

***SLI LIGHTING***

# life safety catalog



***SLI LIGHTING***

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# SLI LIGHTING

A Havells Sylvania Company

## We are

### Havells Sylvania

One of the world's largest leading global designers and providers of lighting systems, with presence over 50 countries. We offer high-quality and high-volume manufacturing capability at strategic locations, with the support of one of the most recognized brands in the industry. Our headquarters are located in Delhi, India.

## Mission

### Focus on excellence

Combining innovative products with inspired solutions, Havells Sylvania helps lighting professionals turn creative design into reality. Building on our global expertise in lamps and fixtures, we strive to create positive, energy-efficient work and leisure environments for people all over the world.

### Who is SLI Lighting?

SLI Lighting is the North American division of Havells Sylvania. Our goal is to provide to our customers world-class products, service and support in the North American lighting industry. Havells uses the brand Sylvania in the rest of the world. The SLI territory includes USA, Mexico, Canada and Puerto Rico.

### Operations

Havells SLI / Sylvania maintain sale operations in every region around the world. This is a leading brand in Europe, Asia, North, Central and South America. In addition, we manufacture these products in 18 plants, located at 13 countries (Europe, Northern Africa, Asia and Central and South America).

Furthermore, Havells Sylvania operates by outsource manufacturing in China. We offer quality guaranteed through direct supervision. To achieve it, we established the Asian Sourcing Office (ASO).

### We have

- Design and engineering capabilities
- Strong creative R & D for lighting technology (+\$20M R&D budget)
- One-stop shop offering comprehensive range of lamps and a broad selection of fixtures and ballasts
- Supply chain management expertise with a rationalized manufacturing base
- Environmental responsibility awareness
- Leading global market presence
- Revenues: +US\$1bn





## **Brand Portfolio**

The Havells Group distributes their products under the name of five recognized brands, each of them specialized in particular target segments and specific products. Trust in quality, volume and design where you see these brands:

### ***SLI LIGHTING***

The Group sells lamps, ballasts and fixtures under the SLI Lighting brand in North America where it does not own the rights to the Sylvania brand.

### ***SYLVANIA***

Sylvania is one of the most globally recognized names in the industry for over a century.

### ***Lumiance***

Lumiance offers an extensive variety of contemporary designed fixtures intended for lighting medium to large projects (shops, offices, hotels and restaurants).

### ***Concord***

Concord is one of Europe's most respected commercial and architectural lighting brands, renowned for its strong design ethos, high technical performance and aesthetic form.

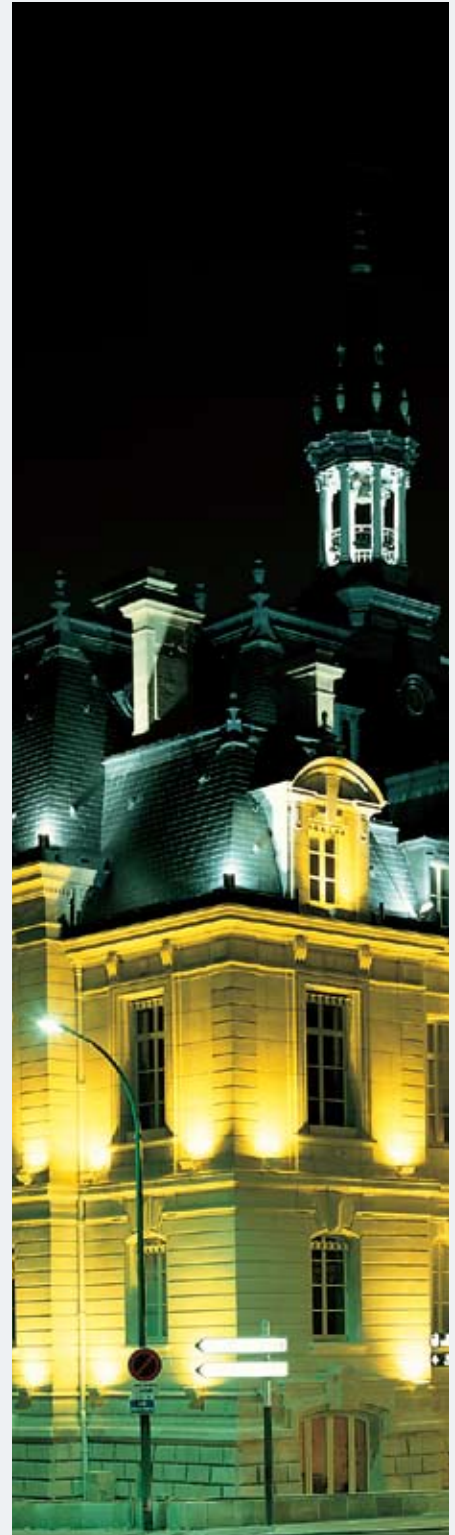
# HAVELLS

Havells offers a wide range of products from industrial and domestic circuit protection switchgear; cables and wires; energy meters; motors; fans; power capacitors; CFL lamps; fixtures for domestic, commercial and industrial applications; modular switches and bathfittings covering the entire gamut of household, commercial and industrial electrical needs.

Global player, local partner...  
We are where you are.

At SLI Lighting we are ready to exceed your expectations. Contact us:

Telephone: 1-800-922-6693  
[customerservice@havells-sli.com](mailto:customerservice@havells-sli.com)  
[www.havells-sli.com](http://www.havells-sli.com)



# Emergency Exit Lighting



# EXLED Series

## Intended use

- Ideal for all applications where a slim and low profile exit fixture is needed. The unit provides LED illumination for excellent energy savings.

