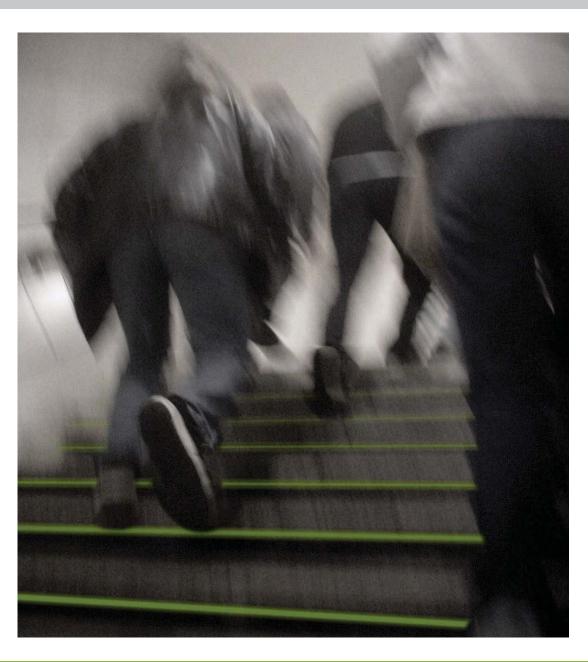
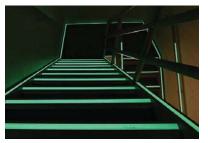
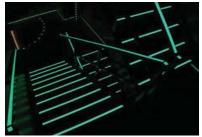


Photoluminescent Emergency Path-Finding Solutions for Outdoor and Indoor Use











IFC/IBC, NYC LL 26/141 and NFPA Compliant Guidance Systems

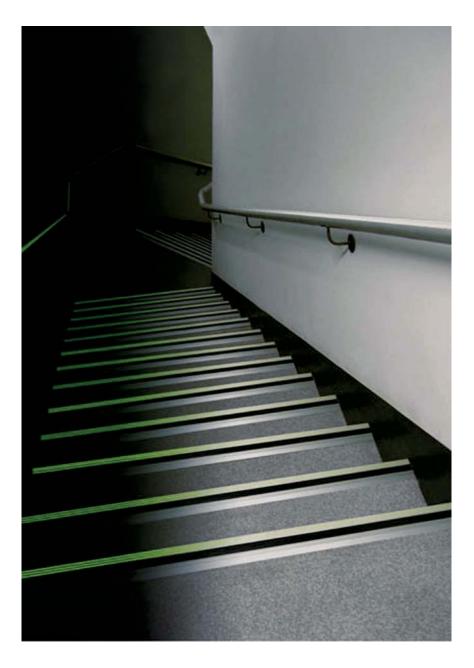


OUR MISSION

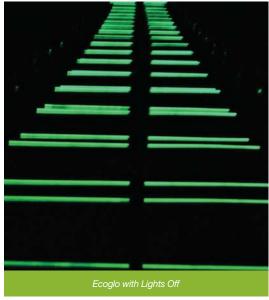
Our mission at Ecoglo Inc. is to manufacture and distribute durable photoluminescent products which create a safe and efficient pedestrian environment providing all people the ability to navigate egress safely and efficiently in all emergency type environments.

By fulfilling the needs of municipalities, facility owners, architects, engineers and general contractors to meet IBC/ IFC / NFPA photo luminescent requirements, our product improves the quality of the building infrastructure and ensures a safe passage from public and private facilities.

Ecoglo Inc. strives to provide building products that not only create a safer environment but also meet the demand for cost effective and long term solutions.









HOW THE ECOGLO SYSTEM WORKS

Ecoglo uses a patented process to produce a range of products that provide a complete solution to pathfinding requirements:

- step edge contrast
- slip-resistance
- visibility in all light conditions
- engineered for durability

ROUGH

The hard wearing silicon carbide non-slip material is just what you need to reduce slips and falls in all weather conditions. Your patrons will commend you, not complain to you. With their UV resistance and good looks, you can confidently install Ecoglo products inside and out.

TOUGH

Our patented process bakes in the photoluminescent powder and non-slip material and you get to savor the results. Thousands of people can walk on these products thousands of times with no wear and tear. And just to make sure, we've put them through extensive testing at internationally accredited laboratories relating to durability, weather resistance, UV resistance, stain resistance, abrasion and cleaning. And they passed with flying colors.

SEEN

Unlike electrical or battery lighting, Ecoglo products will never let you down. They will glow brightly in the dark for many hours giving your patrons confidence in exiting, even in an emergency. Some steps are just too hard to see, whether it be day or night. With Ecoglo, you can be sure your patrons will see the steps, not fall down them, whatever the light conditions. It's the combination of the photoluminescent strip and the non-slip material that creates such great step edge definition.

ONLINE RESOURCES

For more information, please visit:

- www.caddetails.com
- www.aecdaily.com

GREEN

Every small step you take to reduce electricity usage helps save our environment. Ecoglo products let you recycle natural sunlight or artificial light. No electricity is required. Ecoglo also goes green by using recycled aluminum. All products are non-toxic and non-radioactive. Designed to last the life of your facility, Ecoglo avoids maintenance costs. Ultimately, Ecoglo is recyclable which avoids the cost of landfill dumping.

HOW TO SPECIFY ECOGLO PRODUCTS

Ecoglo provides several design file formats for its products in order to make the job of specifying easier than ever. From step edge contrasts, stair nosings, pathway marking, egress signs, and more, you now have more choices when specifying Ecoglo products for your next project.

Whether you need 2D CAD drawings, 3-part specifications, brochures, videos, installation instructions, and now BIM (Revit) objects, Ecoglo has you covered.











THE ECOGLO TECHNICAL ADVANTAGE

The Ecoglo Photoluminescent (PL) range of products provide significant benefit during low light conditions and emergency blackout situations. With a proven track record in reducing slips and falls Ecoglo products provide improved health and safety with additional benefits in any smoke hazard situation.

Used for way-marking, step nosings and signage, the products are UV stable and highly durable, lasting for many years. The products are easily installed and have minimal maintenance costs.

COMPARATIVE ADVANTAGE

ECOGLO

LUMINANCE

Ecoglo products are manufactured using a patented process that is only used by Ecoglo. This tightly controlled application embeds the photoluminescent particles in a clear durable polymer.

The physical nature of the dry powder embedding process and the optical properties of the polymer ensure maximum efficiency of the photoluminescent particles to absorb useful wavelengths from a natural or artificial light source. This light then re-emits from the product towards a viewer's eye.

Ecoglo products use a custom produced photoluminescent pigment which has greater longevity of glow than all the other pigments (over 100) which Ecoglo has sampled since 2001.

Ecoglo uses dry powder for maximum luminance.

VISIBILITY

All Ecoglo products are engineered to provide greater visibility than relevant codes and standards currently require. Photoluminescent visibility is affected by more than just brightness ('Luminance'); the other factor is contrast against adjacent surfaces.

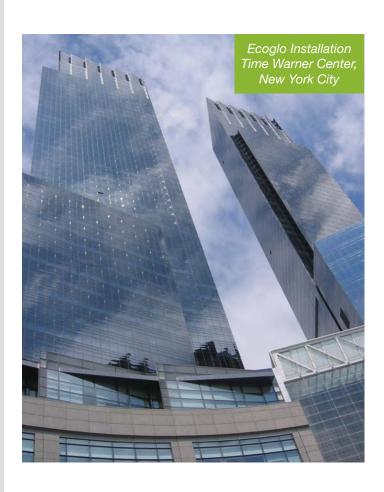
Contrast against adjacent surfaces is the critical parameter for visibility on a step edge. Ecoglo step-edge products incorporate a black anti-slip strip that provides excellent luminance contrast and color contrast to the PL strip, so the step edge is clearly defined in all lighting conditions: dark conditions, light conditions and twilight or dim conditions.

This means the Ecoglo products are visible from a greater distance and for a longer time after the lights go out. Ecoglo incorporates a black anti-slip strip for maximum visibility and edge contrast.

NON-ECOGLO

A widely used alternative manufacturing process uses liquid formulations that carry the photoluminescent particles.

