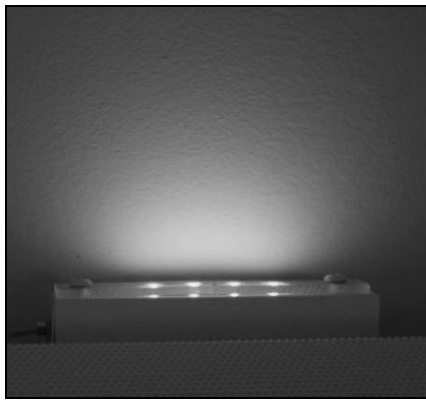


HOTEL BATHROOM LIGHTS CONSUME THE MOST ELECTRICITY

Bathroom lights generally operated between five to eight hours per occupied day in hotels. Sometimes people leave the bathroom light on at night as a guide. Additionally, people often don't turn off the bathroom light when they leave the room and it is left on until the maid service arrives. However, hotel managers are typically reluctant to install occupancy sensors in these spaces due to concerns of accidental light shut-off while the bathroom is occupied.

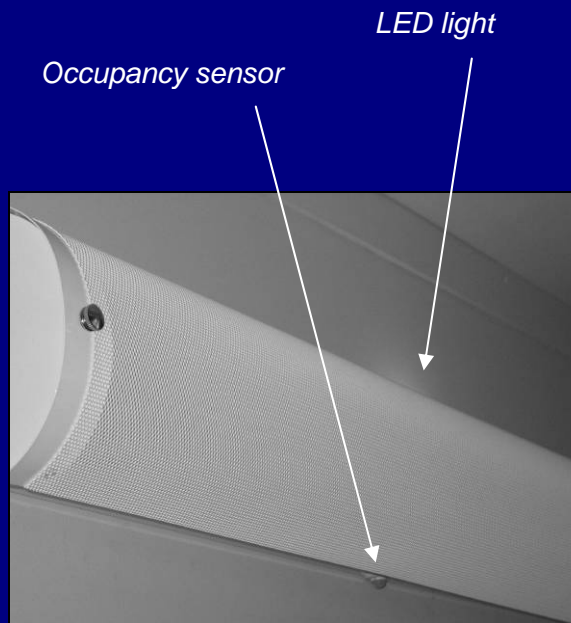
The California Lighting Technology Center (CLTC) staff partnered with a fixture manufacturer, a utility, and a hotel to develop an energy saving, hotel-specific luminaire that integrates a low-wattage LED (light emitting diode) nightlight and an occupancy sensor that saves energy while improving occupant satisfaction.



The LED nightlight provides enough illumination for night time visibility

HIGH PERFORMANCE HOTEL GUESTROOM BATHROOM LUMINAIRE

RESEARCHERS DEVELOPED A NEW ENERGY EFFICIENT LUMINAIRE SPECIFICALLY DESIGNED FOR HOTEL GUESTROOM BATHROOMS. THIS LUMINAIRE INCLUDES AN INTEGRATED OCCUPANCY SENSOR AND LED NIGHT LIGHT TO MAXIMIZE ENERGY SAVINGS FOR THE HOTEL OWNERS, WHILE PROVIDING UNIQUE FEATURES AND AMENITIES TO HOTEL GUESTS. THE FIXTURE ALSO INCLUDES A BATTERY BACKUP TO ENSURE EMERGENCY LIGHTING DURING POWER OUTAGES.



A UNIQUE LIGHTING SOLUTION FOR HOTEL BATHROOMS

The CLTC staff worked closely with the Sacramento Municipal Utility District (SMUD), SpecLight, and hospitality partners to develop a novel luminaire that cuts energy use by about 50% while improving occupant satisfaction. Payback is expected to be 2-6 years, depending on the application in which it is installed.



The luminaire is being installed and tested in hotels and assisted living facilities.

Benefits

- T8 lamp with an electronic ballast provides efficient operation during occupancy.
- 1-Watt LED night light system supplies low-energy illumination during the night and during unoccupied periods.
- Integrated occupancy sensor on one-hour time-out minimizes "false-offs."
- The occupancy sensor in "auto-off, manual-on" mode maximizes energy savings and avoids "blinding" guests who walk into the bathroom at night.
- Safety-mode feature automatically runs LED nightlight on backup battery during power outages.

INTERESTED?

Hotel and institutional owners/managers, contractors, design engineers, code developers, and utility staff can use the information on high-performance hotel bathroom lighting systems.

Key next steps include:

- Conduct field demonstrations in hotel and assisted living applications.
- Educate hotel and institutional owners/managers about energy and maintenance savings opportunities.
- Identify buildings with high-wattage fixtures that would be ideal early adopters of this technology.
- Identify a manufacturer that will produce the system in high volumes at a competitive price.

To participate in field demonstrations or to get more information on this technology, contact Erik Page at CLTC (epage@ucdavis.edu).

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/advlight_luminaires/project_4_1.htm
- Researcher project site:
www.cltc.ucdavis.edu
(under projects)



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HOTEL GUESTROOM BATHROOM LIGHTING



REDUCING ENERGY USE
WHILE IMPROVING
OCCUPANT
SATISFACTION



Public Interest
Energy Research