## Features

- Completely self-contained/ Fully automatic operation
- Compact, low-profile design in neutral finish
- Push-to-test switch
- Automatic, low-voltage disconnect
- 120 or 277 VAC operation with a NI-CAD battery provided for emergency power
- Injection-molded, V-O flame retardant, high impact thermoplastic housing
- Charge rate/power on LED indicator light
- Energy consumption of 3.2 watts for red letters and 3.8 watts for green letters
- LED lamp life of 25 years +
- Listed for damp location
- Universal mounting canopy for side or top installation
- Additional face provided for double sided requirements
- 5 year warranty



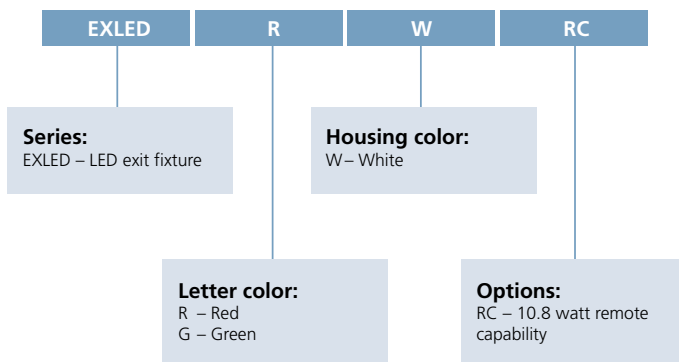
EXLED-RW-RC



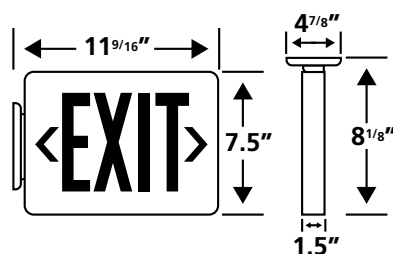
EXLED-GW



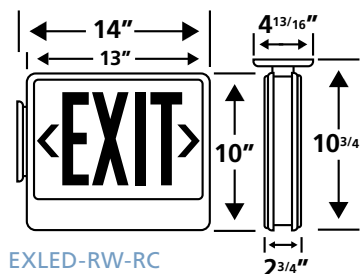
## Ordering information



## Dimensions of units



EXLED-GW



EXLED-RW-RC

Refer to [www.havells-sli.com](http://www.havells-sli.com) for Lamp Characteristic Curves under Life Safety Lighting, in the Product section.

# EM1 Series

## Intended use

- Ideal for applications for low maintenance with easy backplate installation. Provides a minimum 90 minutes of illumination with provided lamp when loss of power occurs.



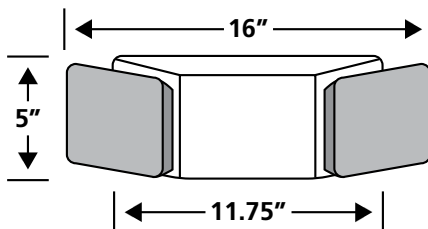
## Features

- Completely self-contained
- Fully automatic operation
- Compact, low-profile design in neutral finish
- Universal mounting plate with Quick Connect for rapid, laborsaving installation
- Push-to-test switch
- 6-volt, sealed lead acid, rechargeable, maintenance-free battery
- Environmentally-coated, solid state charger
- Automatic, low-voltage disconnect
- Universal transformer for 120 to 277 VAC
- Listed for damp location
- Injection-molded, V-O flame retardant, high-impact thermoplastic housing
- Charge rate/power on LED indicator light.

## Dimensions

Catalog Model #	Emergency Operation	Voltage Input	Lamp Wattage	Battery Voltage	Battery Type	Damp Location	Warranty
EM1	90 min.	120V/277V	2x5.4W	6V-939 Type	Sealed lead acid	Yes	5 years

## Dimensions of units



Refer to [www.havells-sli.com](http://www.havells-sli.com) for Lamp Characteristic Curves under Life Safety Lighting, in the Product section.

# EM2 Series

## Intended use

- Ideal application's for a low profile appearance, easy installation and low maintenance. Provides a minimum of 90 minutes of illumination with provided lamp when loss of power occurs.

## Features

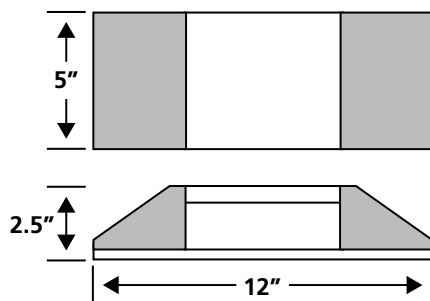
- Completely self-contained
- Fully automatic operation
- Compact, low-profile design in neutral finish
- Push-to-test switch
- 6-volt, sealed lead acid, rechargeable, maintenance-free battery
- Environmentally-coated, solid state charger
- Automatic, low-voltage disconnect
- Universal transformer for 120 to 277 VAC
- Standard with two 5.4 watt, glare-free lighting lenses
- Injection-molded, V-O flame retardant, high-impact thermoplastic housing
- Charge rate/power on LED indicator light
- ETL damp location approved



## Dimensions

Catalog Model #	Emergency Operation	Voltage Input	Lamp Wattage	Battery Voltage	Battery Type	Damp Location	Warranty
EM2	90 min.	120V/277V	2x5.4W	6V-939 Type	Sealed lead acid	Yes	5 years

## Dimensions of units



Refer to [www.havells-sli.com](http://www.havells-sli.com) for Lamp Characteristic Curves under Life Safety Lighting, in the Product section.

# EM3 Series

## Intended use

- Ideal for contemporary design applications where precise illumination is needed. Provides a minimum of 90 minutes of illumination with MR-16 lamps when loss of power occurs.



