

# EMERGENCY LIGHTING



# The World's Emergency Lighting Solution



Our customers' needs form the backbone of our design and service thinking process; which is why our emergency lighting and exit signs are unrivalled in the markets, and built to deliver safety measures whenever the situation rises.

Established in 1992, Denko Lighting specialises in the design, development and manufacture of innovative emergency lighting, exit signs and related products.

As one of Singapore's leading manufacturers in the emergency lighting market, Denko Lighting takes pride in product quality, reliability and innovation of emergency lighting products to meet and exceed the needs of both local and overseas customers.

Denko Lighting's products are listed under the Product Listing Scheme – a safety and product quality certification accredited by Singapore – which bears the mark of excellence as required by the international standards. Our quality management system and processes are also ISO 9001:2015 certified, providing customers with confidence and assurance of our products.

On top of delivering customer satisfaction, Denko Lighting is committed to provide and ensure high quality products that dutifully serve the public in times of emergencies and unforeseen circumstances. Denko Lighting is also dedicated on driving continuous business growth through research and development to be economically competitive in the market.

Denko Lighting is also officiated with bizSAFE Level 3, a testament to our Risk Management commitment to Singapore's WSHA initiatives.



Every year, existing and new product line undergo stringent testing to ensure quality control and reduce defects



CERT NO.: 2016-2-2382  
ISO 9001 : 2015



PLS Listed



## ISO Certified

Fully trained manufacturing and assembly skill-force adhering to international ISO 9001 quality management system standards

## Value-Added Service

More than a supplier; we are committed in growing our business partnership with you - from giving emergency lighting workshops to planning emergency lighting installations with Denko solutions using the DIALux lighting design software

## Quality Brilliance

Fully compliant to Singapore Safety standards, Denko Lighting products undergo stringent tests by international testing body TÜV SÜD PSB before they are ready to market

## Growing Markets

Every year, thousands of Denko Lighting's products are exported to neighboring Southeast Asian countries, and the Middle East



# Our Project Milestones

## Across Market Segments



**Illuminating the path to safety with exit and emergency lighting.** With over 25 years of market expertise, Denko Lighting caters to a diverse range of sectors covering all types of indoor and outdoor building installations. These include commercial, industrial, residential, retail, hospitality, government and healthcare sectors. Our full list of project references and overseas projects are available upon request.

### Commercial & Industrial

Amazon  
Aperia Tower  
Ascendas @ Techlink  
ASPIAL CAPITAL  
Biopolis  
BCA-Keppel Land Challenge  
Bollore  
Certis Cisco  
Changi Logistic Center  
China Square Central  
Creative Technology Ltd  
Golden Agri Plaza  
IBM - Changi Business Park  
IBM Manufacturing  
Income @ Raffles  
LUXASIA  
Mapletree Jurong Logistics Hub  
MBS Tower 1 & 2  
Mediapolis@One-North  
Microsoft Datacentre  
Midtown  
Schenker  
Solaris @ Kallang 171  
The Signature  
UOB Plaza

### Education

Australian International School  
Dulwich College International  
Eunoia Junior College  
Global Indian International School  
INSEAD  
Lycee Francis School  
Middleton International School  
Nexus International School  
National University of Singapore  
Nanyang Academy of Fine Arts  
Nanyang Girl's School  
Nanyang Polytechnic  
Nanyang Technological University  
Paya Lebar Methodist Girls' School  
Pei Chun Public School  
Rainbow Centre  
School of the Arts Singapore (SOTA)  
Singapore Institute of Technology  
Singapore Management University  
Singapore Polytechnic  
St Andrew's Junior College  
Temasek Polytechnic

### Hospitality

Four Seasons Resort  
Fullerton Bay  
Holiday Inn Express  
Le Meridien Singapore Sentosa  
Pan Pacific Hotel Orchard  
Park Regis Hotel  
Perak Hotel  
Populous Hotel  
Ritz Carlton  
The Clan Hotel

### Healthcare

Ang Mo Kio Polyclinic  
Balestier Polyclinic  
Dover Nursing Home  
Gleneagle's Hospital  
HCA-HOSPICE CARE  
Kandang Kerbau Hospital (KK)  
Khoo Teck Puat Hospital  
Mount Alvernia Hospital  
National Cancer Centre  
National Skin Centre  
Peacehaven Nursing Home  
Seng Kang General Hospital  
Singhealth Polyclinic  
Singapore General Hospital  
Starmed Medical Centre  
Tan Tock Seng NNI

### Retail

Bedok Food City  
Canberra Plaza  
CHIJMES  
China Square Central  
City Square Mall  
Decathlon  
Eurokars  
Fusionopolis  
IKEA Alexandra  
IKEA Tampines  
iSPACE AT SOON LEE STREET  
KFC - various locations  
KidZania Singapore  
KINEX  
MacDonald's - various locations  
Northpoint City  
Sim Lim Square  
Shaw Centre & Shaw House  
Sushiro - various locations  
Takashimaya  
Tampines One  
Tanjong Pagar Complex  
The Centrepoint  
Westgate Shopping Mall  
WeWork  
WhiteSands

### Institution

Airbus Asia Training Centre  
Anguillia Mosque  
Arena Country Club  
Bishan Fire Station  
Bukit Batok Church  
Bukit Panjang Community Club  
CAG Cargo  
Church Of Christ  
Food Center @ Bukit Merah Central  
Golden Pagoda Buddhist Temple  
Hill St Police Station  
Indian Heritage Centre  
Jurong Mosque  
Mahabodi Monastery  
Ministry of Home Affairs  
Singapore Zoo

### Public & Others

Changi Airport T2  
Mandai Wildlife  
SAFRA CCK  
SCDF HQ  
Singapore Chinese Orchestra  
Singapore Khalsa Association  
Sultan Mosque  
Toa Payoh Community Centre

### Residential (Government/HDB)

Anchorvale EC  
Bedok Town Centre  
Bukit Batok Road N4 C8/C9  
BIDADARI C3  
Canberra Crescent - Eastlink I & II  
Canberra Link EC  
Clementi N4C12  
Compassvale Bow  
Dawson  
Lake Vista  
Marine Parade Town Council  
Macpherson Spring  
Melody Spring @ Yishun  
Punggol East - PEC48/PEC49  
Sengkang N1C30  
Rivervale Gardens  
Tampines Green Court  
Tampines Green Vines  
Tengah Plantation HDB  
Toa Payoh (MSCP 787A)  
Treasure Crest @ Sengkang  
West Edge @ Bukit Batok  
Woodlands Dew

### Residential

1953 Balestier  
38 Martin Road  
Amber Park  
Botanique Condo  
Caribbean At Keppel Bay  
Fraser Suites Singapore  
Grange Residence  
Highline Residences  
High Park Residences  
Mattar Residences  
Nassim Hill  
Normanton Park  
Olloi Condo  
Queens Peak  
Regent Heights Tower  
River Trees Residences  
Spottiswoode Suites  
Summerhill Condo  
The Draycott Condominium  
The Lantor Residences  
The Line @ Tanjong Rhu  
The Tre Ver  
Treasure at Tampines  
Urban Treasures Condo  
Verdure At Holland Park  
Westwood Residences

# General Guide to Emergency Lighting and Exit Sign



**Proper usage of emergency lighting can save lives.** Our pictorial guideline with actual exit sign and emergency lighting serve as a guide to installers commissioned to install Denko Lighting's solution. These guidelines were based on Singapore Fire Code 2018.



Exit sign placed over the exit door



Directional exit signs in long corridors



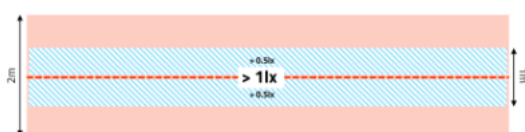
Directional exit signs at each change of direction and in areas where an exit is not readily available



Emergency luminaire at each piece of fire fighting equipment and call point

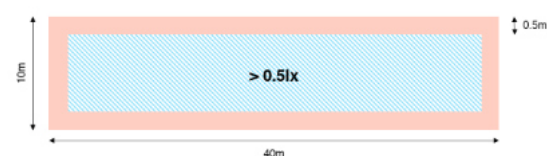
## Clause 6 – Escape route lighting

For escape routes up to 2m in width, the horizontal illuminance on the floor along the centre line of an escape route shall not be less than 1lx and the central band consisting of not less than half of the width of the route shall be illuminated to a minimum of 50% of that value.



## Clause 7 – In anti-panic and/or open areas

In these areas, the horizontal illuminance shall be not less than 0.5 lux at the floor level at each point of the empty area which excludes a border of 0.5m



## Keen to learn more?

Contact our sales consultants for more information. Denko Lighting's photometric data are also available upon request.

# EXIT SIGN



EmFLEX 1602M / RM | PG 8



EmFLEX 1602M (B) / RM (B) | PG 9



EmFLEX 360M / RM | PG 10



EmGRAND 390M-ET / DET | PG 11



EmBER 2602M / RM | PG 12



EmBER R2602M / RM | PG 13



WLEX 100M / RM | PG 14



WLEX 100M-D / DX | PG 15

Running man pictogram is also available

# EMERGENCY LIGHT



EmLED-12NM | PG 16  
EmLED-14NM | PG 16



EmLED-12NM (B) | PG 17  
EmLED-14NM (B) | PG 17



EmLED-12NM DRUM | PG 18  
EmLED-14NM DRUM | PG 18



EmLED-12NM DRUM (B) | PG 19  
EmLED-14NM DRUM (B) | PG 19



EmLED-110NM | PG 20



EmLED-110NM SURFACE | PG 21



EmLED-110NM (B) | PG 22



EmLED-110NM SURFACE (B) | PG 23



EmCEL 12NM / 12M / 16NM  
| PG 24



EmDL 203NM | PG 25  
EmDL 205NM | PG 25



EmDL 203NM WP | PG 26



DL 2301NM | PG 27



DL 2301NM WP | PG 28

\*all images are not drawn to scale

# EMERGENCY CONVERSION KIT



LUNA-11NM AUX | PG 29  
LUNA-13NM AUX | PG 29



LED1880-M | PG 30



FL 140M-EV58 | PG 31

## LUMINAIRE



DENKO SUNLITE 18 | PG 32

## Battery Pack Certifications

Battery packs play a pivotal role in all emergency lighting systems. During AC power failure, the battery pack is automatically activated to power up the emergency lights at the rated duration to guide occupants to safety.