Liquid formulations can suffer from settling out of the dense photoluminescent particles resulting in inconsistent luminance properties.





THE ECOGLO TECHNICAL ADVANTAGE

ECOGLO

DURABILITY OF PHOTOLUMINESCENCE

The Ecoglo range has been subjected to accelerated UV/weathering exposure, and proven to be highly resistant to the effects of UV/weathering.

Testing has been extended from the usual 1000 hour or 2000 hour test, out to 6000 hours, which can be interpreted to be similar to around 30 years of outdoor exposure.

At 6000 hours exposure, while there is noticeable loss of gloss of the top surface, the loss in PL brightness is less than can be detected by the human eye (measured reduction of 5-8%).

The unique ridges in the photoluminescent strips protect the glowing areas from most abrasive wear, and other incidental abuse.

Ecoglo uses its patented process for maximum durability. Using powder means the polymer we use is "long chain" which forms a strong UV resistant product when bonding.

INSTALLED DURABILITY

The manufacture of all Ecoglo products involves the integral bonding of the photoluminescent layer to a rigid aluminum substrate, so there is no chance of delamination or peeling. Rigid products spread any applied loads over a greater area of installation adhesive.

Ecoglo signage uniquely incorporates an integrally bonded antigraffiti protective top coat over the print, which also protects the print from abrasive wear. Because this top layer bonds into the substrate, there is no chance of delamination or peeling.

Ecoglo bonds onto rigid aluminum and applies a protective top coat for greater installed durability.

SLIP RESISTANCE

The unique ridges in the Ecoglo photoluminescent strips and the integrated anti-slip contrast strips provide all-weather slip resistance.

Ecoglo combines ridges and anti-slip contrast strips for slip resistance.

NON-ECOGLO

PVC based products have reduced durability, may turn brown during weathering exposure after a short time.

Flexible base products, such as PVC, are more prone to coming loose because the installation adhesive is more highly stressed.

For outdoor use, protective film which is not integrally bonded is only as good as the quality of the adhesive.

Smooth surface PL products do not provide slip resistance.

THE PRODUCT RANGE INCLUDES:

- Pathmarking guidance strips
- Handrail guidance strips
- Floor marker discs
- Hazard strips

- Signage (including tactile and Braille)
- Seat and aisle identification
- Step edge definition trim
- Step nosings



ECOGLO VS. TRADITIONAL EMERGENCY LIGHTING BACKUP SYSTEMS

COMPARATIVE ADVANTAGE

ECOGLO

EFFECTIVENESS

- The energy stored in Ecoglo photoluminescent pigments will continuously exhaust for over 100 hours until it needs to be recharged by re-exposing it to a light source
- PL way-finding systems an image of the pathway is created by outlining elements such as steps, landings, doors, etc. and critical information such as change in floor level or direction
- PL way-finding systems can play a vital life-saving role by showing the safe exit path, even in heavy smoke
- The standard when designing PL way-finding systems for smoky conditions is low-level continuous marking less than 1 meter above the floor level
- Even if in a dark room for a week, can recharge for a 2 hour evacuation in as little as 10 minutes

INSTALLATION

Installation can be completed by any competent handyman

MAINTENANCE

Occasional dusting

LIFE SPAN

35-year life span

ENVIRONMENTAL IMPACT

Ecoglo is not radioactive or toxic and uses no energy.
 In 35 years, the aluminum can be recycled

TRADITIONAL EMERGENCY LIGHTING BACKUP SYSTEMS

FFFFCTIVENESS

- Experience problems with partial or total failure
- Limited operating time
- Cast insufficient light
- High mounted emergency lights can easily be totally extinguished when there is smoke in the air
- Location of high light casts shadows
- Every model requires a battery or generator system that could provide electricity to the lights during a blackout
- If completely drained an emergency backup battery can take up to 7 days to recharge

INSTALLATION

Requires costly installation by electricians

MAINTENANCE

 Annual inspection and regular replacement of bulbs, batteries, or generators

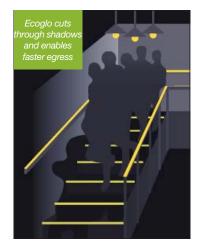
LIFE SPAN

• 2 to 7-year life span

ENVIRONMENTAL IMPACT

 Emergency lights are not recyclable and over 35 years, up to 7 systems will need to be installed









LUMINANCE REQUIREMENTS

A luminance level of 5 millicandelas per m² (mcd/m²) after 90 minutes of darkness is considered adequately visible for photoluminescent emergency lighting in the following international codes and standards. Ecoglo products EXCEED ALL these requirements.

NEW YORK CITY REFERENCE STANDARD RS6-1 PHOTOLUMINESCENT EXIT PATH MARKINGS

This reference standard was promulgated in May 2005, and is referenced into the New York City building code by New York City Local Law 26 of 2004.

This law requires high-rise office buildings in New York City to have photoluminescent way-finding markings in all exit pathways. This is supplementary to existing emergency lighting requirements, and applies to all buildings, old and new.

RS6-1 defines the size and location of the markings and signage, as well as their performance requirements. Markings are required on all step edges, and as perimeter markings of the exit pathways, stairwell landings, and exit doors. Exit signs are also required. New buildings require handrail markings. Performance requirements include a minimum luminance at ninety minutes of 5mcd/m² after charging at 2f/c for 120 mins in fluorescent light. Conforms to tests for flammability, toxicity, radioactivity, washability, and (optionally) UV stability.

ICC INTERNATIONAL BUILDING CODE AND INTERNATIONAL FIRE CODE

New code has been added to Chapter 10, Means of Egress, since the 2009 International Building Code and International Fire Code. The International Building Code is in use or adopted in 50 states, the District of Columbia, the US Virgin Islands, NYC, Guam, and the Northern Marianas Islands. The new code requires photoluminescent exit path markings in new non-residential buildings of 75ft height or more. Photoluminescent markings are required on all step edges and handrails, and as perimeter markings of the exit pathways, including stairwell landings. For performance requirements the code prescribes compliance with either

- UL1994, Luminous Egress Path Marking Systems, or
- ASTM E2072 Standard Specification for Photoluminescent Safety Markings (subject to modified charging source requirements)

NEW YORK CITY LOCAL LAW 141

As an adaptation of the ICC International Building Code and International Fire Code, the New York City Local Law 141 signaled the beginning of New York City's move towards an internationally recognized standard for photoluminescent pathmarking and compliance. Any exceptions or deviations by comparison are usually related to NYC-specific section numbering conventions.

UL 1994 LUMINOUS EGRESS PATH MARKING SYSTEMS

UL 1994 is a standard that provides requirements for floor proximity and other egress path marking and lighting systems that provide a visual delineation of the path of egress. These systems are also used to identify significant egress path features such as doors, stair banisters, obstacles or information placards.

Such systems are intended for installation and use as required by building and fire safety codes such as the Life Safety Code, NFPA 101; the Building Construction and Safety Code, NFPA 5000, and the International Building Code sponsored by the International Code Council.

UL1994 requires each system element to be recognizable from a distance of 25 feet, and also requires all elements that may be applied to a floor or step to meet UL410 Slip Resistance of Floor Surface Materials, and to be tested for the effects of cleaning.

ASTM E2072, STANDARD TEST METHOD FOR PHOTOPIC LUMINANCE OF PHOTOLUMINES-CENT (PHOSPHORESCENT) MARKINGS

This standard requires that photoluminescent markings be tested for photoluminescent brightness (luminance) following charging for 2 hours at 21.6 lux from a Fluorescent lamp having a color temperature between 4000K and 4500K. The required luminance properties are:

- After 10 minutes, minimum luminance 20mcd/m²
- After 60 minutes, minimum luminance 2.8mcd/m²



2009 IFC/IBC 1024 LUMINOUS EGRESS PATH MARKINGS COMPLIANCE GUIDE

Please contact Ecoglo customer service to obtain a copy of this and other code compliance guides

1024.1 GENERAL

Approved luminous egress path markings delineating the exit path shall be provided in buildings of Groups A, B, E, I, M and R-1 having occupied floors located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access in accordance with Sections 1024.1 through 1024.5.