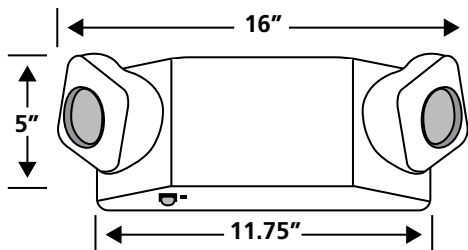
## Features

- Utilizes MR-16 halogen lamps
- UL listed for damp location
- Completely self-contained
- Fully automatic operation
- Compact, low-profile design in neutral finish
- Universal mounting plate with easy Quick Connect for rapid, labor-saving installation
- Push-to-test switch
- 6-volt, sealed lead acid, maintenance-free battery
- Environmentally-coated, solid state charger
- Automatic, low-voltage disconnect
- Universal transformer for 120 to 277 VAC
- Injection-molded, V-O flame retardant, high-impact thermoplastic housing
- Charge rate/power on LED indicator light.

## Dimensions

Catalog Model #	Emergency Operation	Voltage Input	Lamp Wattage	Battery Voltage	Battery Type	Remote Capable	Warranty
R-16	90 min.	120V/277V	2x5W MR16	Sealed lead acid	6V	No	5 years

## Dimensions of units



Refer to [www.havells-sli.com](http://www.havells-sli.com) for Lamp Characteristic Curves under Life Safety Lighting, in the Product section.

# Remote Lamp Heads

## Intended use

- Remote heads are available in both 6-volt or 12-volt configurations and several wattage options. Outdoor weatherproof remote heads (WP) are also available. Order the correct voltage and wattage combination to fit your applications.

Catalog Model #	No. of heads	Voltage	Wattage	Color
RH1-6V/5.4W	1	6 VOLT	5.4 W	Beige
RH1-12V/7.2W	1	12 VOLT	7.2 W	Beige
RHR1-6V/5.4W	1	6 VOLT	5.4 W	Beige
RHR1-12V/7.2W	1	12 VOLT	7.2 W	Beige
RH1WP-6V/7.2W	1	6 VOLT	7.2 W	Light Gray

RHR-1



RH-1



RH1-WP



Refer to [www.havells-sli.com](http://www.havells-sli.com) for Lamp Characteristic Curves under Life Safety Lighting, in the Product section.

# EXEM Series

## Intended use

- Ideal For applications where a slimline low profile combination exit fixture and emergency lighting fixture unit are needed. The exit unit is LED lighted providing excellent energy savings.

## Features

- Universal mounting canopy for top installation
- Energy consumption of less than 4 watts for red letters and less than 5 watts for green letters
- LED lamp life of 25 years
- Push-to-test switch
- 6-volt, sealed lead acid, maintenance-free battery
- Automatic, low-voltage disconnect
- Universal transformer for 120 or 277 VAC operation
- Two 5.4W fully adjustable, glare-free lighting heads
- Injection-molded, V-O flame retardant, high impact thermoplastic housing
- Suitable for damp location
- 5 year warranty



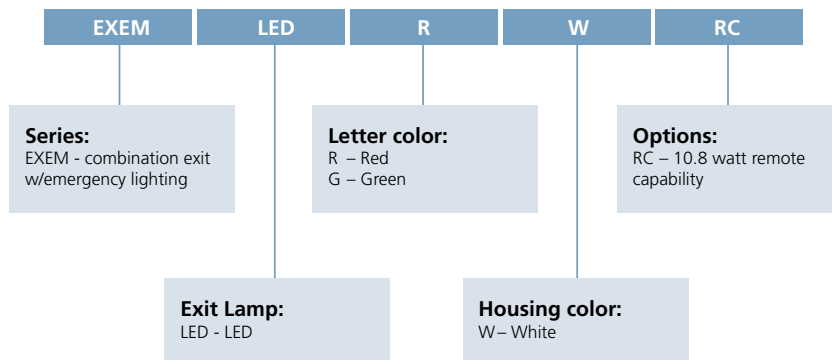
EXEM-LED-GW



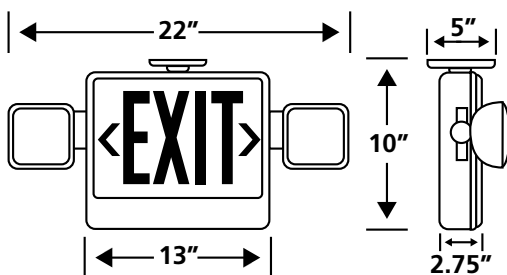
EXEM-LED-RC



## Ordering information



## Dimensions of units



Refer to [www.havells-sli.com](http://www.havells-sli.com) for Lamp Characteristic Curves under Life Safety Lighting, in the Product section.

# EMHD Series

## Intended use

- Ideal for general and industrial environments requiring emergency lighting. Provides a minimum of 90 minutes of illumination when the loss of power occurs.

## Features

- Compact, low-profile design in neutral finish
- Self contained/ fully automatic
- Push-to-test switch
- 6-volt premium grade, sealed lead acid, rechargeable, maintenance-free batteries with 10-year expected life
- Injection molded high impact thermoplastic housing
- Side and top conduit K/Os
- Automatic, low-voltage disconnect
- Universal transformer for 120 or 277 VAC operation
- Standard with two fully adjustable, glare-free lighting heads
- Charge rate/power on LED indicator light
- 5 year warranty