Our rechargeable Ni-Cd, Ni-MH and LiFePO4 batteries are rated to operate at high temperatures to ensure safety during normal and emergency operations.

Our products are powered by battery packs that are tested compliant to international EN standards.

Turn to PG 33 to find out more.

## Glossary

### MAINTAINED MODE (M)

The lamp is energised during normal conditions from main supply. In the event of mains power failure, the same lamp remains on by automatically switching to the integral battery supply.

### NON-MAINTAINED MODE (NM)

The lamp is off during normal mains supply and is automatically energised by the integral battery supply in the event of mains power failure.

## Symbols



Luminaires suitable for direct mounting on normally flammable surfaces.



Recessed mounted luminaires suitable for mounting on normally flammable surfaces, may not be covered with thermally insulating material.

### Class I

Class I luminaire in which protection against electric shock is provided with basic insulation and the connection of accessible conductive parts to the protective (earthing) conductor.



Class II luminaire in which protection against electric shock is provided with both basic insulation and double insulation or reinforced insulation, there being no provision for protective earthing conductor.

# EmFLEX 1602M / RM Series

## SLIM FLEX LED EMERGENCY EXIT SIGN

### Features and Benefits

- Slim and lightweight LED emergency exit signs with option for Exit or Running Man signage.
- Anti-corrosive housing, good for installation in high humidity and damp environment.
- Designed for seamless and hassle-free installation and maintenance.
- Optional snap-on recess plate available.
- Samsung LED lamps provide high efficiency, durability and low energy consumption.



EmFLEX 1602M



EmFLEX 1602RM

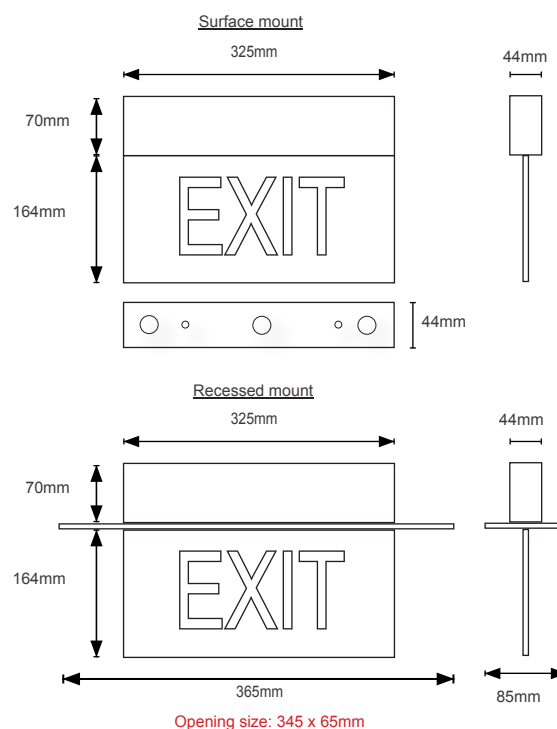


Recess plate REC160 \*



### Technical Data

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Mode of Operation     | Maintained                                                            |
| Lamp                  | Samsung 2W High flux white LED                                        |
| Operating Temperature | ta 0°C ~ 40°C                                                         |
| Power Consumption     | < 3W                                                                  |
| Mains Supply          | 230V AC 50Hz/60Hz                                                     |
| Battery               | High temperature Ni-Cd battery                                        |
| Charger               | Fully automatic                                                       |
| Charging Monitor      | Ø 5mm green LED                                                       |
| Recharge Period       | 24 hours                                                              |
| Testing Facility      | Test-switch for independent testing                                   |
| Emergency Duration    | 3 hours                                                               |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery              |
| Construction          | Injection moulded fire retardant polycarbonate                        |
| Weight (Nett/Gross)   | 0.6 kg / 0.8 kg<br>Recess plate: 0.1 kg                               |
| Compliance            | SS 563-1:2010/A1:2017<br>SS 563-2:2010/A2:2017<br>IEC 60598-2-22:2021 |
| Installation          | Ceiling, wall, suspended or recessed mounting                         |
| Cable Entry           | 3 x 20mm Ø knockout hole                                              |
| IP Rating             | IP30                                                                  |
| Legend                | White text/graphical symbol over ISO green background                 |
| Viewing Distance      | 30 m                                                                  |
| Warranty              | 1 year                                                                |



### Ordering Information

| MODEL                                           | LEGEND | MODEL                                                | LEGEND |
|-------------------------------------------------|--------|------------------------------------------------------|--------|
| EmFLEX 1602M                                    |        | EmFLEX 1602RM                                        |        |
| EmFLEX 1602M-E                                  |        | EmFLEX 1602RM-E                                      |        |
| EmFLEX 1602M-T                                  |        | EmFLEX 1602RM-T                                      |        |
| EmFLEX 1602M-D<br>(Double-sided with arrow)     | <br>   | EmFLEX 1602RM-D<br>(Double-sided)                    | <br>   |
| EmFLEX 1602M-DX<br>(Double-sided without arrow) | <br>   | EmFLEX 1602RM-D-AD<br>(Double-sided with arrow down) | <br>   |
| EmFLEX 1602RM-AD                                |        | EmFLEX 1602RM-D-AU<br>(Double-sided with arrow up)   | <br>   |
| EmFLEX 1602RM-AU                                |        | EmFLEX 1602RM-DX<br>(Double-sided without arrow)     | <br>   |

\* Remarks: Recess plate REC160 for recessed mounting is sold as a separate accessory.

# EmFLEX 1602M / RM (BLACK)

## SLIM FLEX LED EMERGENCY EXIT SIGN

### Features and Benefits

- Slim and lightweight LED emergency exit signs with option for Exit or Running Man signage with black casing.
- Anti-corrosive housing, good for installation in high humidity and damp environment.
- Designed for seamless and hassle-free installation and maintenance.
- Optional snap-on recess plate available.
- Samsung LED lamps provide high efficiency, durability and low energy consumption.



EmFLEX 1602M (B)



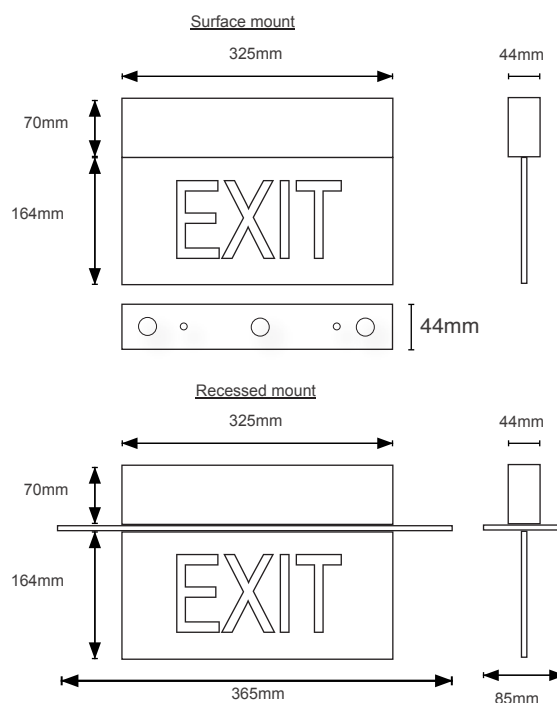
EmFLEX 1602RM (B)



Recess plate REC160 (B) \*

### Technical Data

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Mode of Operation     | Maintained                                                            |
| Lamp                  | Samsung 2W High flux white LED                                        |
| Operating Temperature | ta 0°C ~ 40°C                                                         |
| Power Consumption     | < 3W                                                                  |
| Mains Supply          | 230V AC 50Hz/60Hz                                                     |
| Battery               | High temperature Ni-Cd battery                                        |
| Charger               | Fully automatic                                                       |
| Charging Monitor      | Ø 5mm green LED                                                       |
| Recharge Period       | 24 hours                                                              |
| Testing Facility      | Test-switch for independent testing                                   |
| Emergency Duration    | 3 hours                                                               |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery              |
| Construction          | Injection moulded fire retardant polycarbonate                        |
| Weight (Nett/Gross)   | 0.6 kg / 0.8 kg<br>Recess plate: 0.1 kg                               |
| Compliance            | SS 563-1:2010/A1:2017<br>SS 563-2:2010/A2:2017<br>IEC 60598-2-22:2021 |
| Installation          | Ceiling, wall, suspended or recessed mounting                         |
| Cable Entry           | 3 x 20mm Ø knockout hole                                              |
| IP Rating             | IP30                                                                  |
| Legend                | White text/graphical symbol over ISO green background                 |
| Viewing Distance      | 30 m                                                                  |
| Warranty              | 1 year                                                                |



### Ordering Information

| MODEL                                               | LEGEND | MODEL                                                    | LEGEND |
|-----------------------------------------------------|--------|----------------------------------------------------------|--------|
| EmFLEX 1602M (B)                                    |        | EmFLEX 1602RM (B)                                        |        |
| EmFLEX 1602M-E (B)                                  |        | EmFLEX 1602RM-E (B)                                      |        |
| EmFLEX 1602M-T (B)                                  |        | EmFLEX 1602RM-T (B)                                      |        |
| EmFLEX 1602M-D (B)<br>(Double-sided with arrow)     |        | EmFLEX 1602RM-D (B)<br>(Double-sided)                    |        |
| EmFLEX 1602M-DX (B)<br>(Double-sided without arrow) |        | EmFLEX 1602RM-D-AD (B)<br>(Double-sided with arrow down) |        |
| EmFLEX 1602RM-AD (B)                                |        | EmFLEX 1602RM-D-AU (B)<br>(Double-sided with arrow up)   |        |
| EmFLEX 1602RM-AU (B)                                |        | EmFLEX 1602RM-DX (B)<br>(Double-sided without arrow)     |        |

\* Remarks: Recess plate REC160 (B) for recessed mounting is sold as a separate accessory.