Applicable Occupancy Groups:

A Assembly

B Business

E Educational

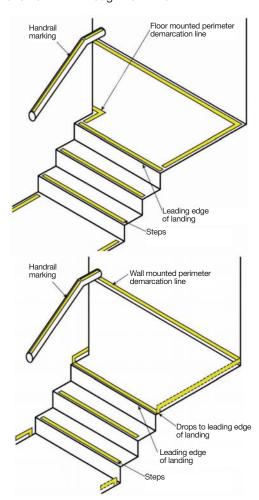
R1 Transient Residential

Institution

M Mercantile

1024,2 MARKINGS WITHIN EXIT CLOSURES

Egress path markings shall be provided in exit enclosures, including vertical exit enclosures and exit passageways, in accordance with Sections 1024.2.1 through 1024.2.6.



1024.2.1 STEPS

A solid and continuous stripe shall be applied to the horizontal leading edge of each step and shall extend for the full length of the step. Outlining stripes shall have a minimum horizontal width of 1 inch (25 mm) and a maximum width of 2 inches (51 mm). The leading edge of the stripe shall be placed at a maximum of ½ inch (12.7 mm) down the vertical face of the step.

Exception: The minimum width of 1 inch (25 mm) shall not apply to outlining stripes listed in accordance with UL 1994.

STEPS AND LANDINGS PRODUCTS

E Series: Photoluminescent contrast strips

F / RF Series: Flat aluminum stair nosings with photoluminescent contrast strips

S Series: Cast-in-place aluminum stair nosings with photoluminescent contrast strips

G3001 / G6001: Photoluminescent guidance strip

1024.2.2 LANDINGS

The leading edge of landings shall be marked with a stripe consistent with the dimensional requirements for steps.

Exception: The minimum width of 1 inch (25 mm) shall not apply to outlining stripes listed in accordance with UL 1994.

1024.2.3 HANDRAILS

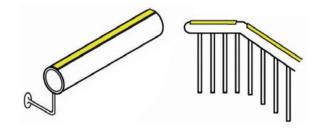
All handrails and handrail extensions shall be marked with a solid and continuous stripe having a minimum width of 1 inch (25 mm). The stripe shall be placed on the top surface of the handrail for the entire length of the handrail, including extensions and newel post caps. Where handrails or handrail extensions bend or turn corners, the stripe shall not have a gap of more than 4 inches (102 mm).

Exception: The minimum width of 1 inch (25 mm) shall not apply to outlining stripes listed in accordance with UL 1994.

HANDRAIL PRODUCTS

H Series: Handrail strip end caps

G3001 / G6001: Photoluminescent guidance strip





2009 IFC/IBC 1024 LUMINOUS EGRESS PATH MARKINGS COMPLIANCE GUIDE (CONTINUED)

1024.2.4 PERIMETER DEMARCATION LINES

Stair landings and other floor areas within exit enclosures, with the exception of the sides of steps, shall be provided with solid and continuous demarcation lines on the floor or on the walls or a combination of both. The stripes shall be 1 to 2 inches (25 mm to 51 mm) wide with interruptions not exceeding 4 inches (102 mm).

Exception: The minimum width of 1 inch (25 mm) shall not apply to outlining stripes listed in accordance with UL 1994.

PERIMETER DEMARCATION LINE PRODUCTS

T5-G3001 / T8-6001: Aluminum track and photoluminescent guidance strip

G3001 / G6001: Photoluminescent guidance strip

1024.2.4.1 FLOOR-MOUNTED DEMARCATION LINES

Perimeter demarcation lines shall be placed within 4 inches (102 mm) of the wall and shall extend to within 2 inches (51 mm) of the markings on the leading edge of landings. The demarcation lines shall continue across the floor in front of all doors.

Exception: Demarcation lines shall not extend in front of exit doors that lead out of an exit enclosure and through which occupants must travel to complete the exit path.

1024.2.4.2 WALL-MOUNTED DEMARCATION LINES

Perimeter demarcation lines shall be placed on the wall with the bottom edge of the stripe no more than 4 inches (102 mm) above the finished floor. At the top or bottom of the stairs, demarcation lines shall drop vertically to the floor within 2 inches (51 mm) of the step or landing edge. Demarcation lines on walls shall transition vertically to the floor and then extend across the floor where a line on the floor is the only practical method of outlining the path. Where the wall line is broken by a door, demarcation lines on walls shall continue across the face of the door or transition to the floor and extend across the floor in front of such door.

Exception: Demarcation lines shall not extend in front of exit doors that lead out of an exit enclosure and through which occupants must travel to complete the exit path.

1024.2.4.3 TRANSITION

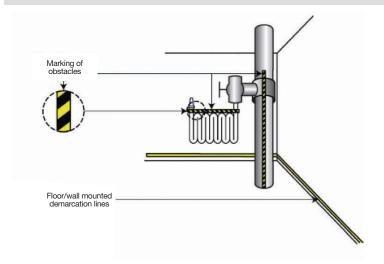
Where a wall-mounted demarcation line transitions to a floormounted demarcation line, or vice versa, the wall-mounted demarcation line shall drop vertically to the floor to meet a complementary extension of the floor-mounted demarcation line, thus forming a continuous marking.

1024.2.5 OBSTACLES

Obstacles at or below 6 feet 6 inches (1981 mm) in height and projecting more than 4 inches (102 mm) into the egress path shall be outlined with markings no less than 1 inch (25 mm) in width comprised of a pattern of alternating equal bands, of luminescent luminous material and black, with the alternating bands no more than 2 inches (51 mm) thick and angled at 45 degrees (0.79 rad). Obstacles shall include, but are not limited to, standpipes, hose cabinets, wall projections and restricted height areas. However, such markings shall not conceal any required information or indicators including, but not limited to, instructions to occupants for the use of standpipes.

OBSTACLE PRODUCTS

0B20025: Photoluminescent obstruction strip **0B20025-TP:** Photoluminescent obstruction tape

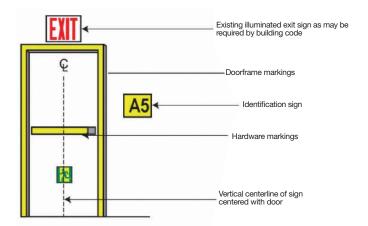




2009 IFC/IBC 1024 LUMINOUS EGRESS PATH MARKINGS COMPLIANCE GUIDE (CONTINUED)

1024,2.6 DOORS FROM EXIT ENCLOSURES

Doors through which occupants within an exit enclosure must pass in order to complete the exit path shall be provided with markings complying with Sections 1024.2.6.1 through 1024.2.6.3.



1024.2.6.1 EMERGENCY EXIT SYMBOL

The doors shall be identified by a low-location luminous emergency exit symbol complying with NFPA 170. The exit symbol shall be a minimum of 4 inches(102 mm) in height and shall be mounted on the door, centered horizontally, with the top of the symbol no higher than 18 inches (457 mm) above the finished floor.

EMERGENCY EXIT SYMBOL PRODUCTS

R Series: Running man photoluminescent directional and door exit signs

1024.2.6.2 DOOR HARDWARE MARKINGS

Door hardware shall be marked with no less than 16 square inches (406 mm²) of luminous material. This marking shall be located behind, immediately adjacent to or on the door handle and/or escutcheon. Where a panic bar is installed, such material shall be no less than 1 inch (25 mm) wide for the entire length of the actuating bar or touchpad.

DOOR HARDWARE MARKING PRODUCTS

DHM Series: Door hardware indicators

1024.2.6.3 DOOR FRAME MARKINGS

The top and sides of the door frame shall be marked with a solid and continuous 1 inch to 2 inch (25 mm to 51 mm) wide stripe. Where the door molding does not provide sufficient flat surface on which to locate the stripe, the stripe shall be permitted to be located on the wall surrounding the frame.

DOOR FRAME MARKING PRODUCTS

G6001: Photoluminescent guidance strip

1024.3 UNIFORMITY

Placement and dimensions of markings shall be consistent and uniform throughout the same exit enclosure.



