



L.E.D. Exit Signs

fact sheet

Light emitting diodes can be used to illuminate exit signs, consuming only about two watts of input power. LED signs are available as complete assemblies and as retrofit kits for existing signs. The life expectancy of an LED sign is 20 years of continuous operation.

REPORTED BENEFITS

- Reduced energy cost—an LED exit sign consumes about two watts of energy compared to about 20 to 30 watts for incandescent signs or 10 to 18 watts for compact fluorescent signs.
- Reduced maintenance—rated lamp life for LEDs is about 200,000 hours compared to about 5000 hours for incandescent lamps and 10,000 hours for fluorescent lamps.

Barriers to Market Acceptance

- ➡ 1. price
- 2. risk of failure
- ➡ 3. benefits not understood
- 4. priorities not on benefits of new technology

The price appears excessive if the benefits are not considered.

Development Stage

- 1. need for the technology identified
- 2. technology concept developed
- 3. initial research findings reported
- 4. research on concept completed
- 5. commercial pilot completed
- 6. introduction to commercial market
- ➡ 7. immature market demand
- 8. mature market demand
- 9. market saturation

WISCONSIN APPLICATIONS

This lighting technology is applicable wherever incandescent or fluorescent exit signs are used.

TYPICAL PAYBACK

Considering equipment costs, replacement bulb costs, and energy savings, the expected payback periods for retrofit LED exit signs are two to three years compared to incandescent signs and about five years compared to fluorescent signs. For new installations, typical paybacks are two to three years compared to incandescent signs and about four years compared to fluorescent signs. These

paybacks do not include labor savings from reduced maintenance (incandescent and fluorescent signs require bulb replacement maintenance about twice and once per year, respectively).

MORE INFORMATION

- Bierman, A. 1995. Exit signs. *National Lighting Product Information Program Specifier Reports Supplements*, 2(2), Supplement 1, March 1995.
- Bierman, A., and O'Rourke, C. 1998. Exit signs. *National Lighting Product Information Program Specifier Reports Supplements*, 2(2), Supplement 2, March 1998.
- U.S. Environmental Protection Agency's website on "Energy Star-Labeled Exit signs" at www.epa.gov/appdstar/exit

MEMBERS OF THE ENERGY CENTER OF WISCONSIN

- Alliant Utilities-Wisconsin Power & Light Company
- Badger Power Marketing Authority of Wisconsin
- Consolidated Water Power Company
- Madison Gas & Electric Company
- Manitowoc Public Utilities
- Marshfield Electric and Water Department
- Northern States Power Company-Wisconsin
- Pardeeville Public Utilities
- Rice Lake Utilities
- Superior Water, Light and Power
- Wisconsin Electric Power Company
- Wisconsin Public Power Incorporated
- Wisconsin Public Service Corporation



**ENERGY CENTER
OF WISCONSIN**
We show you how

595 Science Drive • Madison, WI 53711
Your comments and suggestions are welcome:
industrial@ecw.org