# EmFLEX 360M / RM Series

## SLIM FLEX WIDE LED EMERGENCY EXIT



### Features and Benefits

- New slim, wide and lightweight LED emergency exit signs with option for Exit or Running Man signage.
- Anti-corrosive housing, good for installation in high humidity and damp environment.
- Designed for seamless and hassle-free installation and maintenance.
- Optional snap-on recess plate available.
- Samsung LED lamps provide high efficiency, durability and low energy consumption.



EmFLEX 360M



EmFLEX 360RM

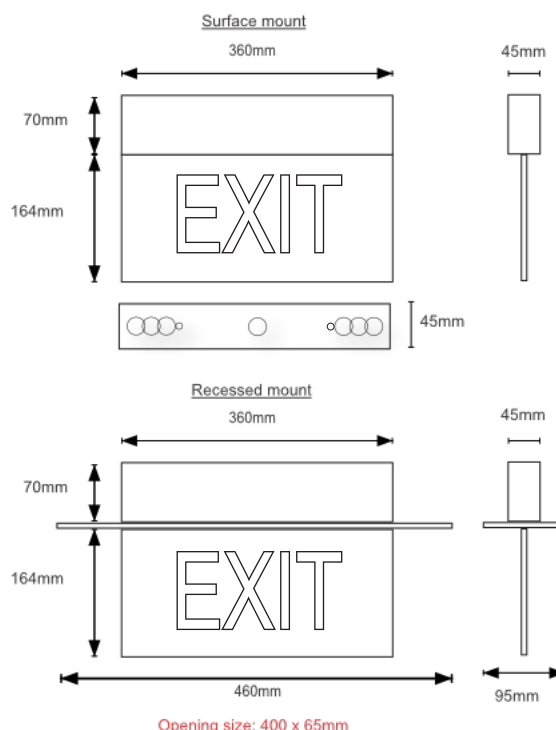


Recess plate REC360 \*



### Technical Data

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Mode of Operation     | Maintained                                                            |
| Lamp                  | Samsung 2W High flux white LED                                        |
| Operating Temperature | ta 0°C ~ 40°C                                                         |
| Mains Supply          | 230V AC 50Hz/60Hz                                                     |
| Power Consumption     | < 3W                                                                  |
| Battery *             | High temperature Ni-Cd battery<br>High temperature LiFePO4 battery    |
| Charger               | Fully automatic                                                       |
| Charging Monitor      | Ø 5mm green LED                                                       |
| Recharge Period       | 24 hours                                                              |
| Testing Facility      | Test-switch for independent testing                                   |
| Emergency Duration    | 3 hours                                                               |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery              |
| Construction          | Injection moulded fire retardant polycarbonate                        |
| Weight (Nett/Gross)   | 0.65 kg / 0.85 kg<br>Recess plate: 0.16 kg                            |
| Compliance            | SS 563-1:2010/A1:2017<br>SS 563-2:2010/A2:2017<br>IEC 60598-2-22:2021 |
| Installation          | Ceiling, wall, suspended or recessed mounting                         |
| Cable Entry           | 7 x 20mm Ø knockout hole                                              |
| IP Rating             | IP30                                                                  |
| Legend                | White text/graphical symbol over ISO green background                 |
| Viewing Distance      | 30 m                                                                  |
| Warranty              | 1 year                                                                |



### Ordering Information

| MODEL                                       | LEGEND | MODEL                                            | LEGEND   |
|---------------------------------------------|--------|--------------------------------------------------|----------|
| EmFLEX 360M                                 |        | EmFLEX 360RM                                     |          |
| EmFLEX 360M-E                               |        | EmFLEX 360RM-E                                   |          |
| EmFLEX 360M-T                               |        | EmFLEX 360RM-T                                   |          |
| EmFLEX 360M-D (Double-sided with arrow)     | <br>   | EmFLEX 360RM-D (Double-sided)                    | <br>     |
| EmFLEX 360M-DX (Double-sided without arrow) | <br>   | EmFLEX 360RM-D-AD (Double-sided with arrow down) | <br><br> |
| EmFLEX 360RM-AD                             |        | EmFLEX 360RM-D-AU (Double-sided with arrow up)   | <br><br> |
| EmFLEX 360RM-AU                             |        | EmFLEX 360RM-DX (Double-sided without arrow)     | <br>     |

\* Remarks: For Ni-Cd battery version, add suffix (NICD). For LiFePO4 battery version, add suffix (LFP).  
Recess plate REC360 for recessed mounting is sold as a separate accessory.

# EmGRAND 390M-ET / EmGRAND 390M-DET

## DOUBLE ARROW SLIM LED EMERGENCY EXIT SIGN

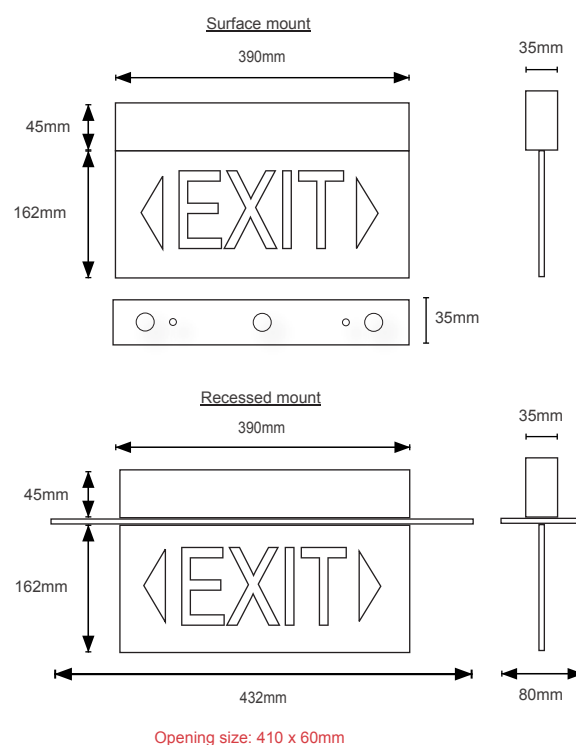
**NEW**

### Features and Benefits

- New ultra slim and lightweight housing LED emergency exit signs with double arrow Exit signage.
- Designed for easy installation and maintenance.
- Samsung LED lamps provide high efficiency, durability and low energy consumption.



Recessed panel REC390 \*



### Ordering Information

| MODEL           | LEGEND | MODEL            | LEGEND |
|-----------------|--------|------------------|--------|
| EmGRAND 390M-ET |        | EmGRAND 390M-DET |        |

\* Remarks: Recessed panel REC390 for recessed mounting is sold as a separate accessory.

### Technical Data

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Mode of Operation     | Maintained                                                            |
| Lamp                  | Samsung 2W High flux white LED                                        |
| Operating Temperature | ta 0°C ~ 40°C                                                         |
| Mains Supply          | 230V AC 50Hz/60Hz                                                     |
| Power Consumption     | < 3W                                                                  |
| Battery               | High temperature LiFePO4 battery                                      |
| Charger               | Fully automatic                                                       |
| Charging Monitor      | Ø 5mm green LED                                                       |
| Recharge Period       | 24 hours                                                              |
| Testing Facility      | Test-switch for independent testing                                   |
| Emergency Duration    | 3 hours                                                               |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery              |
| Construction          | Injection moulded fire retardant polycarbonate                        |
| Weight (Nett/Gross)   | 0.5 kg / 0.7 kg<br>Recess plate: 0.1 kg                               |
| Compliance            | SS 563-1:2010/A1:2017<br>SS 563-2:2010/A2:2017<br>IEC 60598-2-22:2021 |
| Installation          | Ceiling, wall, suspended or recessed mounting                         |
| Cable Entry           | 3 x 20mm Ø knockout hole                                              |
| IP Rating             | IP30                                                                  |
| Legend                | White text symbol over ISO green background                           |
| Viewing Distance      | 30 m                                                                  |
| Warranty              | 1 year                                                                |

# EmBER 2602M / RM Series

## SLIM LED BOX EMERGENCY EXIT SIGN

### Features and Benefits

- Self contained emergency exit sign encased in a slim box made of fire retardant polycarbonate.
- New design with thin bezels for a minimalist and modern aesthetic.
- Options for Exit or Running Man signage available.
- Suitable for installation on ceiling, wall or suspended mounting.
- LED lamps provide high efficiency, durability and low energy consumption.