DEFINITIONS

CHARGING

Photoluminescent material must receive some light in order to re-emit that light. In most situations 15-30 minutes of light (depending on the light source) will be sufficient to charge photoluminescent material so that it will remain visible for four hours.

Immediately after the charging light has stopped, the luminance (brightness) can be very high (over 2000 mcd/m² if the charging light is bright). Luminance rapidly decreases over the next 10-20 minutes, however visibility is still adequate at 5 mcd for emergency egress. It takes 11 hours for fully charged Ecoglo material to reduce to 5 mcd.

If very low light levels exist Ecoglo will be able to advise of the duration of lighting required to charge the strips. See *Typical Charging Tables on page 14.*

EYE ADAPTATION

There are two main types of detector cells in the retina; cone and rod cells. For approximately the first 5-15 minutes under dark conditions the cone system of detector cells, which operate in bright light, continues to operate. However after this time the rod system of detector cells takes over as it is far more sensitive to light. The detective threshold of cone cells is 1 mcd/m², whereas the detective threshold for rod cells is only 0.001 mcd/m².

Visibility is affected by an individual's ability to see in the dark. In particular older people see significantly less in the dark or in dim light than younger people. It takes approximately 20-30 minutes to fully adapt from bright sunlight to complete darkness. The speed of adaptation is faster than the rate at which the brightness of photoluminescent material reduces. This can lead to the photoluminescent material appearing to get brighter initially.

PHOTOLUMINESCENCE

The process of photoluminescence allows certain substances to emit a steady luminescent glow after they have absorbed various kinds of energy. Photoluminescence involves the absorption of energy normally light. This causes the electrons of the atoms of the absorbing material to become excited and jump from the inner orbits of the atoms to the outer orbits. The electrons then fall back to their original state causing photons of light to be emitted.

Ecoglo uses Strontium Aluminate crystals embedded in a clear, durable polymer. These crystals continue to glow for many hours until exhausting the energy they have absorbed, but they can be recharged repeatedly by re-exposure to light. The luminescent ability will not noticeably deteriorate over time.

Ecoglo photoluminescent material is made from strontium aluminate crystals. When exposed to light energy (either natural or artificial) the crystals become excited and undergo a conversion process which enable them to re-emit the energy received as light in the form of a yellow/green glow. The light source can then be cut off and the excitation will continue for many hours. Photoluminescent material can be simply recharged by re-exposing to light.

VISIBILITY

Visibility of photoluminescent material is measured by millicandelas/m². From international code requirements (NYC and ICC) it is widely accepted that at 5 mcd photoluminescent material is visible. It takes many hours for Ecoglo photoluminescent material to reduce to 5 mcd.

Note that if photoluminescent step edging is used as the only light source for indoor theatre aisles Ecoglo will engineer a solution to provide sufficient visibility as the 5 mcd emergency requirements are not relevant.



DURABILITY CLEANING AND MAINTENANCE

CLEANING

Regular cleaning to remove built up dirt and objects on the strips will ensure Ecoglo will continue performing to expectation. Note that the photoluminescence will continue performing even after UV exposure or exposure to moisture. The only reason for degradation in the performance of the photoluminescence is a lack of correct cleaning.

- 1. Vacuuming or brushing with a stiff bristle head (wet or dry) is often enough to keep the strips clean. The glowing strip can also be wiped clean with a wet or dry sponge or cloth. Observation will determine if cleaning is required, however a regular cleaning every 4 to 6 weeks or after particularly heavy use should ensure correct performance.
- 2. High-pressure water (but not steam cleaning) can also be used to clean the strips.
- 3. Do not use highly alkaline or acidic cleaning agents. The pH of the cleaning agents should be between pH 5 and pH 12. If cleaning agents are applied at more than pH 10, the strips should be rinsed with pH neutral (pH 6 to pH 8) solution afterwards.

MAINTENANCE

Ecoglo products should be checked annually to ensure the following:

- All products are still in place as at installation and there is no material damage to any of these products
- All products are clean from general dust build up and any other specific obscuring deposits such as gum or tar
- All products are clearly visible and have not been covered by carpet or other materials
- All products mark a clear path and have not been obstructed by physical hazards such as trolleys, machinery etc.
- All products can be used to provide clear escape path marking and there has been no change to the configuration of the building which renders them unusable
- All light required to charge Ecoglo products is operating as designed at installation



DURABILITY STANDARDS AND TESTS

BENEFITS AND TECHNICAL DETAILS

Ecoglo products meet or exceed the performance criteria specified in the following tests or standards:

- UL 1994 and ASTM E2072 (including IFC and NYC LL 141 variations)
- In United States, UL924

1. HIGH VISIBILITY IN DARK OR LIGHT CONDITIONS

BRIGHTNESS:

- ASTM E2073, Standard Test Method for Photopic Luminance of Photoluminescent (Phosphorescent) Markings.
- DIN 67510 Part 1, Phosphorescent Pigments and Products:
 Measurement and identification by the manufacturer.
- ISO 17398:2004 Clause 7.11, Safety Colors and Safety Signs - Classification, Performance and Durability of Safety Signs.

2. HIGH DURABILITY INDOORS AND OUTDOORS

UV STABILITY:

- ASTM G155-04 Cycle 1 2000hrs, Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-metallic Materials.
- Salt Spray Resistance: ASTM B117-97 500hrs, Standard Practice for Operating Salt Spray (Fog) Apparatus.
- Freeze-Thaw Resistance: ASTM C1026-87(1996), Standard Test Method for Measuring the Resistance of Ceramic Tile to Freeze-Thaw Cycling.

3. REDUCES SLIPS

SLIP RESISTANCE:

- UL410, Standard for Slip Resistance for Floor Surface Materials.
- AS/NZS 4586-1999, Slip Resistance Classification of New Pedestrian Surface Materials.
- AS/NZ 4586 2004, Slip resistance classification of new pedestrian surface materials - Appendix D (oil-wet ramp test).

4. HARD WEARING

ABRASION RESISTANCE:

- ASTM D1242-95a, Standard Test Methods for Resistance of Plastic Materials to Abrasion.
- ASTM B 244-97, Test Methods for Measurement of Anodic Coatings on Aluminum and other Nonconductive Coatings on Nonmagnetic Basis Metals with Eddy-Current Instruments.
- ASTM B137-95(2000), Test Method for Measurement of Coating Mass per Unit Area of Anodically Coated Aluminum.
- ASTM F510-93(2004), Standard Test Method for Resistance to Abrasion of Resilient Floor Coverings Using an Abrader with a Grit Feed Method.
- JIS H8682-1:1999, Test Methods for Abrasion Resistance of Anodic Oxide Coatings on Aluminium and Aluminium Alloys- Wheel Wear Test.

5. EASY CLEANING

WASHABILITY:

- ASTM D4828-94(2003), Standard Test Methods for Practical Washability of Organic Coatings.
- ASTM B136-84(1998), Standard Test Method for Measurement of Stain Resistance of Anodic Coatings on Aluminum.

6. NO RADIOACTIVITY OR TOXICITY

RADIOACTIVITY:

- ASTM D3648-2004, Standard Practices for the Measurement of Radioactivity.
- Toxicity: Bombardier SMP 800-C (2000), Toxic Gas Generation Test.

7. DOES NOT BURN

FLAMMABILITY:

- ASTM E162-02, Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source.
- ASTM D635-03, Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
- FAA AC 23.2 Paragraph 4.b, Horizontal Burn Test.