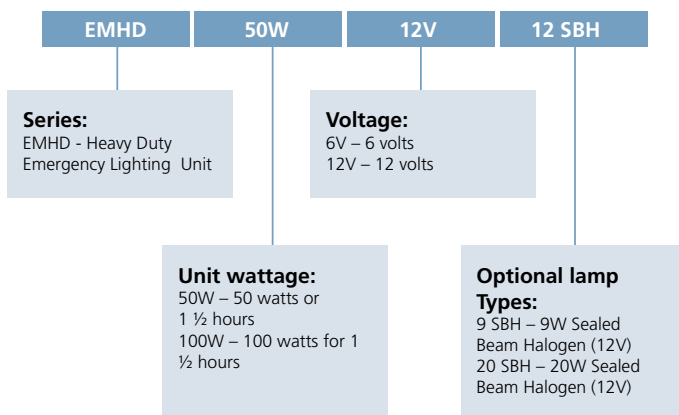


## Dimensions

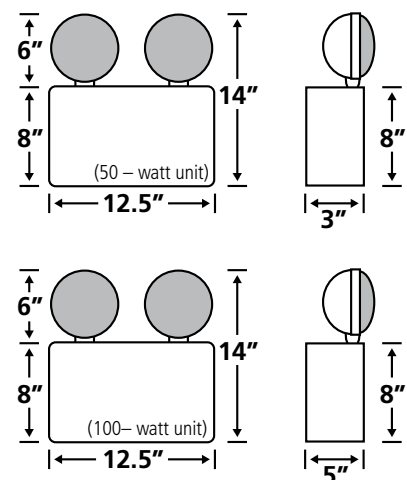
Catalog Model #	Watts for 1-1½ hrs.	Voltage	Total Connected Heads/Fixtures			Standar Lamp Types	Optional Lamps
			4 hrs	2hrs	1.5hrs		
EMHD-50W	50	6	2*	4*	6*	7.2W	9w,12w,15w
EMHD-100W	100	6	4*	9*	12*	7.2W	9w,12w,15w
EMHD-50W	50	12	2**	3**	5**	12V 12W Sealed Beam Halogen	9w,20w
EMHD-100W	100	12	4**	7**	10**	12V 12W Sealed Beam Halogen	9w,20w

\*Based on 7.2 watt lamps, standard

\*\* Based on 12 watt lamps, standard



## Dimensions of units



Refer to [www.havells-sli.com](http://www.havells-sli.com) for Lamp Characteristic Curves under Life Safety Lighting, in the Product section.

# Voltage Drop Tables

The National Electrical Code limits voltage drop to a maximum of 5% of nominal. Circuit runs must be of sufficient capacity to maintain operating voltage when remote fixtures and/or exit signs are connected to the emergency lighting.

Table A – Important electrical installation information

Total watts on wire runs	12 Volt system				Total watts on wire runs	6 Volt system			
	Wire gauge					Wire gauge			
	#12	#10	#8	#6		#12	#10	# 8	# 6
	Max. Length of wire runs (feet)					Max. Length of wire runs (feet)			
6	378	600	955	1518	6	94	150	238	379
7	324	515	818	1301	7	81	129	204	325
8	283	450	716	1138	8	70	112	179	284
10	226	360	570	910	10	56	90	143	227
12	178	283	450	715	12	44	70	112	178
14	162	257	409	650	14	40	64	102	162
16	133	212	338	538	16	33	53	84	134
18	119	189	300	477	18	30	47	75	119
20	113	180	286	455	20	28	45	71	114
21	108	171	273	434	21	27	43	68	108
24	89	141	225	357	24	24	38	60	95
25	86	136	216	344	25	21	34	54	86
30	75	120	190	303	30	19	30	48	76
35	65	103	164	260	35	15	25	39	63
40	53	85	135	214	40	13	21	33	53
48	44	70	112	178	48	11	17	28	44
50	43	68	108	172	50	11	17	27	43
75	28	45	72	115	75	7	11	18	29
100	21	34	54	86	100	5	8	14	21
125	17	27	43	69	125	4	7	11	17
150	14	23	36	57	150	3	5	9	14
175	12	19	31	49	175	3	5	8	12
200	10	16	27	42	200	2	4	6	10
225	10	16	25	40	225	2	4	6	10
250	9	14	22	36	250	2	3	5	9

**Information republished is for reference only. Local codes and the local authority having jurisdiction are the most reliable sources to ensure code compliance.**



# Emergency Ballast



# Fluorescent Emergency Lighting Ballasts

## Intended use

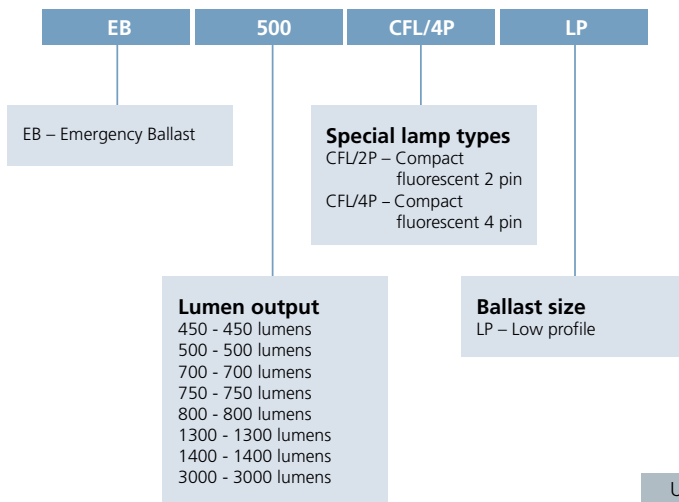
- Field installed for fluorescent fixtures with emergency power to illuminate accompanying lamps. Ballasts will provide a minimum of 90 minutes of power at specified lumens upon power interruption.