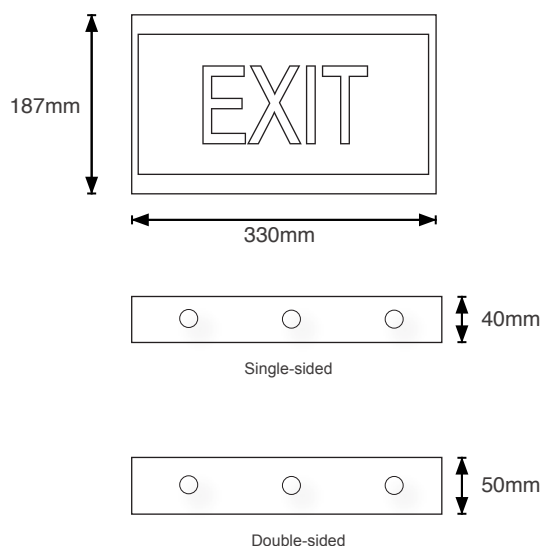
EmBER 2602M



EmBER 2602M-D

### Technical Data

|                     |                                                                    |
|---------------------|--------------------------------------------------------------------|
| Mode of Operation   | Maintained                                                         |
| Lamp                | 2W High flux white LED                                             |
| Mains Supply        | 230V AC 50/60Hz                                                    |
| Power Consumption   | < 4W                                                               |
| Battery             | High temperature Ni-Cd battery                                     |
| Charger             | Fully automatic                                                    |
| Charging Monitor    | Ø 5mm green LED                                                    |
| Recharge Period     | 24 hours                                                           |
| Testing Facility    | Test-switch for independent testing                                |
| Emergency Duration  | 3 hours                                                            |
| Safety Feature      | Low-voltage cut-off to prevent over-discharge of battery           |
| Construction        | Injection moulded fire retardant polycarbonate                     |
| Weight (Nett/Gross) | Single-sided: 0.74 kg / 0.94 kg<br>Double-sided: 1.06 kg / 1.26 kg |
| Compliance          | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016   |
| Installation        | Ceiling, wall or suspended mounting                                |
| Cable Entry         | 5 x 20mm Ø knockout hole                                           |
| IP Rating           | IP30                                                               |
| Legend              | White text/graphical symbol over ISO green background              |
| Viewing Distance    | 30 m                                                               |
| Warranty            | 1 year                                                             |



### Ordering Information

| EXIT                         | LEGEND | RUNNING MAN                   | LEGEND |
|------------------------------|--------|-------------------------------|--------|
| EmBER 2602M                  |        | EmBER 2602RM                  |        |
| EmBER 2602M-E                |        | EmBER 2602RM-E                |        |
| EmBER 2602M-T                |        | EmBER 2602RM-T                |        |
| EmBER 2602M-D (Double-sided) |        | EmBER 2602RM-D (Double-sided) |        |

# EmBER R2602M / RM Recessed Series

## SLIM LED RECESSED BOX EMERGENCY EXIT SIGN

### Features and Benefits

- Self contained emergency exit sign encased in a slim box made of fire retardant polycarbonate.
- New design with thin bezels for a minimalist and modern aesthetic.
- Specially designed for recessed wall mounting.
- Options for Exit or Running Man signage available.
- LED lamps provide high efficiency, durability and low energy consumption.



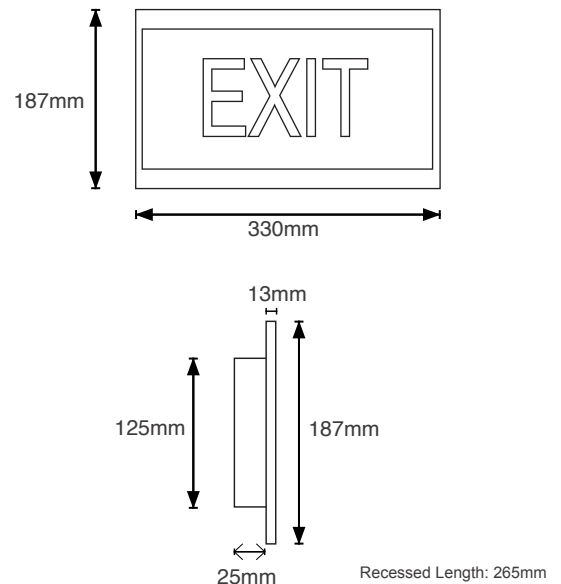
PLS Listed  
Emergency  
Exit Sign



EmBER R2602RM-

### Technical Data

|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Mode of Operation   | Maintained                                                       |
| Lamp                | 2W High flux white LED                                           |
| Mains Supply        | 230V AC 50/60Hz                                                  |
| Power Consumption   | < 4W                                                             |
| Battery             | High temperature Ni-Cd battery                                   |
| Charger             | Fully automatic                                                  |
| Charging Monitor    | Ø 5mm green LED                                                  |
| Recharge Period     | 24 hours                                                         |
| Testing Facility    | Test-switch for independent testing                              |
| Emergency Duration  | 3 hours                                                          |
| Safety Feature      | Low-voltage cut-off to prevent over-discharge of battery         |
| Construction        | Injection moulded fire retardant polycarbonate                   |
| Weight (Nett/Gross) | 0.74 kg / 0.94 kg                                                |
| Compliance          | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016 |
| Installation        | Recessed wall mounting                                           |
| Cable Entry         | 1 x 20mm Ø knockout hole                                         |
| IP Rating           | IP30                                                             |
| Legend              | White text/graphical symbol over ISO green background            |
| Viewing Distance    | 30 m                                                             |
| Warranty            | 1 year                                                           |



### Ordering Information

| EXIT                    | LEGEND | RUNNING MAN              | LEGEND |
|-------------------------|--------|--------------------------|--------|
| EmBER R2602M Recessed   |        | EmBER R2602RM Recessed   |        |
| EmBER R2602M-E Recessed |        | EmBER R2602RM-E Recessed |        |
| EmBER R2602M-T Recessed |        | EmBER R2602RM-T Recessed |        |

# WLEX 100M / RM Series

## WEATHERPROOF EMERGENCY EXIT SIGN

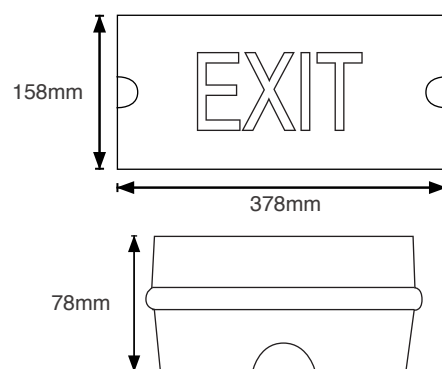
### Features and Benefits

- IP65 weatherproof self contained emergency exit sign approved and certified by TÜV SÜD PSB.
- Options for Exit or Running Man signage available.
- Ideal for outdoor areas such as dusty, humid and corrosive environments including car parks, loading bays, workshops, laboratories and corridor areas.
- LED lamps provide high efficiency, durability and low energy consumption.



### Technical Data

|                       |                                                                  |
|-----------------------|------------------------------------------------------------------|
| Mode of Operation     | Maintained                                                       |
| Lamp                  | 2W High flux white LED                                           |
| Operating Temperature | ta 0°C ~ 50°C                                                    |
| Mains Supply          | 230V AC 50/60Hz                                                  |
| Power Consumption     | < 4W                                                             |
| Battery               | High temperature Ni-Cd battery                                   |
| Charger               | Fully automatic                                                  |
| Charging Monitor      | Ø 5mm green LED                                                  |
| Recharge Period       | 24 hours                                                         |
| Testing Facility      | Test-switch for independent testing                              |
| Emergency Duration    | 3 hours                                                          |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery         |
| Construction          | Injection moulded fire retardant polycarbonate                   |
| Weight (Nett/Gross)   | 1.2 kg / 1.3 kg                                                  |
| Compliance            | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016 |
| Installation          | Wall or suspended mounting                                       |
| IP Rating             | IP65 rated TÜV SÜD PSB certified*                                |
| Legend                | White text/graphical symbol over ISO green background            |
| Viewing Distance      | 30 m                                                             |
| Warranty              | 1 year                                                           |



### Ordering Information

| EXIT        | LEGEND | RUNNING MAN  | LEGEND |
|-------------|--------|--------------|--------|
| WLEX 100M   |        | WLEX 100RM   |        |
| WLEX 100M-E |        | WLEX 100RM-E |        |
| WLEX 100M-T |        | WLEX 100RM-T |        |

### Remarks

\* For Weatherproof (IP65) installation, a cable gland (PG9 to PG13.5) is required for the AC incoming cable entry to ensure IP65 rating.

# WLEX 100M-D / WLEX 100M-DX

## DOUBLE SIDED WEATHERPROOF EMERGENCY EXIT

### Features and Benefits

- IP65 weatherproof self contained emergency exit sign approved and certified by TÜV SÜD PSB.
- Ideal for outdoor areas such as dusty, humid and corrosive environments including car parks, loading bays, workshops, laboratories and corridor areas.
- LED lamps provide high efficiency, durability and low energy consumption.



PLS Listed  
Emergency  
Exit Sign

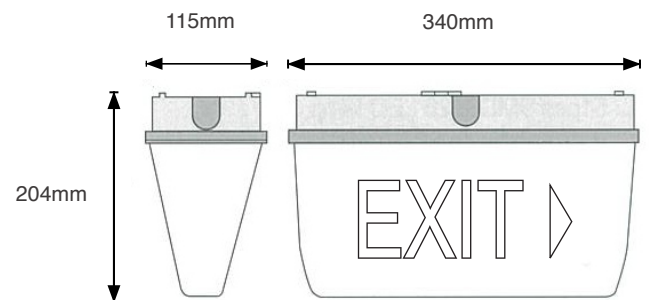


Class I



### Technical Data

|                     |                                                                  |
|---------------------|------------------------------------------------------------------|
| Mode of Operation   | Maintained                                                       |
| Lamp                | 4W High flux white LED module                                    |
| Mains Supply        | 230V AC 50/60Hz                                                  |
| Power Consumption   | < 4.5W                                                           |
| Battery             | High temperature Ni-Cd battery                                   |
| Charger             | Fully automatic                                                  |
| Charging Monitor    | Ø 5mm green LED                                                  |
| Recharge Period     | 24 hours                                                         |
| Testing Facility    | Test-switch for independent testing                              |
| Emergency Duration  | 3 hours                                                          |
| Safety Feature      | Low-voltage cut-off to prevent over-discharge of battery         |
| Construction        | Injection moulded fire retardant polycarbonate                   |
| Weight (Nett/Gross) | 1.2 kg / 1.3 kg                                                  |
| Compliance          | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016 |
| Installation        | Ceiling or suspended mounting                                    |
| IP Rating           | IP65 rated TÜV SÜD PSB certified*                                |
| Legend              | White text over ISO green background                             |
| Viewing Distance    | 30 m                                                             |
| Warranty            | 1 year                                                           |



### Ordering Information

| EXIT         | LEGEND |
|--------------|--------|
| WLEX 100M-D  |        |
| WLEX 100M-DX |        |

### Remarks

\* For Weatherproof (IP65) installation, a cable gland (PG9 to PG13.5) is required for the AC incoming cable entry to ensure IP65 rating.