CHARGING TABLES

FLUORESCENT CHARGING OF ECOGLO PATHMARKING MATERIAL (20 LUX, 4000K) IN A POORLY LIT AREA

ACTIVATION TIME HOURS OF VISIBILITY*

5 Minutes	0.50 Hours
10 Minutes	1.00 Hour
20 Minutes	2.25 Hours
30 Minutes	3.00 Hours

FLUORESCENT CHARGING OF ECOGLO PATHMARKING MATERIAL (150 LUX, 4000K) IN A REASONABLY LIT AREA

ACTIVATION TIME HOURS OF VISIBILITY*

5 Minutes	2.50 Hours
10 Minutes	4.00 Hours
20 Minutes	6.00 Hours
30 Minutes	7.00 Hours

FLUORESCENT CHARGING OF ECOGLO PATHMARKING MATERIAL (300 LUX, 4000K) IN A WELL LIT AREA

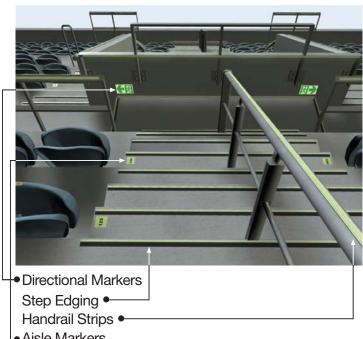
ACTIVATION TIME HOURS OF VISIBILITY*

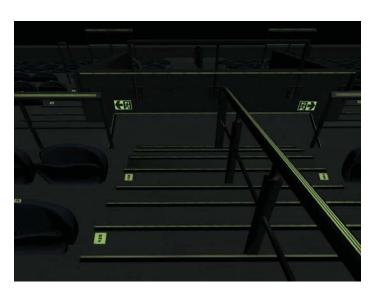
5 Minutes	4.00 Hours
10 Minutes	6.00 Hours
20 Minutes	7.00 Hours
30 Minutes	8.00 Hours

^{*}Each pathmarking element is seen clearly from 25 feet



SYSTEM DESIGN WHERE TO INSTALL ECOGLO IN ARENAS

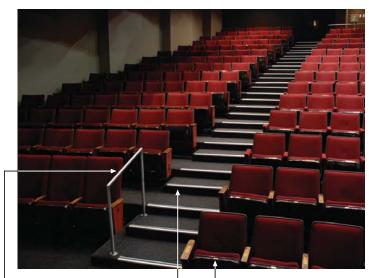




Aisle Markers

SYSTEM DESIGN

WHERE TO INSTALL ECOGLO IN THEATERS





Step Edging •

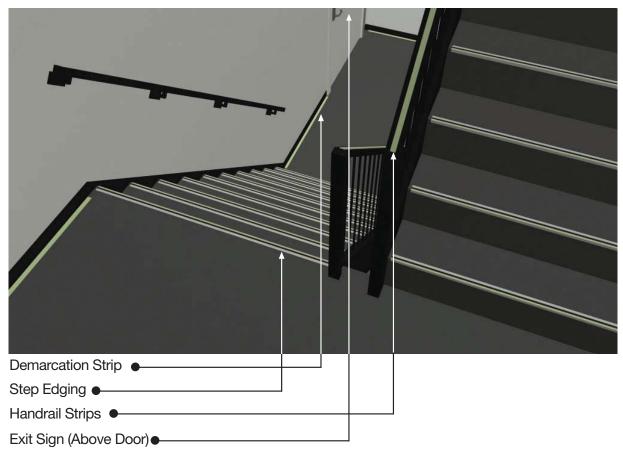
Handrail Strips

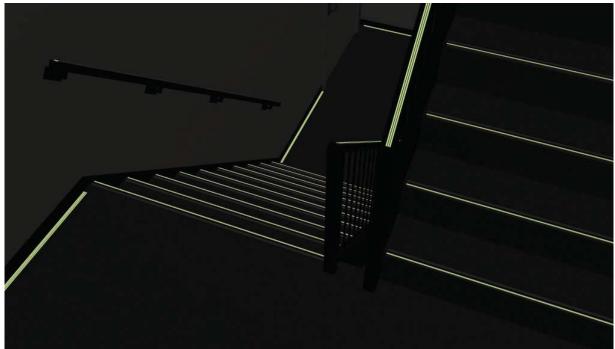
Seat Numbers •

Aisle Markers •



SYSTEM DESIGNWHERE TO INSTALL ECOGLO IN FIRE EXIT STAIRWAYS

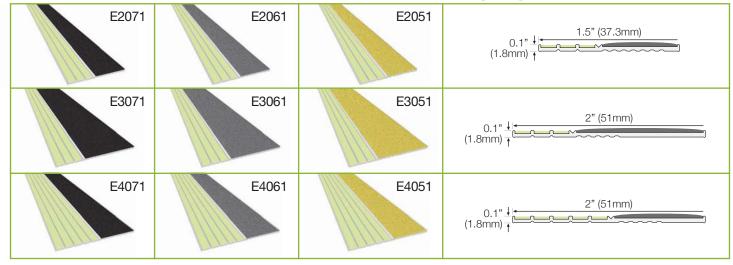




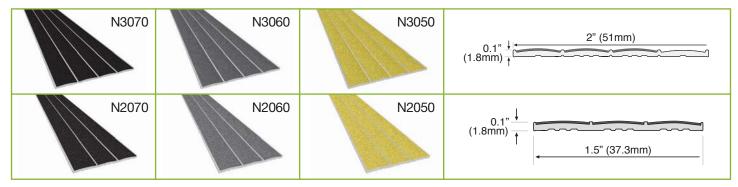


STEP EDGE CONTRAST STRIPS, NON-SLIP STRIPS, GUIDANCE STRIPS, AND HANDRAIL STRIPS

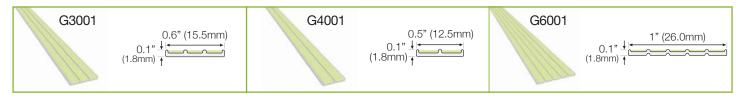
E SERIES CONTRAST STRIPS - Photoluminescent Leading Edge



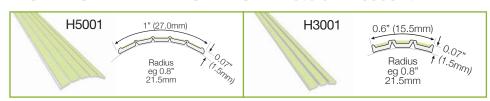
N SERIES NON-SLIP STRIPS - Not Photoluminescent