## Features

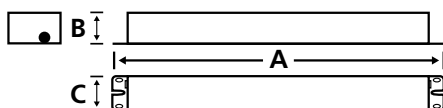
- Long life, high temperature Ni-CAD Battery
- 90 minutes plus operation
- UL listed
- 5 year Warranty
- 120/277 voltage input
- LED indicator light
- Single Pole Test Switch
- Meets all NEC and NFPA codes



## Ordering information



## Ballast dimensions



Unit Dimensions in inches

	A	B	C
EB 450	9.4	1.5	2.4
EB 500	9.4	1.1	2.4
EB 500 LP	14.2	1.2	1.1
EB 700	9.4	1.5	2.4
EB 750 CFL/2P	9.4	1.5	2.4
EB 750 CFL/4P	9.4	1.5	2.4
EB 800 LP	17.5	1.2	1.1
EB 1300 LP	21.5	1.2	1.1
EB 1400	13.3	1.5	2.4
EB 3000	16.3	1.75	5.5

# Lamp Compatibility Chart

MODEL	EB 450	EB 500	EB 500LP	EB 700	EB750 CFL/2P	EB750 CFL/4P	EB 800 LP	EB 1300 LP	EB 1400	EB 3000
Lumens	450	500	500	700	750	750	800	1300	1400	3000
<b>Linear Lamps</b>										
<b>Number of lamps supported</b>										
2'-4' Rapid, Instant, or Energy Savings, T8-T12, HO, VHO	1	1	1	1 or 2		1	1	1	1 or 2	1 or 2
2'-8' Rapid, Instant or Energy Saving, Circline T8, T12, HO, VHO				1					1	1
8W-28W – T5*	1	1	1	1			1	1	1 or 2	1 or 2
54W – T5HO			1				1		1 or 2	1 or 2
<b>Compact Fluorescent Lamps</b>										
<b>Number of lamps supported</b>										
13 – 39W Twin/Quad/ TT 4 pin (G24q/GX24q base)				1 or 2		1 or 2			1 or 2	1 or 2
13-42W Twin/Quad/ TT 4 pin (G24q/ Gx24q base)				1		1			1	1 or 2
10 – 26W Quad/TT 2 pin (G24d/TX24d base)					1					
17W-40W 4 pin compact	1	1		1 or 2			1	1	1 or 2	1 or 2
40W-55W 4 pin compact				1			1	1	1	1
<b>Specialty Lamp</b>										
<b>Number of lamps supported</b>										
20-40W T9/T10/T12 Circline Lamps	1	1		1 or 2					1 or 2	1 or 2
16-38W 2D 4 pin (BR10q base)		1								1 or 2
55W 2D 4 pin (GR10q base)										1

# Life Safety Code Excerpt (NFPA 101) - 2006

Information republished  
is for reference only.  
Local codes and the  
local authority having  
jurisdiction are the most  
reliable sources to ensure  
code compliance.

## Section 3.3.193 Definition of Public Way

**3.3.193** A street, alley, or other similar parcel of land essentially open to the outside air deeded, dedicated, or otherwise permanently appropriated to the public for public use and having a clear width and height of not less than 10 ft. (3050mm).

## 4.6 General Requirements

### 4.6.12 Maintenance, Inspection and Testing.

**4.6.12.1** Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature is required for compliance with the provisions of this Code, such device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or other feature shall thereafter be continuously maintained in accordance with applicable NFPA requirements or requirements developed as part of a performancebased

design, or as directed by the authority having jurisdiction.

**4.6.12.2** No existing life safety feature shall be removed or reduced where such feature is a requirement for new construction.

**4.6.12.3\*** Existing life safety features obvious to the public, if not required by the Code, shall either be maintained or removed.

**4.6.12.4** Any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature requiring periodic testing, inspection, or operation to ensure its maintenance shall be tested, inspected, or operated as specified elsewhere in this Code or as directed by the authority having jurisdiction.

**4.6.12.5** Maintenance, inspection, and testing shall be performed under the supervision of a responsible person who shall ensure that testing, inspection, and maintenance are made at specified intervals in accordance with applicable NFPA standards or as directed by the authority having jurisdiction.

## 7.8 Illumination of Means of Egress.

### 7.8.1 General

**7.8.1.1\*** Illumination of means of egress shall be provided in accordance with Section 7.8 for every building and structure where required in Chapter 11 through Chapter 42. For the purposes of this requirement, exit access shall include only designated stairs, aisles, corridors, ramps, escalators, and passageways leading to an exit. For the purposes of this requirement, exit discharge shall include only designated stairs, aisles, corridors, ramps, escalators, walkways, and exit passage ways leading to a public way.

**7.8.1.2** Illumination of means of egress shall be continuous during the time that the conditions of occupancy require that the means of egress be available for use, unless otherwise provided in 7.8.1.2.2.

**7.8.1.2.1** Artificial lighting shall be employed at such locations and for such periods of time as are necessary to maintain the illumination to the minimum criteria values herein specified.

**7.8.1.2.2** Automatic, motion sensor-type lighting switches shall be permitted within the means of egress, provided that the switch controllers are equipped for fail-safe operation, the illumination timers are set for a minimum 15-minute duration, and the motion sensor is activated by any occupant movement in the area served by the lighting units.

**7.8.1.3\*** The floors and other walking surfaces within an exit and within the portions of the exit access and exit discharge designated in 7.8.1.1 shall be illuminated as follows:

- a. During conditions of stair use, the minimum illumination for new stairs shall be at least 10 ft-candle (108 lux), measured at the walking surfaces.
- b. The minimum illumination for floors and walking surfaces, other than new stairs during conditions of stair use, shall be to values of at least 1 ft-candle (10.8 lux), measured at the floor.
- c. In assembly occupancies, the illumination of the floors of exit access shall be at least 0.2 ft-candle (2.2 lux) during periods of performances or projections involving directed light.
- d. \* The minimum illumination requirements shall not apply where operations or processes require low lighting levels.

**7.8.1.4\*** Required illumination shall be arranged so that the failure of any single lighting unit does not result in an

illumination level of less than 0.2 ft-candle (2.2 lux) in any designated area.

**7.8.1.5** The equipment or units installed to meet the requirements of Section 7.10 also shall be permitted to serve the function of illumination of means of egress, provided that all requirements of Section 7.8 for such illumination are met.

### 7.8.2 Sources of Illumination.

**7.8.2.1\*** Illumination of means of egress shall be from a source considered reliable by the authority having jurisdiction.