# EmLED-12NM / EmLED-14NM

## EASI LED RECESSED EMERGENCY LIGHT

### Features and Benefits

- Compact all-in-one, self-contained LED emergency light designed for easy and quick recessed installation on ceiling.
- Includes an optional large ring adapter.
- Suitable for various indoor environments such as retail, commercial, hospitality and healthcare industries.
- LED lamps provide high efficiency, durability and low energy consumption.



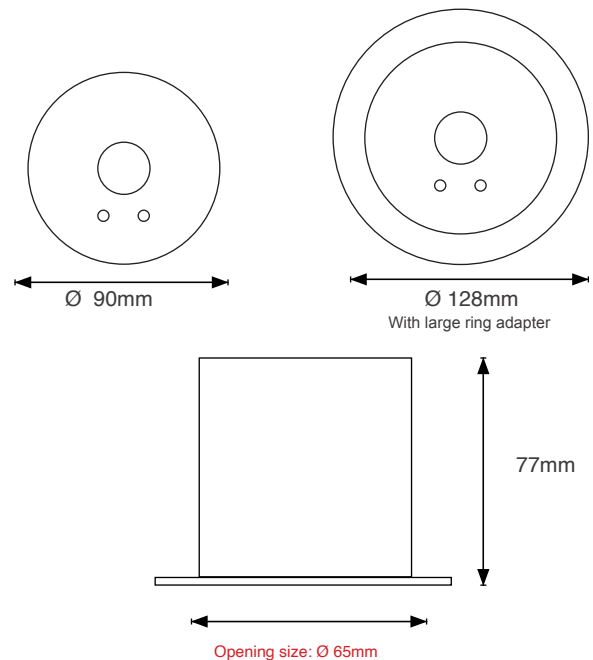
EmLED-12NM  
EmLED-14NM

EmLED-12NM  
with large ring adapter  
EmLED-14NM  
with large ring adapter



### Technical Data

|                       |                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained                                                                                 |
| Lamp                  | Samsung 2W/4W High flux white LED                                                              |
| Operating Temperature | ta 0°C ~ 50°C                                                                                  |
| Mains Supply          | 230V AC 50Hz/60Hz                                                                              |
| Power Consumption     | EmLED-12NM: < 1W<br>EmLED-14NM: < 2W                                                           |
| Battery               | EmLED-12NM:<br>High temperature Ni-Cd battery<br>EmLED-14NM:<br>High temperature Ni-MH battery |
| Charger               | Fully automatic                                                                                |
| Charging Monitor      | Green LED                                                                                      |
| Recharge Period       | 24 hours                                                                                       |
| Testing Facility      | Test-switch for independent testing                                                            |
| Emergency Duration    | 3 hours                                                                                        |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                       |
| Construction          | Injection moulded<br>fire retardant polycarbonate                                              |
| Weight (Nett/Gross)   | EmLED-12NM: 0.20 kg / 0.28 kg<br>EmLED-14NM: 0.28 kg / 0.34 kg                                 |
| Compliance            | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016<br>SS IEC 60598-1:2016        |
| Installation          | Recessed mount                                                                                 |
| IP Rating             | IP20                                                                                           |
| Warranty              | 1 year                                                                                         |



### Ordering Information

| MODEL      | LAMP                              |
|------------|-----------------------------------|
| EmLED-12NM | Samsung 2W<br>High flux white LED |
| EmLED-14NM | Samsung 4W<br>High flux white LED |

# EmLED-12NM (BLACK)

# EmLED-14NM (BLACK)

## EASI LED RECESSED EMERGENCY LIGHT

### Features and Benefits

- Compact all-in-one, self-contained LED emergency light designed for easy and quick recessed installation on ceiling.
- Includes an optional large ring adapter.
- Suitable for various indoor environments such as retail, commercial, hospitality and healthcare industries.
- LED lamps provide high efficiency, durability and low energy consumption.



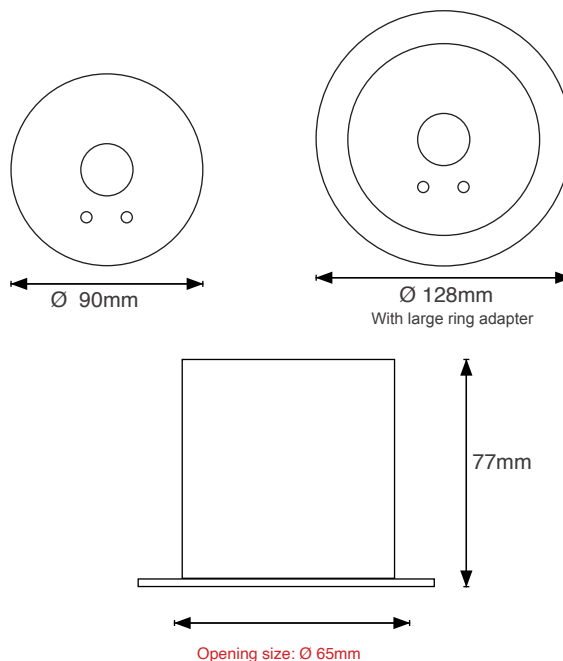
EmLED-12NM (B)  
EmLED-14NM (B)



EmLED-12NM (B)  
with large ring adapter  
EmLED-14NM (B)  
with large ring adapter

### Technical Data

|                       |                                                                                                        |
|-----------------------|--------------------------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained                                                                                         |
| Lamp                  | Samsung 2W/4W High flux white LED                                                                      |
| Operating Temperature | ta 0°C ~ 50°C                                                                                          |
| Mains Supply          | 230V AC 50Hz/60Hz                                                                                      |
| Power Consumption     | EmLED-12NM (B): < 1W<br>EmLED-14NM (B): < 2W                                                           |
| Battery               | EmLED-12NM (B):<br>High temperature Ni-Cd battery<br>EmLED-14NM (B):<br>High temperature Ni-MH battery |
| Charger               | Fully automatic                                                                                        |
| Charging Monitor      | Green LED                                                                                              |
| Recharge Period       | 24 hours                                                                                               |
| Testing Facility      | Test-switch for independent testing                                                                    |
| Emergency Duration    | 3 hours                                                                                                |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                               |
| Construction          | Injection moulded<br>fire retardant polycarbonate                                                      |
| Weight (Nett/Gross)   | EmLED-12NM (B): 0.20 kg / 0.28 kg<br>EmLED-14NM (B): 0.28 kg / 0.34 kg                                 |
| Compliance            | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016<br>SS IEC 60598-1:2016                |
| Installation          | Recessed mount                                                                                         |
| IP Rating             | IP20                                                                                                   |
| Warranty              | 1 year                                                                                                 |



### Ordering Information

| MODEL          | LAMP                              |
|----------------|-----------------------------------|
| EmLED-12NM (B) | Samsung 2W<br>High flux white LED |
| EmLED-14NM (B) | Samsung 4W<br>High flux white LED |

# EmLED-12NM DRUM

# EmLED-14NM DRUM

## EASI LED SURFACE EMERGENCY LIGHT

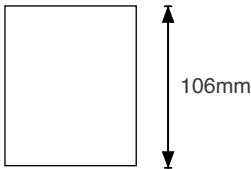
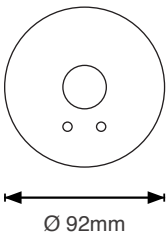
### Features and Application

- New compact all-in-one, self-contained LED emergency light for surface installation on ceilings designed for easy installation and usage.
- Suitable for various indoor environments such as retail, commercial, hospitality and healthcare industries.
- LED lamps provide high efficiency, durability and low energy consumption.



### Technical Data

|                       |                                                                                                          |
|-----------------------|----------------------------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained                                                                                           |
| Lamp                  | Samsung 2W/4W High flux white LED                                                                        |
| Operating Temperature | ta 0°C ~ 50°C                                                                                            |
| Mains Supply          | 230V AC 50Hz/60Hz                                                                                        |
| Power Consumption     | EmLED-12NM DRUM: < 1W<br>EmLED-14NM DRUM: < 2W                                                           |
| Battery               | EmLED-12NM DRUM:<br>High temperature Ni-Cd battery<br>EmLED-14NM DRUM:<br>High temperature Ni-MH battery |
| Charger               | Fully automatic                                                                                          |
| Charging Monitor      | Green LED                                                                                                |
| Recharge Period       | 24 hours                                                                                                 |
| Testing Facility      | Test-switch for independent testing                                                                      |
| Emergency Duration    | 3 hours                                                                                                  |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                                 |
| Construction          | Polycarbonate                                                                                            |
| Weight (Nett)         | EmLED-12NM DRUM: 0.28 kg<br>EmLED-14NM DRUM: 0.36 kg                                                     |
| Compliance            | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016<br>SS IEC 60598-1:2016                  |
| Installation          | Surface mount                                                                                            |
| IP Rating             | IP20                                                                                                     |
| Warranty              | 1 year                                                                                                   |



### Ordering Information

| MODEL           | LAMP                              |
|-----------------|-----------------------------------|
| EmLED-12NM DRUM | Samsung 2W<br>High flux white LED |
| EmLED-14NM DRUM | Samsung 4W<br>High flux white LED |

# EmLED-12NM DRUM (BLACK)

# EmLED-14NM DRUM (BLACK)

## EASI LED SURFACE EMERGENCY LIGHT

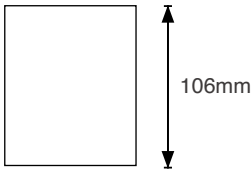
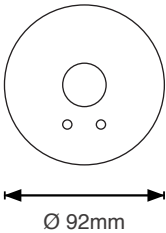
### Features and Application

- New compact all-in-one, self-contained LED emergency light for surface installation on ceilings designed for easy installation and usage.
- Suitable for various indoor environments such as retail, commercial, hospitality and healthcare industries.
- LED lamps provide high efficiency, durability and low energy consumption.