G SERIES GUIDANCE STRIPS - Photoluminescent



H SERIES HANDRAIL STRIPS - Photoluminescent



HANDRAIL END CAPS - Not Photoluminescent



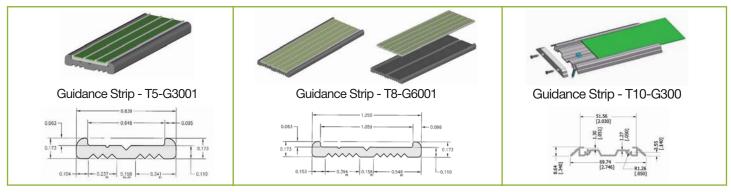
GEC FLAT END CAPS



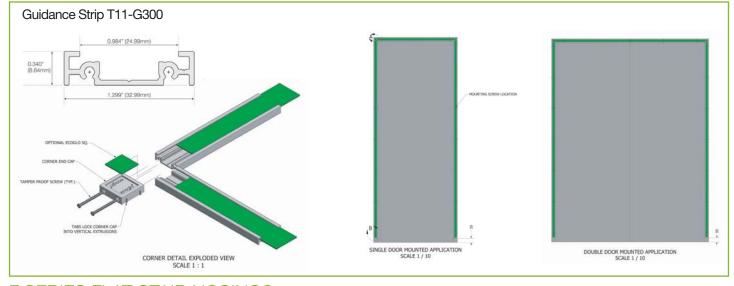


GUIDANCE STRIPS, DOOR FRAME RAILS, AND FLAT ALUMINUM STAIR NOSINGS

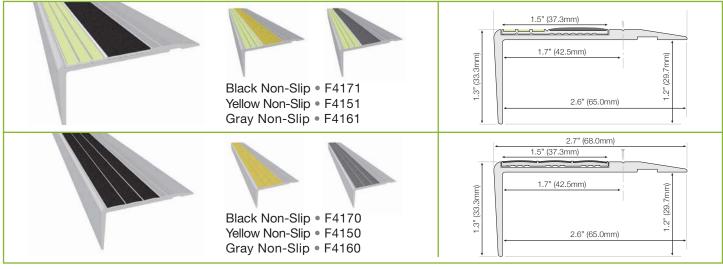
T SERIES GUIDANCE STRIPS



T SERIES DOOR FRAME RAILS



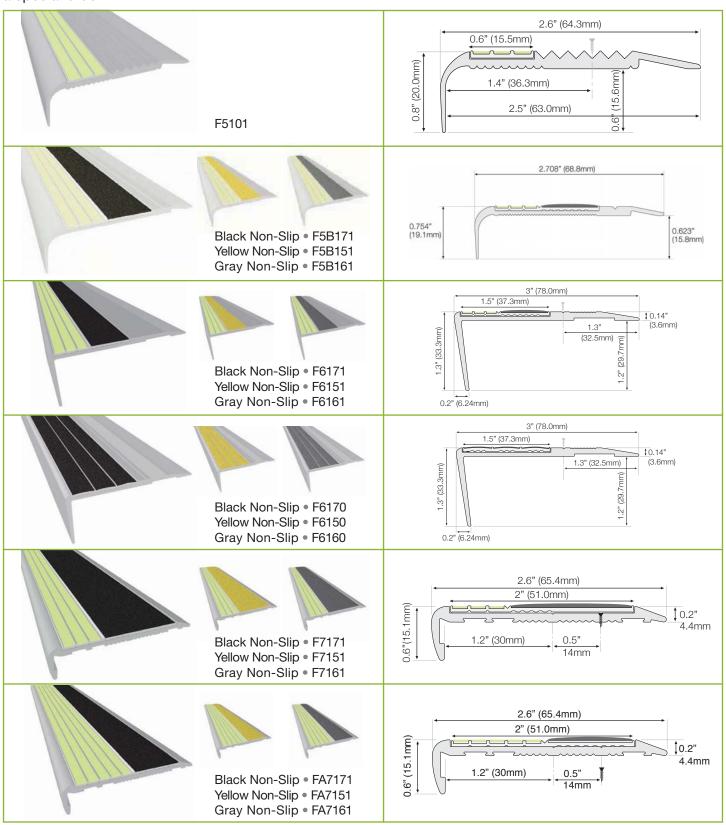
F SERIES FLAT STAIR NOSINGS





FLAT ALUMINUM STAIR NOSINGS

F SERIES FLAT STAIR NOSINGS

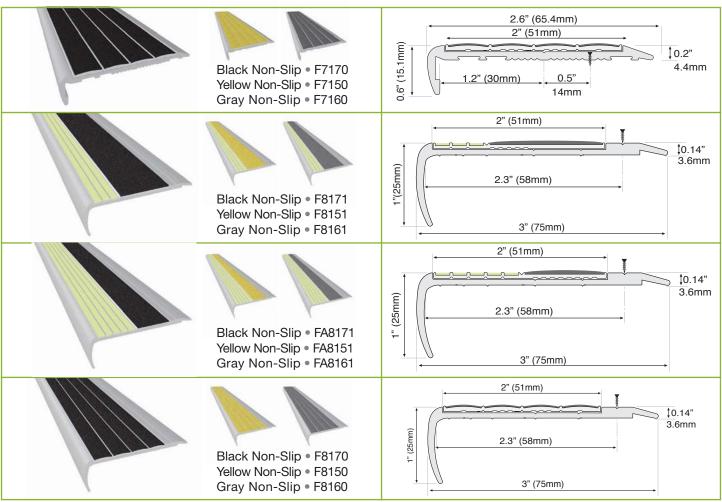




FLAT ALUMINUM STAIR NOSINGS

F SERIES FLAT STAIR NOSINGS

Clear anodized aluminum standard (Type II, Class I), black, bronze, and custom color anodizing available as a special order.



RF SERIES FLAT STAIR NOSINGS





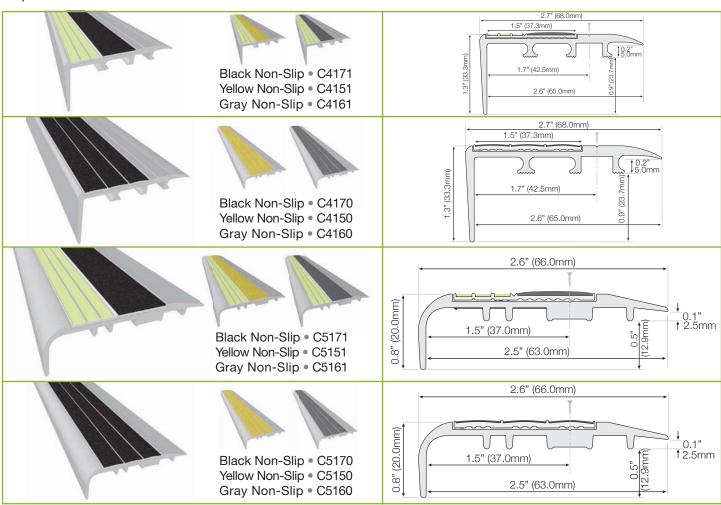
FLAT AND CARPET ALUMINUM STAIR NOSINGS

RF SERIES FLAT STAIR NOSINGS

Clear anodized aluminum standard (Type II, Class I), black, bronze, and custom color anodizing available as a special order.



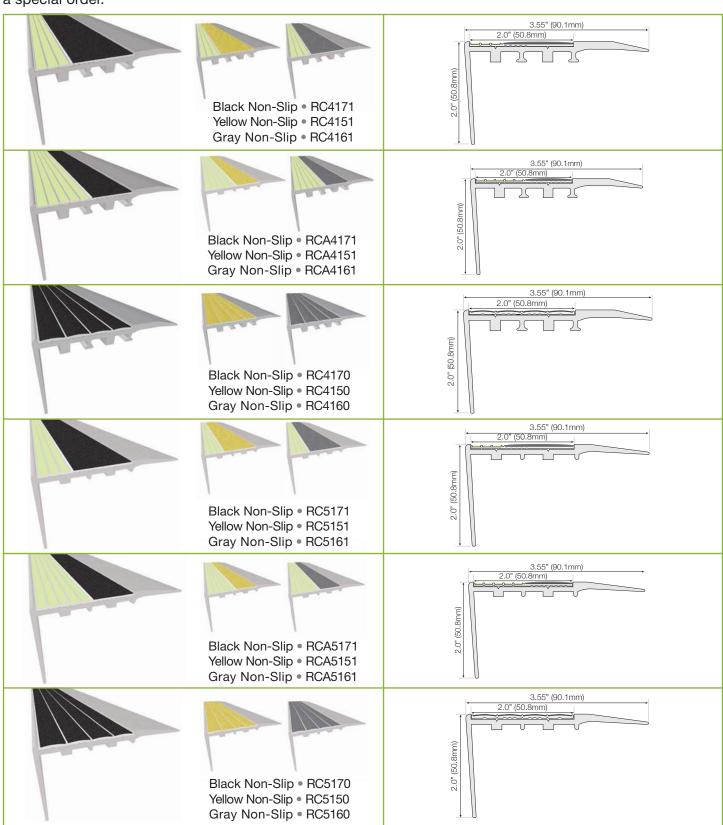
C SERIES CARPET STAIR NOSINGS





CARPET ALUMINUM STAIR NOSINGS

RC SERIES CARPET STAIR NOSINGS





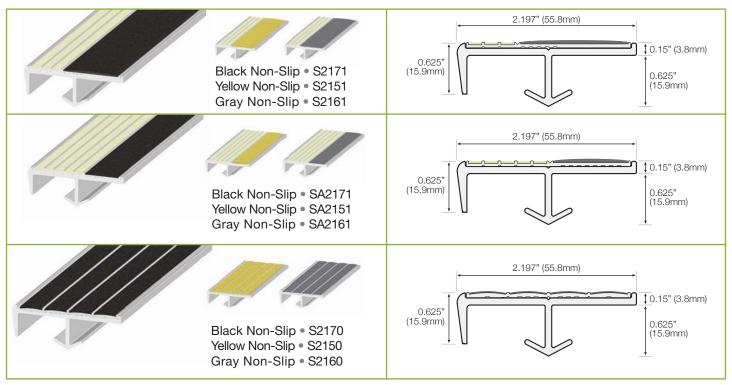
CAST-IN-PLACE ALUMINUM INSERTS

S1 SERIES CAST-IN-PLACE INSERTS



CAST-IN-PLACE ALUMINUM INSERTS

S2 SERIES CAST-IN-PLACE INSERTS





PATHMARKING SIGNS

PATHMARKING SIGNS



EXIT TO THE RIGHT

RA02012 8" x 4.6" (203mm x 116.84mm)



