

OCCUPANCY SENSOR SECURITY LAMPS CAN BE OFF WHEN NEEDED

Many exterior entry lights in residential and commercial applications use two-lamp incandescent flood lamps with occupancy sensors because they are small and inexpensive. However, they don't provide continuous illumination, causing some people to opt for continuous operating fixtures.

Operating incandescent lamps continuously is expensive and requires frequent lamp replacement. Alternatively, compact fluorescent lamps (CFLs) have lower operating cost than incandescents but are more expensive to install, and replacement CFLs are not widely stocked.

The Light-Emitting Diode (LED) Hybrid Security Fixture combines cutting-edge LED technology with an occupancy sensor and incandescent flood lamps to reduce operating costs below those of continuously operating incandescent lamps and CFL fixtures.



Standard flood lamps are dark until motion is detected.

LED HYBRID SECURITY FIXTURE

A PHOTOCELL CONTROLS A 5-WATT AMBER LED ARRAY FOR CONTINUOUS NIGHTTIME OPERATION, PROVIDING PLEASANT, LOW-LEVEL AMBIENT LIGHT. AN OCCUPANCY SENSOR TURNS ON THE INCANDESCENT FLOOD LAMPS WHEN MOTION IS DETECTED, FLOODING THE AREA WITH BRIGHT LIGHT. AFTER A FEW MINUTES THE OCCUPANCY SENSOR TURNS OFF THE INCANDESCENT LAMP WHILE THE LED ARRAY CONTINUES TO ILLUMINATE THE AREA.



The 5-watt LED array provides continuous illumination.

ENVIRONMENTALLY SOUND AND ENERGY EFFICIENT

This fixture is expected to cut operating costs 50–90 percent compared to fixtures operating continuously, depending on occupancy. Equally important, the fixture gives building owners and occupants peace of mind that the long-life LEDs will provide illumination all night long for years to come.



Motion sensor activates flood lamps.

Benefits

- Continuous LED lighting offers low-level illumination compared with standard security fixtures that are dark unless motion is detected.
- The unit is only slightly more expensive than standard units.
- The combined use of LED lighting with incandescent flood lamps controlled by an occupancy sensor consumes less energy than continuously operating incandescents or CFLs.
- LEDs with 10–15 year life provide light when incandescent lamps burn out.
- The LEDs meet the California Title 24 Building Efficiency Standards requirement for 40 lumens/watt.

INTERESTED?

Hotel/motel staff, apartment managers, lighting specifiers, code developers, contractors, and utility staff can use the information on this system.

Key next steps include:

- *Building Owners/Managers and Lighting Specifiers*—Specify the LED Hybrid Security Fixture.
- *Utility Staff*—Educate audiences on the technology's benefits and offer incentives for this product category.
- *Code Developers/Implementers*—Accept the technology within new and existing codes.

Contact The Watt Stopper for information on this product (www.wattstopper.com).

Shaper Lighting developed a similar unit. It is available on special order (www.shaperlighting.com).

Hunter Lighting Group is preparing a fixture of this type for the residential consumer market (<http://www.hunterkenroy.com/>).

This project was part of the PIER Lighting Research Program. To view the project results, as well as other current research activities, visit www.energy.ca.gov/pier.

Additional information about this technology can be found on the following web sites:

- PIER contractor site:
www.archenergy.com/lrp/products/ledhybrid.htm
- PIER researcher site:
www.cltc.ucdavis.edu (under projects)



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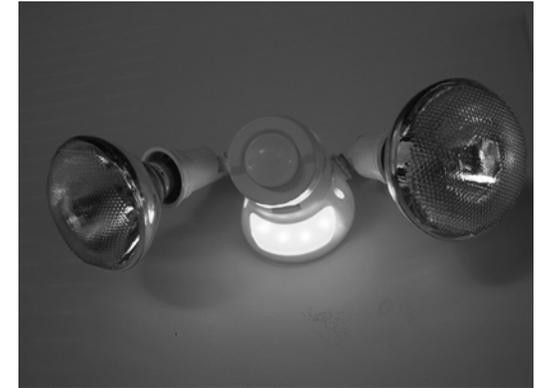
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LED HYBRID SECURITY FIXTURE



PROVIDING SECURITY
AND ENERGY
EFFICIENCY TO
OUTDOOR LIGHTING



Public Interest
Energy Research

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