### Technical Data

|                       |                                                                                                                  |
|-----------------------|------------------------------------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained                                                                                                   |
| Lamp                  | Samsung 2W/4W High flux white LED                                                                                |
| Operating Temperature | ta 0°C ~ 50°C                                                                                                    |
| Mains Supply          | 230V AC 50Hz/60Hz                                                                                                |
| Power Consumption     | EmLED-12NM DRUM (B): < 1W<br>EmLED-14NM DRUM (B): < 2W                                                           |
| Battery               | EmLED-12NM DRUM (B):<br>High temperature Ni-Cd battery<br>EmLED-14NM DRUM (B):<br>High temperature Ni-MH battery |
| Charger               | Fully automatic                                                                                                  |
| Charging Monitor      | Green LED                                                                                                        |
| Recharge Period       | 24 hours                                                                                                         |
| Testing Facility      | Test-switch for independent testing                                                                              |
| Emergency Duration    | 3 hours                                                                                                          |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                                         |
| Construction          | Polycarbonate                                                                                                    |
| Weight (Nett)         | EmLED-12NM DRUM (B): 0.28 kg<br>EmLED-14NM DRUM (B): 0.36 kg                                                     |
| Compliance            | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016<br>SS IEC 60598-1:2016                          |
| Installation          | Surface mount                                                                                                    |
| IP Rating             | IP20                                                                                                             |
| Warranty              | 1 year                                                                                                           |



### Ordering Information

| MODEL               | LAMP                              |
|---------------------|-----------------------------------|
| EmLED-12NM DRUM (B) | Samsung 2W<br>High flux white LED |
| EmLED-14NM DRUM (B) | Samsung 4W<br>High flux white LED |

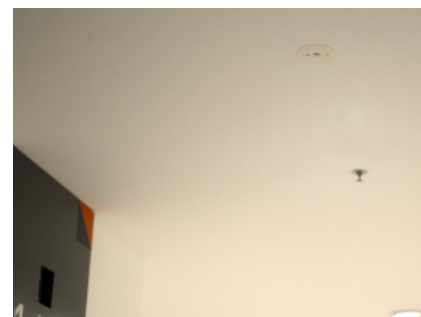
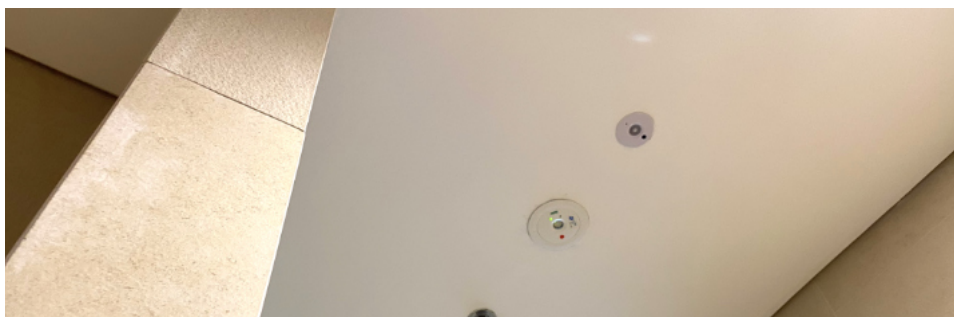
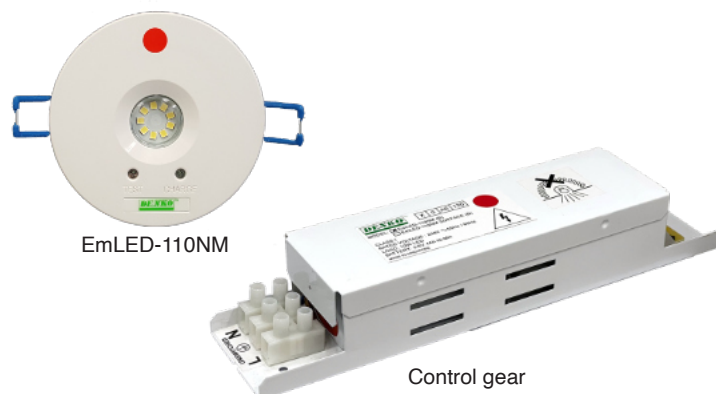
# EmLED-110NM

## VENUS LED 10W RECESSED EMERGENCY LIGHT

Application: Ceiling height above 8-metre

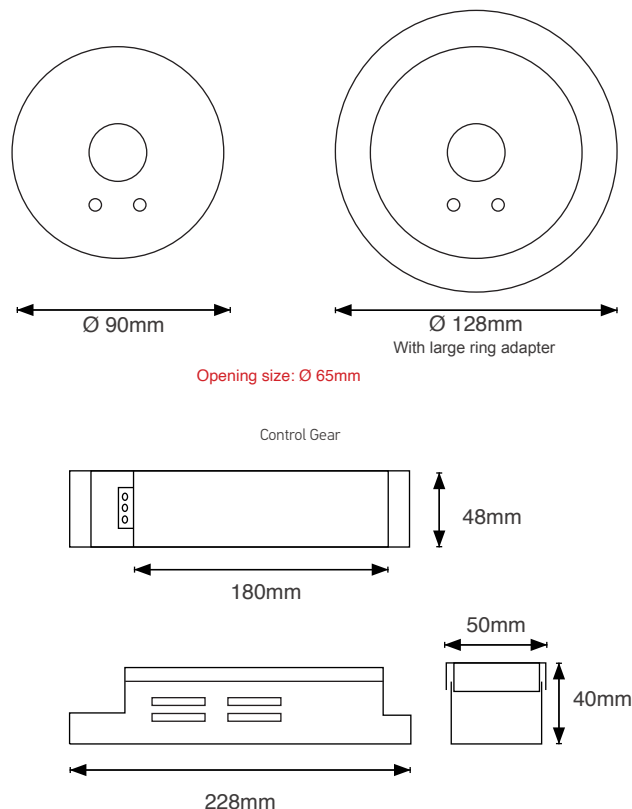
### Features and Application

- High lumens self-contained LED emergency light designed for easy and quick recessed installation on high ceilings.
- Includes an optional large ring adapter.
- Suitable for various indoor environments such as retail, commercial, hospitality and healthcare industries.
- LED lamps provide high efficiency, durability and low energy consumption.



### Technical Data

|                       |                                                                                                                             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained                                                                                                              |
| Lamp                  | Samsung 10W High flux white LED                                                                                             |
| Operating Temperature | ta 0°C ~ 50°C                                                                                                               |
| Mains Supply          | 230V AC 50Hz/60Hz                                                                                                           |
| Power Consumption     | < 3W                                                                                                                        |
| Battery               | High temperature Ni-MH battery                                                                                              |
| Charger               | Fully automatic                                                                                                             |
| Charging Monitor      | Green LED                                                                                                                   |
| Recharge Period       | 24 hours                                                                                                                    |
| Testing Facility      | Test-switch for independent testing                                                                                         |
| Emergency Duration    | 2 hours                                                                                                                     |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                                                    |
| Construction          | Disc: Polycarbonate<br>Control gear: Electro-galvanised steel casing<br>Surface: Aluminium casing with epoxy powder coating |
| Weight (Nett/Gross)   | Disc: 0.1 kg / 0.15 kg<br>Control gear: 0.52 kg / 0.57 kg                                                                   |
| Compliance            | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016<br>SS IEC 60598-1:2016                                     |
| Installation          | Recessed mount                                                                                                              |
| IP Rating             | IP20                                                                                                                        |
| Warranty              | 1 year                                                                                                                      |



### Ordering Information

| MODEL       | LAMP                               |
|-------------|------------------------------------|
| EmLED-110NM | Samsung 10W<br>High flux white LED |

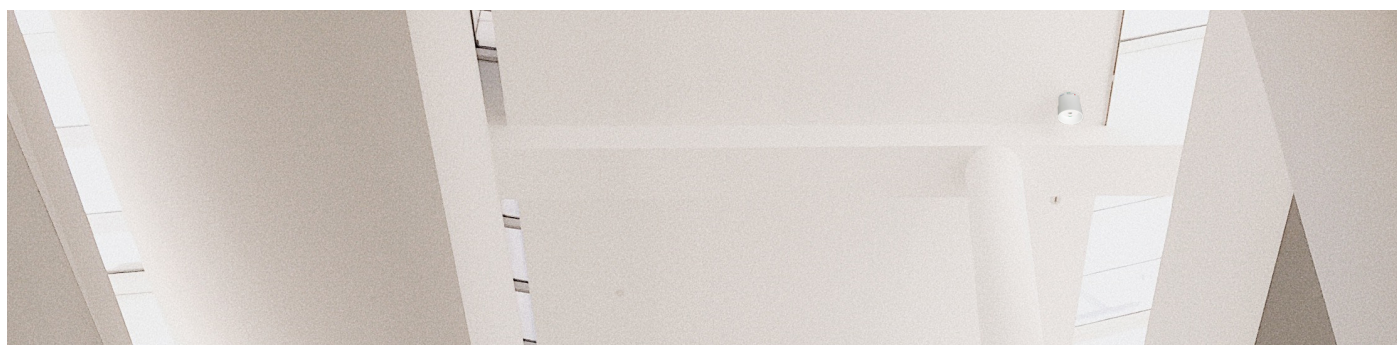
# EmLED-110NM SURFACE

## VENUS LED 10W SURFACE EMERGENCY LIGHT

Application: Ceiling height above 8-metre

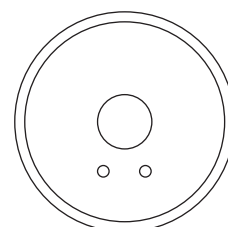
### Features and Application

- New high lumens self-contained LED emergency light for surface installation.
- Suitable for various indoor environments such as retail, commercial, hospitality and healthcare industries.
- LED lamps provide high efficiency, durability and low energy consumption.