**7.8.2.2** Battery-operated electric lights and other types of portable lamps or lanterns shall not be used for primary illumination of means of egress. Batteryoperated electric lights shall be permitted to be used as an emergency source to the extent permitted under Section 7.9.

## 7.9 Emergency Lighting.

### 7.9.1 General.

**7.9.1.1\*** Emergency lighting facilities for means of egress shall be provided in accordance with Section 7.9 for the following:

- a. Buildings or structures where required in Chapter 11 through Chapter 42
- b. Underground and limited access structures as addressed in Section 11.7
- c. High-rise buildings as required by other sections of this Code
- d. Doors equipped with delayed-egress locks
- e. Stair shaft and vestibule of smokeproof enclosures, for which the following also apply:
  1. The stair shaft and vestibule shall be permitted to include a standby generator that is installed for the smokeproof enclosure mechanical ventilation equipment.
  2. The standby generator shall be permitted to be used for the stair

shaft and vestibule emergency lighting power supply.

- f. New access-controlled egress doors in accordance with 7.2.1.6.2.

**7.9.1.2** For the purposes of 7.9.1.1, exit access shall include only designated stairs, aisles, corridors, ramps, escalators, and passageways leading to an exit. For the purposes of 7.9.1.1, exit discharge shall include only designated stairs, ramps, aisles, walkways, and escalators leading to a public way.

**7.9.1.3** Where maintenance of illumination depends on changing from one energy source to another, a delay of not more than 10 seconds shall be permitted.

### 7.9.2 Performance of System.

**7.9.2.1\*** Emergency illumination shall be provided for not less than 1 1/2 hours in the event of failure of normal lighting. Emergency lighting facilities shall be arranged to provide initial illumination that is not less than an average of 1 ftcandle (10.8 lux) and, at any point, not less than 0.1 ft-candle (1.1 lux), measured along the path of egress at floor level. Illumination levels shall be permitted to decline to not less than an average of 0.6 ft candle (6.5 lux) and, at any point, not less than 0.06 ft-candle (.65 lux) at the end of the 1 1/2 hours. A maximum-tominimum illumination uniformity ratio of 40 to 1 shall not be exceeded.

**7.9.2.2** New emergency power systems for emergency lighting shall be at least Type 10, Class 1.5, Level 1, in accordance with NFPA 110, Standard for Emergency and Standby Power Systems.

**7.9.2.3\*** The emergency lighting system shall be arranged to provide the required illumination automatically in the event of any interruption of normal lighting due to

any of the following:

- a. Failure of a public utility or other outside electrical power supply
- b. Opening of a circuit breaker or fuse
- c. Manual act(s), including accidental opening of a switch controlling normal lighting facilities

**7.9.2.4** Emergency generators providing power to emergency lighting systems shall be installed, tested, and maintained in accordance with NFPA 110, Standard for Emergency and Standby Power Systems. Stored electrical energy systems, where required in this Code, shall be installed and tested in accordance with NFPA 111, Standard on Stored Electrical Energy Emergency and Standby Power Systems.

**7.9.2.5** Unit equipment and battery systems for emergency luminaires shall be listed to UL 924, Standard for Emergency Lighting and Power Equipment.

**7.9.2.6\*** Existing battery-operated emergency lights shall use only reliable types of rechargeable batteries provided with suitable facilities for maintaining them in properly charged condition. Batteries used in such lights or units shall be approved for their intended use and shall comply with NFPA 70, National Electrical Code.

**7.9.2.7** The emergency lighting system shall be either continuously in operation or shall be capable of repeated automatic operation without manual intervention.

### 7.9.3 Periodic Testing of Emergency Lighting Equipment.

**7.9.3.1** Required emergency lighting systems shall be tested in accordance with one of the three options offered by 7.9.3.1.1, 7.9.3.1.2, or 7.9.3.1.3.

**7.9.3.1.1** Testing of required emergency lighting systems shall be permitted to be

conducted as follows:

- a. Functional testing shall be conducted at 30-day intervals for not less than 30 seconds.
- b. Functional testing shall be conducted annually for not less than 1 1/2 hours if the emergency lighting system is battery powered.
- c. The emergency lighting equipment shall be fully operational for the duration of the tests required by 7.9.3.1.1 (1) and 7.9.3.1.1 (2).
- d. Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

**7.9.3.1.2** Testing of required emergency lighting systems shall be permitted to be conducted as follows:

- a. Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be provided.
- b. Self-testing/self-diagnostic battery-operated emergency lighting equipment shall automatically perform not less than once every 30 days a test for not less than 30 seconds and a diagnostic routine.
- c. Self-testing/self-diagnostic battery-operated emergency lighting equipment shall indicate failures by a status indicator.
- d. A visual inspection shall be performed at intervals not exceeding 30 days.
- e. Functional testing shall be conducted annually for not less than 1 1/2 hours.
- f. Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be fully operational for the duration of the 1 1/2 hour test.
- g. Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

**7.9.3.1.3** Testing of required emergency lighting systems shall be permitted to be conducted as follows:

- a. Computer-based, self-testing/self-diagnostic battery-operated emergency lighting equipment shall be provided.
- b. The emergency lighting equipment shall automatically perform not less than once every 30 days a test for not less than 30 seconds and a diagnostic routine.
- c. The emergency lighting equipment shall automatically perform annually a test for not less than 1 1/2 hours.
- d. The emergency lighting equipment shall be fully operational for the duration of the tests required by 7.9.3.1.3(2) and 7.9.3.1.3(3).
- e. The computer-based system shall be capable of providing a report of the history of tests and failures at all times.

## 7.10 Marking of Means of Egress.

### 7.10.1 General.

**7.10.1.1 Where Required.** Means of egress shall be marked in accordance with Section 7.10 where required in Chapter 11 through Chapter 42.

