

## Background--Building Codes and Requirements:

To protect the health, welfare and safety of communities, the building industry adopts international building and fire codes and standards ("model" codes) which are applied to every aspect of building design and maintenance. These model codes are revised every three years to make changes so that these standards include the latest in innovation, technology, and approaches to health and safety. Virtually every building, process, service, design and installation in the industry today is affected by these international standards, and in the U.S., they are also affected by the National Fire Protection Association (NFPA) standards. These codes were all revised in 2009 to state that "luminous (visible) egress path markings shall be required in all new and existing buildings—institutional, educational, business, hotel, public assembly and residential," that meet specific occupancy and location requirements. This means that all doors, rails, steps, landings, perimeters and obstacles have to be able to be seen and clearly designated. As these 2009 codes are adopted in whole or in part by local jurisdictions, the model codes become legally-mandated requirements for all building owners. In addition to meeting this legal requirement, having common lighting/visibility in these areas helps guide occupants through them safely. This requirement also provides additional protection for an aging population that sees less clearly, creates a common, non-verbal communication designating exits, entrances, and related areas for a multi-lingual population, and more importantly it matters in emergency situations such as fire or long-term electricity blackouts that leave people stranded. Shown here is an actual installation demonstrating a typical installation required in accordance with this legally-mandated requirement.



**Call for questions or  
to place an order:**

The Home Energy Detective  
866-933-2590 or  
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**UL 924 Approved  
Photoluminescent  
Exit Signs**

**50, 75, and 100 Foot Rated**

**Reduce impact on the global environment**

**Realize cost savings through energy efficiency**



AfterGlow® is our brand name for a range of photoluminescent (PL) - non-electrical, non-radioactive, glow-in-the-dark products used as safety markings in structures and air, land and sea vehicles. AfterGlow LLC's products include entrance, exit and other signage, tapes, paints, appliques and UL listed EXIT signs that provide lighting without electricity, batteries, LED's or radioactive materials.



### Leadership in Energy and Environmental Design (LEED) Buildings

PL safety marking products are highly sustainable and LEED compliant. They can earn LEED points for building owners in the following green building design and construction credits:

- EA Credit #1 – Energy & Atmosphere: Optimizing Energy Performance.
- MR Credit #4 – Materials & Resources: Recycled Content.
- ID Credit #1.1 – Innovation in Design: Exceptional Performance.

PL products can be used to retrofit existing buildings, are ideal for historical preservation, and can be used to significantly reduce the energy budget and electrical infrastructure for new construction. Installation costs are very low, they require fewer building materials to make, are maintenance free, and consume ZERO energy because they are charged by ambient light.



PL products are effective and, in many emergency situations, superior to the alternatives. PL products continue working long after emergency generators typically stop running and the luminance of PL products far exceeds that of many LED products.

### How PL Products Work

As photoluminescent (PL) materials absorb ultraviolet light from ambient light, they simultaneously begin storing energy and releasing some portion of it as visible light. Upon removal of the light source, the stored energy release continues, producing a highly visible, surface illumination, or afterglow, that fades over a period of time. PL materials glow in the dark if power is lost or if smoke obscures overhead lighting. Unlike electrically powered systems, which rely on back up batteries or emergency generators and their finite fuel supplies, PL emergency egress marking systems are virtually fail safe. They will glow by themselves, with UL-listed products remaining visible for a minimum of 90 minutes and will continue to be visible for up to 30 hours. Even if damaged they will continue to glow and provide guidance.

PL products are often used in egress marking systems to provide building occupants with a continuous pathway delineation for emergency egress under all conditions. Following the problems encountered in high-rise buildings in New York during the 9/11 tragedy and the 2003 Great Northeast Blackout, the city passed Local Law 26 of 2004 that requires a range of retroactive and prospective provisions, including photoluminescent exit path markings in high-rise office buildings.

Photoluminescent egress path markings inside staircases are now required by the 2009 IBC International Building Code and 2009 IFC International Fire Code and are detailed in the 2009 NFPA 101-Life Safety Code and 2009 NFPA 5000-Building Construction and Safety Code.



### Why Buy Photoluminescent Products?

- Photoluminescent, or glow-in-the-dark, products improve safety through such products as these:
- Exit signs,
- Low-location egress pathway marking systems, and
- General safety signage.

They reduce Green House Gas impact since no electricity is needed, do not use radioactive materials or require bulb replacement or monthly/annual testing or maintenance. Properly selected and installed, they last for years and work even if damaged.

### Department of Energy Says PL is the MOST Energy Efficient Option

According to the US Department of Energy, photoluminescent (PL) exit signs are the MOST energy efficient exit signs available: "In locations with proper charging sources, PL exit signs can have an unlimited service life."

### Operating Costs

- 500 LED exit signs at 5 watts of power each use 22,000 kwh of electricity annually costing \$3000 @ \$.14/kwh
- 500 PL exit signs use 0 watts of power costing the building owner nothing

### Compare the Three Most Popular and Best-Selling Exit Signs

Key Factor	LED	Radioluminescent P	otoluminescent
Energy Efficiency	Good	Better	Best
Power Consumption	5 watts	0	0
Service Life	10 years	10-20 years	Unlimited
Maintenance	Electrical	Expiration Date	Dust
Disposal Hazard	Yes	Yes	No
Periodic Testing	Yes	No	No
Toxic	Yes	Yes	No
Radioactive	No	Yes	No