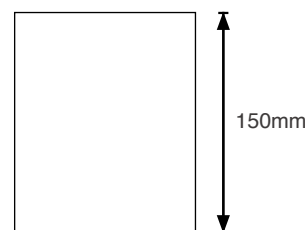


### Technical Data

|                       |                                                                                         |
|-----------------------|-----------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained                                                                          |
| Lamp                  | Samsung 10W High flux white LED                                                         |
| Operating Temperature | ta 0°C ~ 50°C                                                                           |
| Mains Supply          | 230V AC 50Hz/60Hz                                                                       |
| Power Consumption     | < 3W                                                                                    |
| Battery               | High temperature Ni-MH battery                                                          |
| Charger               | Fully automatic                                                                         |
| Charging Monitor      | Green LED                                                                               |
| Recharge Period       | 24 hours                                                                                |
| Testing Facility      | Test-switch for independent testing                                                     |
| Emergency Duration    | 2 hours                                                                                 |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                |
| Construction          | Disc: Polycarbonate<br>Surface: Aluminium casing with epoxy powder coating              |
| Weight (Nett/Gross)   | 0.82 kg / 0.92 kg                                                                       |
| Compliance            | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016<br>SS IEC 60598-1:2016 |
| Installation          | Surface mount                                                                           |
| IP Rating             | IP20                                                                                    |
| Warranty              | 1 year                                                                                  |



Ø 126mm



### Ordering Information

| MODEL               | LAMP                               |
|---------------------|------------------------------------|
| EmLED-110NM SURFACE | Samsung 10W<br>High flux white LED |

# EmLED-110NM (BLACK)

## VENUS LED 10W RECESSED EMERGENCY LIGHT

Application: Ceiling height above 8-metre

### Features and Application

- High lumens self-contained LED emergency light designed for easy and quick recessed installation on high ceilings.
- Includes an optional large ring adapter.
- Suitable for various indoor environments such as retail, commercial, hospitality and healthcare industries.
- LED lamps provide high efficiency, durability and low energy consumption.



EmLED-110NM (B)

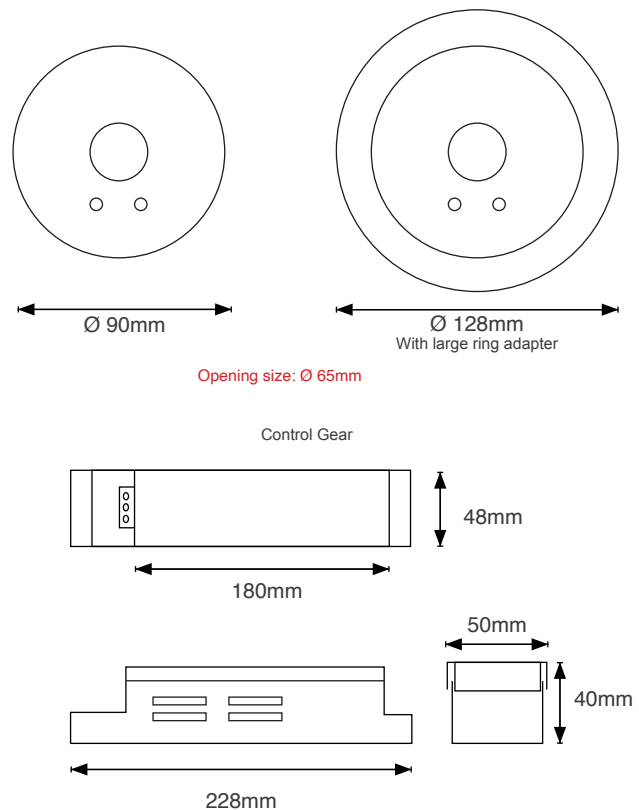


Control gear



### Technical Data

|                     |                                                                                                                             |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Mode of Operation   | Non-maintained                                                                                                              |
| Lamp                | Samsung 10W High flux white LED                                                                                             |
| Mains Supply        | 230V AC 50Hz/60Hz                                                                                                           |
| Power Consumption   | < 3W                                                                                                                        |
| Battery             | High temperature Ni-MH battery                                                                                              |
| Charger             | Fully automatic                                                                                                             |
| Charging Monitor    | Green LED                                                                                                                   |
| Recharge Period     | 24 hours                                                                                                                    |
| Testing Facility    | Test-switch for independent testing                                                                                         |
| Emergency Duration  | 2 hours                                                                                                                     |
| Safety Feature      | Low-voltage cut-off to prevent over-discharge of battery                                                                    |
| Construction        | Disc: Polycarbonate<br>Control gear: Electro-galvanised steel casing<br>Surface: Aluminium casing with epoxy powder coating |
| Weight (Nett/Gross) | Disc: 0.1 kg / 0.15 kg<br>Control gear: 0.52 kg / 0.57 kg                                                                   |
| Compliance          | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016<br>SS IEC 60598-1:2016                                     |
| Installation        | Recessed mount                                                                                                              |
| IP Rating           | IP20                                                                                                                        |
| Warranty            | 1 year                                                                                                                      |



### Ordering Information

| MODEL           | LAMP                               |
|-----------------|------------------------------------|
| EmLED-110NM (B) | Samsung 10W<br>High flux white LED |

# EmLED-110NM SURFACE (BLACK)

## VENUS LED 10W SURFACE EMERGENCY LIGHT

Application: Ceiling height above 8-metre

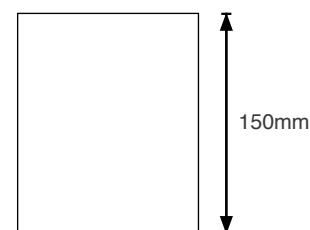
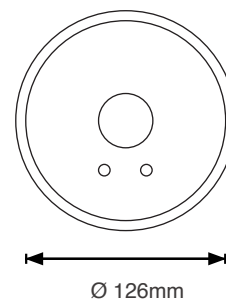
### Features and Application

- New high lumens self-contained LED emergency light for surface installation.
- Suitable for various indoor environments such as retail, commercial, hospitality and healthcare industries.
- LED lamps provide high efficiency, durability and low energy consumption.



### Technical Data

|                     |                                                                                         |
|---------------------|-----------------------------------------------------------------------------------------|
| Mode of Operation   | Non-maintained                                                                          |
| Lamp                | Samsung 10W High flux white LED                                                         |
| Mains Supply        | 230V AC 50Hz/60Hz                                                                       |
| Power Consumption   | < 3W                                                                                    |
| Battery             | High temperature Ni-MH battery                                                          |
| Charger             | Fully automatic                                                                         |
| Charging Monitor    | Green LED                                                                               |
| Recharge Period     | 24 hours                                                                                |
| Testing Facility    | Test-switch for independent testing                                                     |
| Emergency Duration  | 2 hours                                                                                 |
| Safety Feature      | Low-voltage cut-off to prevent over-discharge of battery                                |
| Construction        | Disc: Polycarbonate<br>Surface: Aluminium casing with epoxy powder coating              |
| Weight (Nett/Gross) | 0.82 kg / 0.92 kg                                                                       |
| Compliance          | SS 563-1:2010<br>SS 563-2:2010/A1:2013<br>SS IEC 60598-2-22:2016<br>SS IEC 60598-1:2016 |
| Installation        | Surface mount                                                                           |
| IP Rating           | IP20                                                                                    |
| Warranty            | 1 year                                                                                  |



### Ordering Information

| MODEL                   | LAMP                               |
|-------------------------|------------------------------------|
| EmLED-110NM SURFACE (B) | Samsung 10W<br>High flux white LED |

# EmCEL 12NM / EmCEL 12M / EmCEL

## IP65 WEATHERPROOF LED COMPACT EMERGENCY

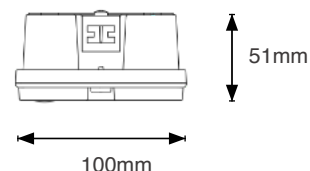
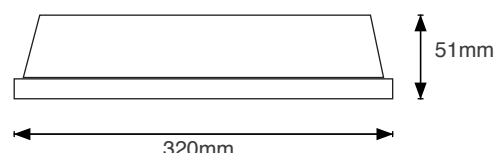
### Features and Application

- Self-contained LED emergency light with new slim and lightweight design.
- Easy installation with optional recess mounting spring clips included.
- LED lamps provide high efficiency, durability and low energy consumption.
- Weatherproof IP65 rated TÜV SÜD PSB certified, ideal for outdoor installations in dusty, humid and corrosive environments including car parks, loading bays, workshops, laboratories and corridor areas.



### Technical Data

|                       |                                                                                                            |
|-----------------------|------------------------------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained / Maintained                                                                                |
| Lamp                  | Samsung 2W/6W High flux white LED                                                                          |
| Operating Temperature | ta 0°C ~ 50°C                                                                                              |
| Mains Supply          | 230V AC 50Hz/60Hz                                                                                          |
| Power Consumption     | EmCEL 12NM: < 1W<br>EmCEL 12M: < 2W<br>EmCEL 16NM: < 2W                                                    |
| Battery               | EmCEL 12NM / EmCEL 12M:<br>High temperature Ni-Cd battery<br>EmCEL 16NM:<br>High temperature Ni-MH battery |
| Charger               | Fully automatic                                                                                            |
| Charging Monitor      | Green LED                                                                                                  |
| Recharge Period       | 24 hours                                                                                                   |
| Testing Facility      | Push button for independent testing                                                                        |
| Emergency Duration    | 3 hours                                                                                                    |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                                   |
| Construction          | Injection moulded fire retardant polycarbonate housing with clear reeded diffuser                          |
| Weight (Nett/Gross)   | 0.55 kg / 0.75 kg                                                                                          |
| Compliance            | SS 563-1:2010<br>SS 563-2/A1:2013<br>SS IEC 60598-2-22:2016<br>SS IEC 60598-1:2016                         |
| Installation          | Ceiling, wall or recessed mounting                                                                         |
| Cable Entry           | 3 x 20mm Ø knockout hole                                                                                   |
| IP Rating             | IP65 rated TÜV SÜD PSB certified*                                                                          |
| Warranty              | 1 year                                                                                                     |



### Ordering Information

| MODEL      | LAMP | MODE           |
|------------|------|----------------|
| EmCEL 12NM | 2W   | Non-maintained |
| EmCEL 12M  | 2W   | Maintained     |
| EmCEL 16NM | 6W   | Non-maintained |

### Remarks

\* For Weatherproof (IP65) installation, a cable gland (PG9 to PG13.5) is required for the AC incoming cable entry to ensure IP65 rating.