**7.10.1.2\* Exits.** Exits, other than main exterior exit doors that obviously and clearly are identifiable as exits, shall be marked by an approved sign that is readily visible from any direction of exit access.

**7.10.1.3 Exit Stair Door Tactile Signage.** Tactile signage shall be provided to meet the following criteria, unless otherwise provided in 7.10.1.4:

- a. Tactile signage shall be located at each exit door requiring an exit sign.
- b. Tactile signage shall read as follows:  
**EXIT**
- c. Tactile signage shall comply with ICC/ANSI A117.1, American National Standard for Accessible and Usable Buildings and Facilities.

**7.10.1.4 Existing Exemption.** The

requirements of 7.10.1.3 shall not apply to existing buildings, provided that the occupancy classification does not change.

### 7.10.1.5 Exit Access.

**7.10.1.5.1** Access to exits shall be marked by approved, readily visible signs in all cases where the exit or way to reach the exit is not readily apparent to the occupants.

**7.10.1.5.2\*** New sign placement shall be such that no point in an exit access corridor is in excess of the rated viewing distance or 100 ft (30 m), whichever is less, from the nearest sign.

### 7.10.1.6\* Floor Proximity Exit Signs.

Where floor proximity exit signs are required in Chapter 11 through Chapter 42, such signs shall be located near the floor level in addition to those signs required for doors or corridors. The signs shall be illuminated in accordance with 7.10.5. Externally illuminated signs shall be sized in accordance with 7.10.6.1. The bottom of the sign shall be not less than 6 in. (150 mm), but not more than 18 in. (455 mm), above the floor. For exit doors, the sign shall be mounted on the door or adjacent to the door, with the nearest edge of the sign within 4 in. (100 mm) of the door frame.

### 7.10.1.7\* Floor Proximity Egress Path Marking.

Where floor proximity egress path marking is required in Chapter 11 through Chapter 42, a listed and approved floor proximity egress path marking system that is internally illuminated shall be installed within 18 in. (455 mm) of the floor. The system shall provide a visible delineation of the path of travel along the designated exit access and shall be essentially continuous, except as interrupted by doorways, hallways, corridors, or other such architectural features. The system

shall operate continuously or at any time the building fire alarm system is activated. The activation, duration, and continuity of operation of the system shall be accordance with 7.9.2. The system shall be maintained in accordance with the product manufacturing listing.

**7.10.1.8\* Visibility.** Every sign required in Section 7.10 shall be located and of such size, distinctive color, and design that it is readily visible and shall provide contrast with decorations, interior finish, or other signs. No decorations, furnishings, or equipment that impairs visibility of a sign shall be permitted. No brightly illuminated sign (for other than exit purposes), display, or object in or near the line of vision of the required exit sign that could detract attention from the exit sign shall be permitted.

**7.10.1.9 Mounting Location.** The bottom of new egress markings shall be located at a vertical distance of not more than 6 ft 8 in. (2030 mm) above the top edge of the egress opening intended for designation by that marking. Egress markings shall be located at a horizontal distance of not more than the required width of the egress opening, as measured from the edge of the egress opening intended for designation by that marking to the nearest edge of the marking.

**7.10.2\* Directional Signs.** A sign complying with 7.10.3 with a directional indicator showing the direction of travel shall be placed in every location where the direction of travel to reach the nearest exit is not apparent.

#### **7.10.3\* Sign Legend.**

**7.10.3.1** Signs required by 7.10.1 and 7.10.2 shall read as follows in plainly legible letters, or other appropriate wording shall be used: **EXIT**

**7.10.3.2\*** Where approved by the authority having jurisdiction, pictograms shall be permitted.

**7.10.4\* Power Source.** Where emergency lighting facilities are required by the applicable provisions of Chapter 11 through Chapter 42 for individual occupancies, the signs, other than approved self-luminous signs and listed photoluminescent signs in accordance with 7.10.7.2, shall be illuminated by the emergency lighting facilities. The level of illumination of the signs shall be in accordance with 7.10.6.3 or 7.10.7 for the required emergency lighting duration as specified in 7.9.2.1. However, the level of illumination shall be permitted to decline to 60 percent at the end of the emergency lighting duration.

#### **7.10.5 Illumination of Signs.**

**7.10.5.1\* General.** Every sign required by 7.10.1.2, 7.10.1.5, or 7.10.8.1, other than where operations or processes require low lighting levels, shall be suitably illuminated by a reliable light source. Externally and internally illuminated signs shall be legible in both the normal and emergency lighting mode.

#### **7.10.5.2\* Continuous Illumination.**

**7.10.5.2.1** Every sign required to be illuminated by 7.10.6.3, 7.10.7, and 7.10.8.1 shall be continuously illuminated as required under the provisions of Section 7.8, unless otherwise provided in 7.10.5.2.2.

**7.10.5.2.2\*** Illumination for signs shall be permitted to flash on and off upon activation of the fire alarm system.

#### **7.10.6 Externally Illuminated Signs.**

##### **7.10.6.1\* Size of Signs.**

**7.10.6.1.1** Externally illuminated signs required by 7.10.1 and 7.10.2, other than approved existing signs, unless otherwise

provided in 7.10.6.1.2, shall read EXIT, or shall use other appropriate wording in plainly legible letters sized as follows:

- a. For new signs, the letters shall be not less than 6 in. (150 mm) high, with the principal strokes of letters not less than 3/4 in. (19 mm) wide.
- b. For existing signs, the required wording shall be permitted to be in plainly legible letters not less than 4 in. (100 mm) high.
- c. The word EXIT shall be in letters of a width not less than 2 in. (51 mm), except the letter I, and the minimum spacing between letters shall be not less than 3/8 in. (9.5 mm) .
- d. Sign legend elements larger than the minimum established in 7.10.6.1.1(1) through 7.10.6.1.1(3) shall use letter widths, strokes, and spacing in proportion to their height.