EXIT TO THE LEFT

RB02012 8" x 4.6" (203mm x 116.84mm)



EXIT DOWN AND TO THE RIGHT

RC02012 8" x 4.6" (203mm x 116.84mm)



EXIT DOWN AND TO THE LEFT

RD02012 8" x 4.6" (203mm x 116.84mm)



EXIT UP AND TO THE RIGHT

RE02012 8" x 4.6" (203mm x 116.84mm)



EXIT TO THE LEFT

RF02012 8" x 4.6" (203mm x 116.84mm)



EXIT STRAIGHT AHEAD AND UP

RG02012 8" x 4.6" (203mm x 116.84mm)



EXIT STRAIGHT AHEAD AND DOWN

RH02012 8" x 4.6" (203mm x 116.84mm)

DOOR MOUNTED PATHMARKING DOOR SIGNS



RUNNING MAN WITH EXIT

> R0E3312 13" x 4.6" (330mm x 116.84mm)

WALL MOUNTED PATHMARKING DOOR SIGNS AND INTERMEDIATE PATHMARKING SIGNS



EXIT TO THE RIGHT

RAE2122 8.4" x 8.89" (213.36mm x 226mm)



EXIT TO THE LEFT

RBE2122 8.4" x 8.89" (213.36mm x 226mm)



FINAL EXIT TO THE RIGHT

RAF2128 8.4" x 11.1" (213.36mm x 282mm)



FINAL EXIT TO THE LEFT

RBF2128 8.4" x 11.1" (213.36mm x 282mm)



EXIT TO THE "CUSTOM WORDING"

RBY4219 16.4" x 7.4" (416.56mm x 188mm)

DOOR AND OBSTRUCTION MARKING PRODUCTS

NOT AN EXIT

NOT AN EXIT

(TEXT ONLY)



DOOR HANDLE INDICATOR

00N1854 DHM1010 7" x 2.1" 4" x 4" (177.8mm x (100mm x 53.34mm) 100mm)



OBSTRUCTION STRIPS

G250R-OB (Flat) G250R-OB-C (Curved) 1" x 39" (25mm x 991mm)



ALUMINUM
OBSTRUCTION STRIP

OB20025 1" x Cut to Length



OBSTRUCTION TAPE

OB20025-TP 1" x 60' Roll



FLOOR IDENTIFICATION SIGNS

Luminous floor identification signs are an important part of egress safety due to the critical information that they provide. Ecoglo Floor Identification Signs meet International Code Council (ICC) and National Fire Protection Agency (NFPA) regulations.

- IBC and IFC 2009 Section 1022.8 Floor Identification Signs
- IBC and IFC 2012 Section 1022.9 Floor Identification Signs
- NFPA 2009/2012 Section 7.2.2.5.4 Stairway Identification
- NYC Local Law 141 Section BC 1022.8 Stairway Identification and Floor Level Signs

ECOGLO FLOOR IDENTIFICATION SIGN FEATURES

- Minimum size 18" by 12"
- Tactile raised letters (ICC A117.1 compliant)
- Braille beads
- 10-year warranty
- Simple "peel and stick" installation with reliable 3M double-sided tape pre-applied to signs
- Safe to use: non-toxic and non-radioactive

Custom made for each location

Listed UL 1994; or ASTM E 2072, except that the charging source shall be 1 footcandle (11 lux) of fluorescent illumination for 60 minutes, and the minimum luminance shall be 30 millicandelas per square meter at 10 minutes and 5 millicandelas per square meter after 90 minutes



Identification of the stair or ramp

Floor level

Braille floor identifier

Terminus of the top and bottom of the exit enclosure

Availability of roof access from the enclosure (for the fire department)

Story of and direction to the exit discharge

EXAMPLE ORDER TABLE

QUANTITY

STAIRWELL ID

Stair A

FLOOR NUMBER

5

FLOORS INCLUDED

Roof to Floor 3

ROOF ACCESS

Yes

STORY AND DIRECTION TO EXIT DISCHARGE

Down to Floor 3

IBC Section 1022

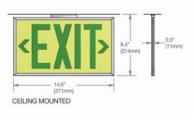
A sign shall be provided at each floor landing in exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the exit enclosure and the identification of the stair or ramp. The signage shall also state the story of, and the direction to, the exit discharge and the availability of roof access from the enclosure for the fire department. The sign shall be located 5 feet above the floor landing in a position that is readily visible when the doors are in the open and closed position. Floor level identification signs in tactile characters complying with ICC A117.1 shall be located at each floor level landing adjacent to the door leading from the enclosure into the corridor to identify the floor level.



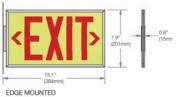
PHOTOLUMINESCENT EXIT SIGN SYSTEM

UL924 EXIT SIGN SYSTEM

- LEED point qualified for energy conservation and sustainability
- Visible for 50 feet
- No electricity or batteries required
- Indoor installation
- Lifetime warranty
- Requires exposure to at least 54 lux (5 foot-candles) of fluorescent, metal halide, mercury vapor light illumination for a minimum of 60 minutes to become fully operational
- Directional arrow labels provided with each sign for on-site application
- Product uses recycled aluminum and is recyclable
- Non-toxic and non-radioactive
- ETL listed for emergency lighting and power equipment according to UL STD 924 and the Canadian Standard for Photoluminescent and Self-Luminous Exit Signs ULC / ORD-C924-02









SLOPED CEILING ADAPTOR

The hinged mounting adaptor accommodates slopes from 0 to approximately 49 degrees and is installed similar to the standard ceiling configuration.

RETROFIT CANOPY ADAPTER

Ecoglo's accessory cover plate gives you all the benefits of low cost installation and maintenance without the frustrations that other systems have. No special tools are required.

Simply attach a universal mounting bracket to an existing octagon box, fasten the Ecoglo canopy to the mounting bracket as shown in the diagram. Slide the sign into the canopy instead of screwing it directly into a ceiling or wall.

When replacing or removing an electrically-powered exit, the power must be terminated at the source, not in the wall cavity before installing the Ecoglo Exit Sign. Check with the local electrical code requirements first before installation.



Retrofit Installation

PART NUMBERS, DIMENSIONS, AND DESCRIPTIONS

EX353183-50G

13.9" x 7.2" (353mm x 183mm) Single Photoluminescent Exit Sign - Green Letters

EX353183-50R

13.9" x 7.2" (353mm x 183mm) Single Photoluminescent Exit Sign - Red Letters

EX371201-50G-CA

14.6" x 7.9" (371mm x 201mm) One-Sided Exit Sign EX353183-50G with Clear Anodized Aluminum Frame and Universal Mounting Hardware - Green Letters

EX371201-50R-CA

14.6" x 7.9" (371mm x 201mm)
One-Sided Exit Sign EX353183-50R
with Clear Anodized Aluminum
Frame and Universal Mounting
Hardware - Red Letters

2X-EX371201-50G-CA

14.6" x 7.9" (371mm x 201mm)
Two-Sided Exit Sign EX353183-50G
with Clear Anodized Aluminum
Frame and Universal Mounting
Hardware - Green Letters

2X-EX371201-50R-CA

14.6" x 7.9" (371mm x 201mm) Two-Sided Exit Sign EX353183-50R with Clear Anodized Aluminum Frame and Universal Mounting Hardware - Red Letters

EX405229-75G

18.9" x 9.8" (481mm x 249mm) Single Photoluminescent Exit Sign -Green Letters

EX405229-75R

18.9" x 9.8" (481mm x 249mm) Single Photoluminescent Exit Sign -Red Letters

EX424246-75G-CA

19.6" x 10.5" (499mm x 267mm) One-Sided Exit Sign EX405229-75G with Clear Anodized Aluminum Frame and Universal Mounting Hardware - Green Letters

EX424246-75R-CA

19.6" x 10.5" (499mm x 267mm) One-Sided Exit Sign EX405229-75R with Clear Anodized Aluminum Frame and Universal Mounting Hardware - Red Letters

