EMERGENCY LIGHTING SOLUTIONS

PROLITE®
EMERGENCY LIGHTING SOLUTIONS

Light is life. Sustain it.

OUR CORE VALUES

DESIGN

We take great care to combine utility, aesthetic & price viability in our product designs.

QUALITY

Our 40 years in the business has taught us that even the slightest compromise on quality can be hugely damaging & dangerous. We strive to ensure that our quality control is always hitting on all cylinders before our products move to customers.

RELIABILITY

Reliability is our second name. We have proved it, we are proving it and we will continue to prove it in future also.

PERFORMANCE

Our products are highly durable and we manufacture 'long life' products that require minimum maintenance and give years of service 24x7. Also, our customer care department is always alert and ready on call at short notice.

LET THERE BE LIGHT ! LET NO POWER FAILURE LEAVE YOU IN THE DARK !

There can be no business without light. In fact there can be no life without light. However many precious lives have been lost due to fire incidents. Proper and regular lighting not only allows good visibility but also effect the health and comfort of human beings. In spite of advancement achieved in the field of electricity generation & distribution uninterrupted electric power supply can never be assured. In case of power failures or blackouts that may occur due to various reasons, emergency lights have become essential for any closed space or enclosed environment.

WHO ARE WE?

PROLITE is a recognized and globally renowned manufacturer and supplier of Emergency Egress Route Lighting Systems and related products. Prolite boasts a wide range of models and is the first company in the country to be an ISO 9001:2015 Certified in the fields of R&D, Manufacturing, Marketing and Maintenance of Emergency Lighting Solutions. The design excellence of Prolite's products are achieved through sustained and periodical in-house Research and Development.

Prolite has evolved with the times and kept in step with rapidly changing threat perceptions and security protocols. Today, Prolite is capable of providing customer-specific solutions through its products range globally.

Prolite's R & D team has designed its new modular light series with all this in mind.

STANDARDS & WE

Indian Standards & Codes

- National Building Code of India NBC SP : 7 2016
- National Lighting Code NLC SP 72 - 2010
- IS 9457:2005 Code of Practice for Safety Colors and Safety Signs
- IS 10322:2:22 Part 5: Sec 8: 2013 - Luminaire Part 5 Particular Requirements Sec 8 Emergency Lighting
- IS 12349:1988 Fire Protection - Safety Signs
- IS 16454:2018 Safety Identification - Escape & Evacuation Plan Signs
- IS 13716:1993 Code of Practice for Fire Safety in Hotels
- IS 9583:1981 Part 5: Sec 8 Specification for Emergency Lighting Units
- IS 12407:1988 Graphic Symbols for Fire Protection Plans
- IS 1644:1988 Code of Practice for Fire Safety of Buildings: Exit Requirements and Personal Hazards
- IS 1646 Code of Practice for Fire Safety of Buildings: Electrical Installations

WHAT DOES THE LAW SAY....

1 IS 10322:2:22 Part 5: Sec 8: 2013 - Luminaire Part 5 Particular Requirements Sec 8 Emergency Lighting

The IS 10322 (Part 5/Sec 1) specifies requirements for fixed general purposes luminaires for use with tungsten filament, tubular florescent , LED, LED modules and other discharge lamps on supply voltage not exceeding 1000V.

According to IS 10322 (Part 5/Sec 1):

Maintained Emergency Luminaire: Luminaire in which the emergency lighting lamps are energized at all times when normal or emergency lighting is required.

Non Maintained Emergency Luminaire: Luminaire in which the emergency lighting lamps are in operation only when the supply to the normal lighting fails.

2 National Lighting Code NLC SP 72 - 2010

Where direct sight of an exit is possible, a directional sign or series of signs should be provided which should be so placed that a person following them will be guided towards the nearest suitable exit, which may be either the normal exit or emergency exit. The directional signs should be illuminated when corresponding exit signs are illuminated.

Methods used for illumination of signs may be:

a) Lamps external to the sign;

b) Lamps contained within the sign

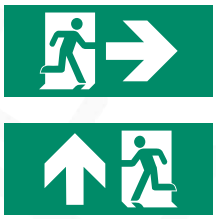
It is recommended that the method of illumination described under (b) be used within any area where the normal lighting maybe deliberately dimmed or extinguished. On no account should the lamps within the signs be dimmed.

In the event of failure of the supply to the normal lighting, escape route sign should receive the power needed for illumination from the emergency lighting supply.

It is recommended that the lowest luminance present in the pictograph should be at least 15 cd/m^2 and that the highest should not be greater than 300 cd/m^2, the minimum and maximum luminances on any sign should be in the ration 1:10.

It is recommended that the signs as given in IS 9457:2005 are used. The colors of the signs should be in accordance with IS 9457:2005.

3 Visual Impact and Legibility of Signs



- Visual impact and legibility are dependent upon size, viewing distance, positioning, contrast and luminance.
- The size of pictograph in an exit or emergency exit sign should be least 1/300 of the maximum distance from which the sign is expected to be viewed.
- The contrast between illuminated face of a sign and the background against which a sign will be viewed in times of emergency, should be sufficient to make the sign easy to see but not so great as to produce disability glare. The contrast contained within the pictograph must be such as to make its message instantly clear when illuminated during times of emergency. Effective contrast in either case may be in brightness and/or in colour.
- *Fire alarm call points and fire fighting equipments provided along escape routes should be illuminated, either by emergency lighting or by normal artificial or daylighting at all times while the building is occupied.*
- *The horizontal illuminance (E) at floor level on the sides of the escape route must at no point be less than 0.5 lux on the sides in order to enable occupants to avoid bumping into obstructions.*
- However, the higher the illuminance the more likely it is that the occupants will move swiftly and confidently along the escape route so that in many cases a minimum of 1 lux may be regarded as preferable. For safe movement a uniformity ratio Emax/Emin = 40:1 along the centre line should not be exceeded.
- *The escape route illumination should come on within 0.5s after failure of the normal supply.*

4 Period of Operation

- The power supply system for emergency lighting should be designed to supply the required load for the desired period of operation.
- The period of operation considered desirable will depend on a number of factors, such as the category of the emergency lighting being powered, the scale and structure of the building and the nature of the activities being carried out in it.
- No recommendations are made on this point, but it might be useful to note that, for many applications, it is considered that a period within the range 1 hour to 3 hours should be satisfactory. This item will, in many cases, be covered by legislation.