**7.10.6.1.2** The requirements of 7.10.6.1.1 shall not apply to marking required by 7.10.1.3 and 7.10.1.6.

##### **7.10.6.2\* Size and Location of Directional Indicator.**

**7.10.6.2.1** Directional indicators, unless otherwise provided in 7.10.6.2.2, shall comply with the following:

- a. The directional indicator shall be located outside of the EXIT legend, not less than 3/8 in. (9.5 mm) from any letter.
- b. The directional indicator shall be of a chevron type, as shown in Figure 7.10.6.2.1.
- c. The directional indicator shall be identifiable as a directional indicator at a distance of 40 ft (12m).
- d. A directional indicator larger than the minimum established for compliance with 7.10.6.2.1(3) shall be proportionately increased in height, width and stroke.
- e. The directional indicator shall be located at the end of the sign for the direction indicated.



FIGURE 7.10.6.2.1 Chevron-Type Indicator.

**7.10.6.2.2** The requirements of 7.10.6.2.1 shall not apply to approved existing signs.

**7.10.6.3\* Level of Illumination.**

Externally illuminated signs shall be illuminated by not less than 5 ft-candles (54 lux) at the illuminated surface and shall have a contrast ratio of not less than 0.5.

**7.10.7 Internally Illuminated Signs.**

**7.10.7.1 Listing.** Internally illuminated signs shall be listed in accordance with UL 924, Standard for Emergency Lighting and Power Equipment, unless they meet one of the following criteria:

- a. They are approved existing signs.
- b. They are existing signs having the required wording in legible letters not less than 4 in. (100mm) high.
- c. They are signs that are in accordance with 7.10.1.3 and 7.10.1.6.

**7.10.7.2\* Photoluminescent Signs.**

The face of a photoluminescent sign shall be continually illuminated while the building is occupied. The illumination levels on the face of the photoluminescent sign shall be in accordance with its listing.

The charging illumination shall be a reliable light source as determined by the authority having jurisdiction. The charging light source shall be of a type specified in the product markings.

**7.10.8 Special Signs.**

**7.10.8.1 Sign Illumination.**

**7.10.8.1.1** Where required by other provisions of this Code, special signs shall be illuminated in accordance with 7.10.5, 7.10.6.3, and 7.10.7.

**7.10.8.1.2** Where emergency lighting facilities are required by the applicable provisions of Chapter 12 through Chapter 42, the required illumination of special signs shall additionally be provided under emergency lighting conditions.

**7.10.8.2 Characters.** Special signs, where required by other provisions of this Code, shall comply with the visual character requirements of ICC/ANSI A117.1, American National Standard for Accessible and Usable Buildings and Facilities.

**7.10.8.3\* No Exit.**

**7.10.8.3.1** Any door, passage, or stairway that is neither an exit nor a way of exit access and that is located or arranged so that it is likely to be mistaken for an exit shall be identified by a sign that reads as follows: **NO EXIT**

**7.10.8.3.2** The NO EXIT sign shall have the word NO in letters 2 in. (51 mm) high, with a stroke width of 3/8 in. (9.5 mm), and the word EXIT in letters 1 in. (25 mm) high, with the word EXIT below the word NO, unless such sign is an approved existing sign.

**7.10.8.4 Elevator Signs.** Elevators that are a part of a means of egress (see 7.2.13.1) shall have the following signs with a minimum letter height of 5/8 in. (16 mm) posted in every elevator lobby:

- a. \*Signs that indicate that the elevator can be used for egress, including any restrictions on use
- b. \*Signs that indicate the operational status of elevators

**7.10.9 Testing and Maintenance.**

**7.10.9.1 Inspection.** Exit signs shall be visually inspected for operation of the illumination sources at intervals not to exceed 30 days or shall be periodically monitored in accordance with 7.9.3.1.3.

**7.10.9.2 Testing.**

Exit signs connected to or provided with a battery-operated emergency illumination source, where required in 7.10.4, shall be tested and maintained in accordance with 7.9.3.

# Conditions of Sale – Warranty and Obligations SLI Lighting

## Warranty and Obligations:

The following is exclusive and in lieu of all other warranties, whether express, implied or statutory including, but not by way of limitation, any warranty of merchantability of fitness for any particular purpose.

SLI Lighting warrants to the customer for resale only that SLI Lighting is free from defects in materials and workmanship. **The obligation of SLI Lighting under this warranty is expressly limited to repair or replacement** without charge, at the sole option of SLI Lighting, of defective products at SLI Lighting's factory within a period of five years from the date of shipment of products and only after SLI Lighting has issued a Return Materials Authorization to customer for the products.

This warranty does not apply to SLI Lighting which have been altered or repaired outside of SLI Lighting's factory or which have been subjected to neglect, abuse, misuse or accident (including shipping damages). **This warranty also does not apply to products not manufactured by SLI Lighting which have been installed and used in conjunction with SLI Lighting products.**

SLI Lighting's warranty does not apply to any items nor does it apply to any other component part or accessory manufactured by another manufacturer. Any warranty regarding such components is made by the manufacturer of the components, and customer shall direct all claims to the component manufacturer.

**Limitations of liability:** in no event shall SLI Lighting be liable for special,

indirect, incidental, or consequential damages (regardless of the form of action, whether in contract, strict liability, or in tort including negligence) nor for lost profits; nor shall the liability of SLI Lighting for any claims or damage arising out of or connected with this agreement or the manufacture, sale, delivery, use, maintenance, repair or modification of the products, or supply of any replacement parts therefor, exceed the purchase price of the products.

This limitation of liability shall apply to any liability for default under or in connection with the products, parts, or services delivered hereunder whether based on warranty, failure of or delay in delivery, or otherwise. **No labor charges will be accepted without prior written approval of SLI Lighting** this clause shall survive failure of an exclusive remedy.



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