2X-EX424246-75G-CA

19.6" x 10.5" (499mm x 267mm) Two-Sided Exit Sign EX405229-75G with Clear Anodized Aluminum Frame and Universal Mounting Hardware - Green Letters

2X-EX424246-75R-CA

19.6" x 10.5" (499mm x 267mm) Two-Sided Exit Sign EX405229-75R with Clear Anodized Aluminum Frame and Universal Mounting Hardware - Red Letters



EGRESS SIGNAGE, AISLE MARKERS, AND SEAT NUMBERS

EGRESS SIGNAGE



EXIT SIGN

EX2010

7.9" x 3.9"

(200mm x 100mm)



EE2010 7.9" x 3.9" (200mm x 100mm)



ARROW

AR1010H or AR1010D 3.9" x 3.9" (100mm x 100mm)



RUNNING MAN

RM1010 3.9" x 3.9" (100mm x 100mm)



FIRE ALARM

FA1010 3.9" x 3.9" (100mm x 100mm)



FIRE EXTINGUISHER

FE1010

3.9" x 3.9"

(100mm x 100mm)

FIRE HOSE

FH1010 3.9" x 3.9"

(100mm x 100mm)

AISLE MARKERS



LARGE RECTANGLE

RE65/45 2.6" x 1.8" (65mm x 45mm)



SMALL RECTANGLE

RE45/32.5 1.8" x 1.3" (45mm x 32.5mm)



SQUARE

SQ88/88 3.6" x 3.6" (88mm x 88mm)



LONG RECTANGLE*

RE38/161 1.6" x 6"

(38mm x 161mm)



60MM ROUND AISLE MARKER

DS60

2.4"

(60mm Round)



68MM ROUND AISLE MARKER

DS68 2.7" (68mm Round)

SEAT NUMBERS



SQUARE WITH ROUNDED CORNERS

SQ31.9r 1.3" x 1.3" (31.9mm x 31.9mm)



40MM ROUND SEAT NUMBER

DS40 1.6" (40mm Round)



ELIPSE

EL 18.7/56.7 0.7" x 2.2" (18.7mm x 56.7mm)



OBROUND LARGE

OR16/44.6 0.6" x 1.8" (15.2mm x 44.6mm)

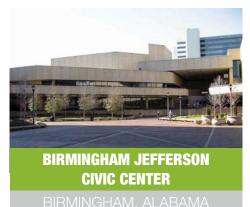


OBROUND SMALL

OR14.7/27.2 0.6" x 1.1" (15.2mm x 27.2mm)



INSTALLED PROJECTS





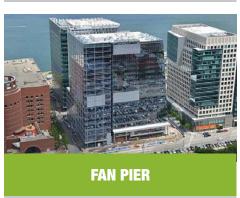






















INSTALLED PROJECTS

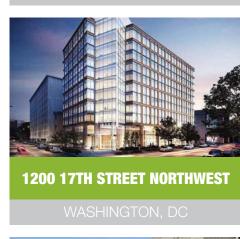


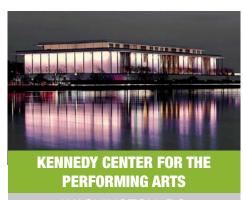






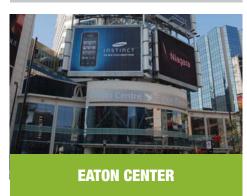






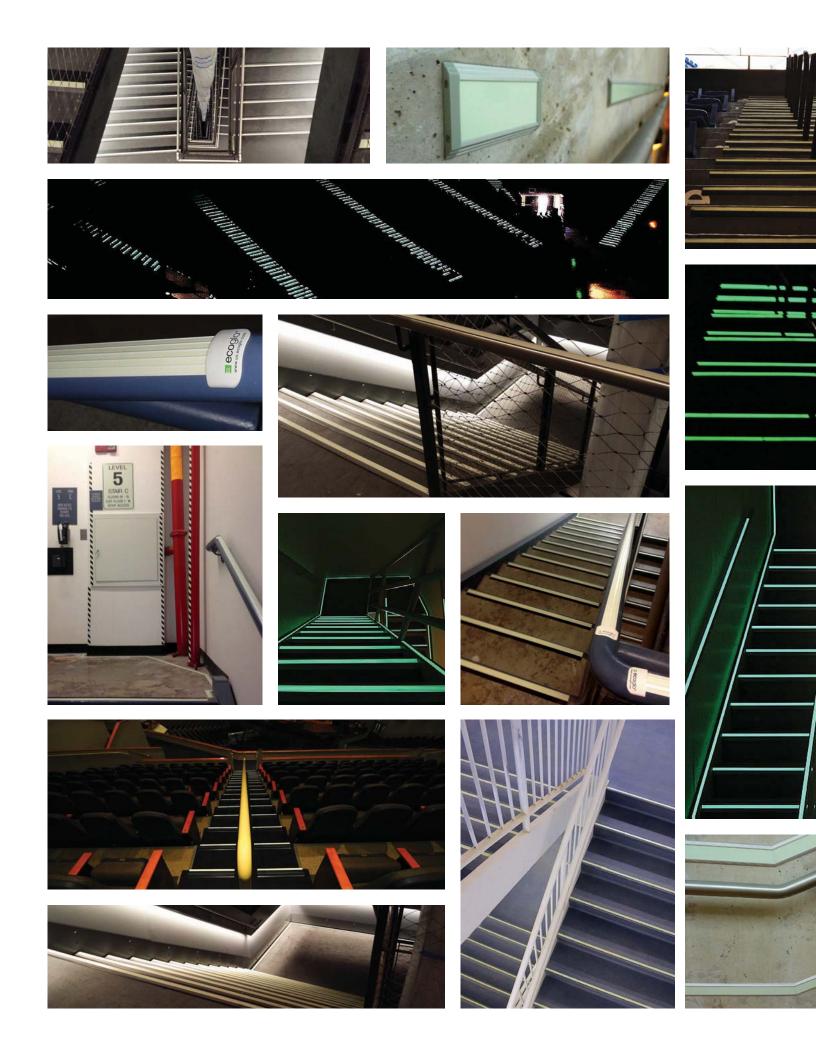






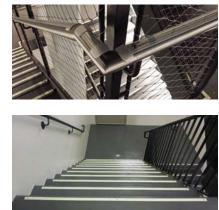






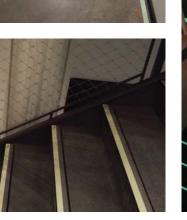


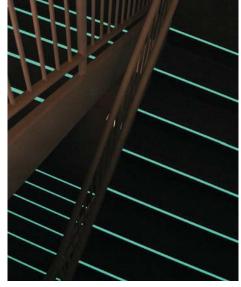




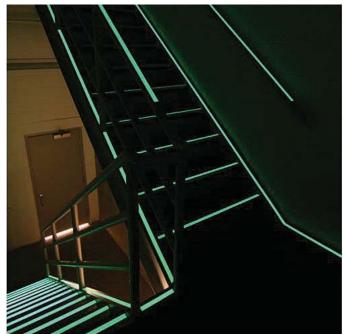
















NO ECOGLO - LIGHTS ON





ECOGLO STRENGTHS

DELIVER REAL BENEFITS

High quality anti-slip material	Reduces slips and falls
High quality photoluminescence	Visible for hours in dark conditions
Baked in process	Hardwearing, no repainting
Step edge contrast	Reduces falls in light or dark conditions
Recycles natural or artificial light	Decrease electricity usage, increased sustainability
UV resistance	Can be installed inside or out
Internationally accredited testing	Specify with confidence
Green attributes	Non-toxic, non-radioactive, made with recycled aluminum and long life

- NYC LL 141, September 2014
- 2009 IFC Means of Egress, January 2009
- 2009 IBC Means of Egress, January 2009
- NFPA 101 and 5000, January 2009
- California, Chapter 10, January 2008
- Connecticut, Section 1026, January 2008
- New York City Code, July 2008

- GSA for All Buildings, January 2009
- British & ISO Standards for PL Brightness
- Tokyo Fire Department
- Fire & Disaster Management Agency (Japan)
- Building Code of Australia
- New Zealand Building Code
- ULC 572

ECOGLO INC.

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