5 Maintainance

A regular schedule of testing and maintenance of all components should be established. This should include a check on the provision of the required illuminance during the stipulated period.

VISIBILITY

Visibility means how well and actually the average human eye can see. Visibility can be determined by a variety of factors.

Factors affecting Visibility:

- Contrast : (Luminance of object to luminance to background
- Time : (Visibility increases with increasing viewing time)
- Colour : (Influences related to contrast and Luminance factors)
- Luminance : (Task Luminance effects visibility)
- Size : (Larger the retinal image makes it easier to see)

ESCAPE SIGN SYSTEM

As per IS 12349

Sign	Meaning	Shape and colours	Comments of use
	Emergency exit	Square Background : Green Symbols : White	This sign may be used to indicate all exits which can be used in the event of an emergency shall be accompanied by an arrow (sign no. 1 of table 5) unless the door is immediately apparent. It may indicate to right or to left.
	Directional arrow for escape route	Square or rectangular sign Background : Green Symbols : White	To be used together with sign No.1 of table 2 to indicate the direction to an emergency exit.

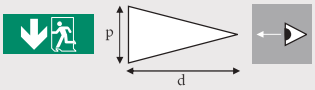
ESCAPE SIGN SYSTEM

Visibility of Exit Signage

Viewing Distances

Safety signs of Escape Routes must comply with the following requirements.

Viewing distance (d) formula d = s x p
p = sign height
s = distance factor 100
(externally illuminated signs)
and
distance factor 200
(internally lit signs)



Luminance & Contrast

Safety signs of Escape Routes must comply with the following requirements.

The minimum luminance of any green area (safety colour) on the sign must be greater than 2 cd / square meters.

The ratio of maximum to minimum luminance shall be less then 10:1 for each colour.

The ratio of white colour to green colour luminance must be between 5:1 and 15:1.

PLACEMENT OF EMERGENCY ESCAPE LIGHTS

- Emergency egress route lighting systems are mandatory in the following places.
- Residential Buildings and Complexes
- Hospitals
- Hotels, Bars & Restaurants
- Educational Institutes
- Auditoriums, Cinema Theaters, Concert Halls,
- Railway Stations, Subways & Airports
- Sports Hall, Stadium & Museum
- Business Premises & Corporate Offices
- Industries, Factories, Warehouses, Workshops,
- Research & Development Centers
- Laboratories
- Rest rooms fr general public & for physically challenged

FIRST TIME IN INDIA

BIS CERTIFIED SELF CONTAINED EMERGENCY EGRESS LIGHTS

Prolite Autoglo Ltd. has been in the business of exigency and safety related products for more than 3 decades. The company has been twice awarded and recognised for its innovation expertise. Prolite is a "**Make in India**" company that manufactures in-house and does not outsource any of its work. Also, its R&D team constantly creates and tweaks its products to conform to latest guidelines, trends and standards stipulated by bodies such as the National Building Code and fire and safety regulators.

Prolite is holding the following –

- BIS Certification
- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management System
- ISO 45001:2018 Occupational Safety Management System
- CE & RoHS Certification
- CIMFR & PESO Certification

Certification Symbols

BIS Certification

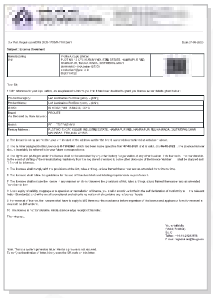
CE Certification

RoHS Compliant

IP Ratings

IK Ratings

Flame Proof



BIS Certification

ISO 9001:2015

ISO 14001:2015

ISO 45001:2018

CE (Non-Maintained)

CE (Maintained)

CE (Non-Emergency)

IP RATINGS

Electric devices malfunction when water or dust enters the device. The IEC 60529 has developed the ingress protection (IP) ratings, which grade the resistance of an enclosure against the intrusion of dust or liquids.

The IP code is composed of two numerals:

- The first numeral refers to the protection against solid object and is rated on a scale from 0 (no protection) to 6 (no ingress of dust).
- The second numeral rates the enclosure's protection against liquids and uses a scale from 0 (no protection) to 9 (high-pressure hot water from different angles).

1st Numeral - Solid foreign objects		
0	Non protected	
1	Protected against solid foreign objects of 50 mm diameter and greater	
2	Protected against solid foreign objects of 12.5 mm diameter and greater	
3	Protected against solid foreign objects of 2.5 mm diameter and greater	
4	Protected against solid foreign objects of 1.0 mm diameter and greater	
5	Protection against dust	
6	Dust tight	

2nd Numeral - Water		
0	Non protected	
1	Protected against vertically falling water drops	
2	Protected against vertically falling water drops as the enclosure is tilted 15° degree	
3	Protected against spraying water	
4	Protected against splashing water	
5	Protected against water jetting	
6	Protected against powerful water jetting	
7	Protected against temporary immersion (1 meter, 30 minutes)	
8	Protected against continuous immersion (1 meter, >30 minutes)