible panels don't shatter and they are located 12' above street level. Without an awkward solar panel support structure, the aesthetic of the street light is also preserved.

ClearWorld lights are hurricane and flood resistant. The ability of the FLEX panels to conform to the light pole increases resistance to wind. A traditional solar light with rectangular panel can withstand 70 to 90 mph winds while a light powered by a MiaSolé flexible panel can withstand 150+ mph. Because the power source is located 12' up, flood protection is provided. Furthermore, the curved design of the MiaSolé FLEX panel performs better in high temperatures, allows for better solar absorption throughout the day through a curved axis, and resists panel surface build up of dirt, grass, bird droppings, etc.

MiaSolé FLEX panels are the most efficient thin-film lightweight flexible panels on the market today—with an efficiency rating of 17.8%—generating the most power possible. For ClearWorld, the power generated by a MiaSolé panel is sufficient to charge a backup battery that can power an LED streetlight for up to eight days, meaning even in times of inclement weather the light will be operational.



MiaSolé

# CUSTOMER CASE STUDY – SOLAR LED LIGHTING AND MICROGRID SOLUTION

## RESULTS

ClearWorld LLC has found the MiaSolé panels to be an ideal fit for their lighting solutions. The flexibility, low weight and power generating capability of the panels allow ClearWorld to create self-contained solar-powered lighting that is off-grid and can be used in remote installations and is unaffected by power outages. ClearWorld's lighting solution is ideal for roadways, sidewalks, apartment and condominium complexes, corporate and industrial parking lots, retail parking lots, university campuses, government institutions, and military installations. The ClearWorld solution also provides a clear white light for improved security while remaining compliant with International Dark-Sky Association (IDA) regulations for reducing sky-glow and light pollution.

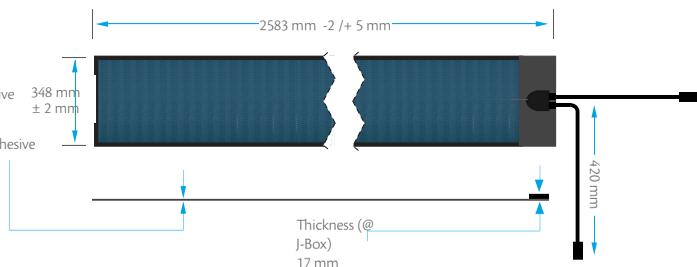
Thanks to MiaSolé, ClearWorld is able to provide their customers a solution that is even less expensive to install and operate than a traditional incandescent street light, with virtually no maintenance costs, no electrical costs, and greater lamp-life hours.

## BENEFITS OF CLEARWORLD LED LIGHTING

- 1 SOLAR LED LIGHT**  
The ultimate lighting option to reduce operating costs for municipalities, while providing an environmentally friendly option.
- 2 OPERATE OFF THE GRID**  
ClearWorld's solutions have the option to operate off-the-grid, so a power outage won't leave residents in the dark.
- 3 TAMPER RESISTANT**  
The solar components are high on the pole, therefore out of arms' reach of someone wishing to damage them.
- 4 FLOOD AND HURRICANE RESISTANT**  
The cylindrical design is capable of withstanding 150 m.p.h winds, making it hurricane resistant, and because all components are installed at the top of the light pole, it is flood resistant as well.
- 5 ELIMINATE CARBON FOOTPRINT**  
ClearWorld eliminates the carbon footprint of a traditional utility pole.
- 6 DARK SKY COMPLIANT**  
ClearWorld's technology complies with International Dark-Sky Association (IDA) regulations in that it reduces sky-glow and light pollution.



Thickness with adhesive  
2.5 mm (0.1 in)  
Thickness without adhesive  
1.6 mm (0.06 in)



The thin, flexible and lightweight MiaSolé module provides excellent resistance to high wind, vandalism and seismic events.



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