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Energy-efficient LEDS having steady sales

BY CAROL POLSKY

carol.polsky@newsday.com

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It's official: The White House Christmas tree is "green." So is the tree at Rockefeller Center. And starting next year, the one at RexCorp Plaza in Uniondale, too.

Those trees will glow with light-emitting diodes, or LEDs, rather than the traditional bulbs of incandescent lights. Like driving a hybrid car and using recycled paper, stringing up LED Christmas lights is becoming a de rigueur gesture of eco-friendliness and environmental responsibility.

Long Island retailers, from high-end specialty shops to The Home Depot and Target, said the lights are also selling steadily. This year customers have more LED offerings to choose from, and many seem willing to pay their extra cost in exchange for their energy-efficiency, vivid colors and longer lifespan.

Traditional incandescent lights glow when electricity passes through a filament in a glass bulb. Their colors come from the tint in the glass. LEDs, on the other hand, are semiconductor chips, diodes that glow with the movement of electrons when activated by electricity. They last far longer, they're more durable and they don't get hot. Their red, blue or green color comes from a material at the diode's base, and white is achieved when strands of the three colors are combined.

"We have more styles this year than we ever had, as far as the shape of the bulb, the sizes, the colors," says Carrie Leopold, store director at Dodds & Eder in Oyster Bay, where customers were coming in with a Long Island Power Authority coupon giving them a \$2 rebate on LED lights.

One customer there, looking for a pre-lit Christmas tree, said she was open to LEDs if she could get the look she wanted. "I'd say the eco-friendly [aspect] is secondary to looks unfortunately for me, but it is an important factor," said Cherie Hlady, an attorney who lives in Hicksville and was shopping yesterday.

"I'm not making my own compost heap anytime soon, but I try to be fairly green and eco-friendly," she added, "so I'd be willing to pay a little extra to do my part if I could get the look I wanted."

The cost certainly is a factor in LED sales: At Home Depot a string of 100 clear minilights in traditional bulbs sells for \$2, while 50 LED lights were on sale for \$7.99. And at Wal-Mart a 7-foot-tall pre-lit tree cost \$59.84 with traditional lights - and \$92.84 with LEDs.

On the other hand, some Home Depot customers came in asking for the "bright lights," meaning the vivid LEDs, said Sheriee Bowman, a metropolitan area spokeswoman for the chain.

"The LED Christmas lights are 80 percent more efficient, is how we are advertising it," she said, "and they last up to 20,000 hours or the equivalent of up to 20 years."

Home Depot, as well as other big stores, offer interactive displays where customers can light both types of lights for comparison. Hlady, at Dodds & Eder, said she saw little difference and would be happy with the LEDs.

Josh Thomas, a spokesman for Target, said the LED lights in those stores were selling "steadily," with the Farmingdale store, for example, reporting that the vivid blue and red lights were particularly popular. The chain also offers outdoor figurines in LED lights, such as a buck outlined in blue.

Neal Lewis, executive director of the Long Island Neighborhood Network, an East Farmingdale-based environmental group with energy efficiency on its agenda, said the LEDs have caught on in the past two years with local stores.

"It's the mainstreaming of an idea when you can find it at Wal-Mart," he said, adding that for most people, the energy and cost efficiencies of LEDs will mean savings over time for customers, although it may take several years to earn back their higher initial cost.

LEDs are cool to the touch, lessening danger of burns or fire. Up to 20 strings of them can be put together. A string doesn't cease functioning if one light is defective. And they cost pennies to use during a season, versus about \$4.50 for a typical string of regular lights.

These advantages won't really apply to the tree at the RexCorp Plaza in Uniondale, where Carol Allen, senior company vice president and organizer of the tree-lighting event Saturday, said that costs may actually be higher when they go green next year.

"We'd already purchased the lights for this year's tree," she explained, "so we could not go into an LED tree this year."

Since the light cast by traditional and LED lights differ, the company may have to use more lights to get the same overall effect, she said.

"We're studying it now. ... It may even cost us more to not only purchase but use the lights to get the same brilliance we want for the tree. But we are planning to do it because we want to be more energy conscious and eco-friendly."

OF INTEREST

Although Nick Holonyak Jr. is known as the "father of the light-emitting diode" for work done in 1962 at General Electric, researcher Henry Round of Marconi Labs first reported light from a semiconductor junction in 1907.

FUTURE LIGHT

In light-emitting diodes, electricity runs through a solid-state device that does not require heating of a filament.

In a Consumer Reports survey, LEDs used 1 to 3 kilowatt hours of electricity, compared with 12 to 105

kwh for incandescents.

Epoxy lens

LED chip (semiconductor)

Reflecting cup

Anode wire

Cathode lead

Anode lead

All LED bulbs worked after 4,000-plus hours in the magazine's tests, while each string of incandescents had one or more bulbs burn out before 2,000 hours.

LEDs are now used in cell phones, traffic lights, spotlights.

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