# EmDL 203NM / EmDL 205NM

## LED TWIN-FLOOD EMERGENCY LIGHT

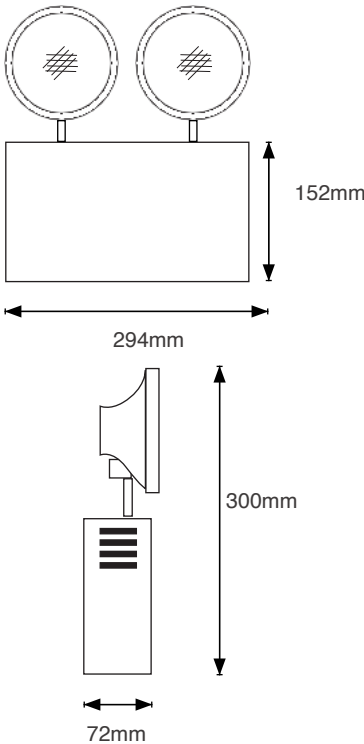
### Features and Application

- Dual 3W/5W LED self-contained emergency light.
- Adjustable lamp heads to project light in desired position.
- Robust steel housing to provide good protection.



### Technical Data

|                       |                                                                                                                 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained                                                                                                  |
| Lamp                  | Samsung 2 x 3W/5W High flux white LED                                                                           |
| Operating Temperature | ta 0°C ~ 40°C                                                                                                   |
| Mains Supply          | 230V AC 50Hz/60Hz                                                                                               |
| Power Consumption     | EmDL 203NM: < 2W<br>EmDL 205NM: < 3W                                                                            |
| Battery               | High temperature Ni-Cd battery<br>High temperature LiFePO4 battery                                              |
| Charger               | Fully automatic                                                                                                 |
| Charging Monitor      | Ø 5mm green LED                                                                                                 |
| Recharge Period       | 24 hours                                                                                                        |
| Testing Facility      | Test-switch for independent testing                                                                             |
| Emergency Duration    | 3 hours                                                                                                         |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                                        |
| Construction          | Casing - Electro-galvanised steel casing with epoxy powder coating<br>Lamphead - High temperature polycarbonate |
| Weight                | EmDL 203NM: 1.55 kg / 1.75 kg<br>EmDL 205NM: 1.7 kg / 1.9 kg                                                    |
| Compliance            | SS 563-1:2010/A1:2017<br>SS 563-2:2010/A2:2017<br>IEC 60598-2-22:2021<br>IEC 60598-1:2020                       |
| Installation          | Wall or suspended mounting                                                                                      |
| Cable Entry           | 1 x 20mm Ø knockout hole                                                                                        |
| IP Rating             | IP20                                                                                                            |
| Warranty              | 1 year                                                                                                          |



### Ordering Information

| MODEL      | LAMP                                  |
|------------|---------------------------------------|
| EmDL 203NM | Samsung 2 x 3W<br>High flux white LED |
| EmDL 205NM | Samsung 2 x 5W<br>High flux white LED |

\* Remarks: For Ni-Cd battery version, add suffix (NICD). For LiFePO4 battery version, add suffix (LFP).

# EmDL 203NM WP

## LED TWIN-FLOOD IP65 WEATHERPROOF EMERGENCY LIGHT

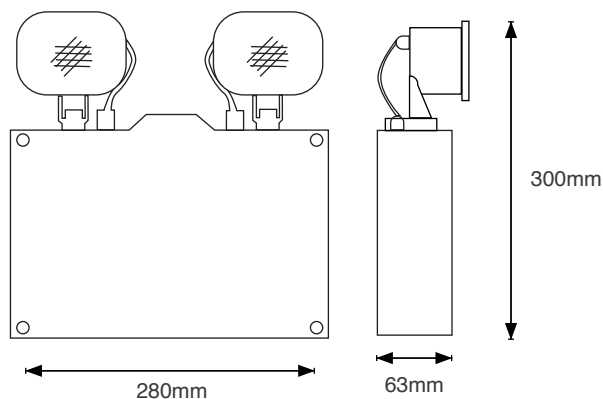
### Features and Application

- Weatherproof housing with dual 3W LED self-contained emergency light.
- Adjustable lamp heads to project light in desired position.
- Robust, fire-retardant and weatherproof polycarbonate housing ideal for outdoor operation.
- Weatherproof IP65 rated TÜV SÜD PSB certified, ideal for outdoor installations in dusty, humid and corrosive environments including car parks, loading bays, workshops, laboratories and corridor areas.



### Technical Data

|                                 |                                                                                    |
|---------------------------------|------------------------------------------------------------------------------------|
| Mode of Operation               | Non-maintained                                                                     |
| Lamp                            | 2 x 3W High flux white LED                                                         |
| Operating Temperature           | ta 0°C ~ 50°C                                                                      |
| Mains Supply                    | 230V AC 50Hz/60Hz                                                                  |
| Power Consumption               | < 2W                                                                               |
| Battery                         | High temperature Ni-Cd battery                                                     |
| Charger                         | Fully automatic                                                                    |
| Charging Monitor                | Ø 5mm green LED                                                                    |
| Lamp Circuit Continuity Monitor | Ø 5mm green LED                                                                    |
| Recharge Period                 | 24 hours                                                                           |
| Testing Facility                | Test-switch for independent testing                                                |
| Emergency Duration              | 3 hours                                                                            |
| Safety Feature                  | Low-voltage cut-off to prevent over-discharge of battery                           |
| Construction                    | Polycarbonate                                                                      |
| Weight (Nett/Gross)             | 1.8 kg / 2 kg                                                                      |
| Compliance                      | SS 563-1:2010<br>SS 563-2/A1:2013<br>SS IEC 60598-2-22:2016<br>SS IEC 60598-1:2016 |
| Installation                    | Wall or suspended mounting                                                         |
| Cable Entry                     | 1 x 20mm Ø knockout hole                                                           |
| IP Rating                       | IP65 rated TÜV SÜD PSB certified*                                                  |
| Warranty                        | 1 year                                                                             |



### Ordering Information

| MODEL         | LAMP                          |
|---------------|-------------------------------|
| EmDL 203NM WP | 2 x 3W<br>High flux white LED |

### Remarks

\* For Weatherproof (IP65) installation, a cable gland (PG9 to PG13.5) is required for the AC incoming cable entry to ensure IP65 rating.

# DL 2301NM

## DECORATIVE LED TWIN-FLOOD EMERGENCY LIGHT

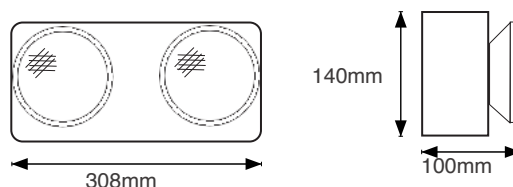
### Features and Application

- Self-contained LED dual lamp emergency light.
- LED lamps provide high efficiency, durability and low energy consumption.
- Suitable for indoor installations such as staircases, walk ways, car parks, warehouses, etc.



### Technical Data

|                       |                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained                                                                            |
| Lamp                  | 2 x 3W High flux white LED                                                                |
| Operating Temperature | ta 0°C ~ 50°C                                                                             |
| Mains Supply          | 230V AC 50Hz/60Hz                                                                         |
| Power Consumption     | < 2W                                                                                      |
| Battery               | High temperature Ni-Cd battery                                                            |
| Charger               | Fully automatic                                                                           |
| Charging Monitor      | Ø 5mm green LED                                                                           |
| Recharge Period       | 24 hours                                                                                  |
| Testing Facility      | Test-switch for independent testing                                                       |
| Emergency Duration    | 3 hours                                                                                   |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                  |
| Construction          | Casing - Injection moulded fire retardant polycarbonate                                   |
| Weight (Nett/Gross)   | 1 kg / 1.1 kg                                                                             |
| Compliance            | SS 563-1:2010/A1:2017<br>SS 563-2:2010/A2:2017<br>IEC 60598-2-22:2021<br>IEC 60598-1:2020 |
| Installation          | Wall or suspended mounting                                                                |
| Cable Entry           | Standard 20mm Ø knockout hole                                                             |
| IP Rating             | IP40                                                                                      |
| Warranty              | 1 year                                                                                    |



### Ordering Information

| MODEL     | LAMP                   |
|-----------|------------------------|
| DL 2301NM | 3W High flux white LED |

# DL 2301NM WP

## DECORATIVE LED TWIN-FLOOD IP65 WEATHERPROOF EMERGENCY LIGHT

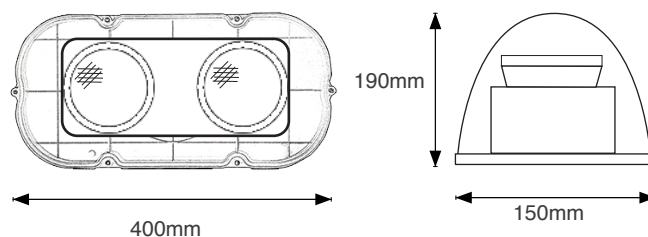
### Features and Application

- Self-contained LED dual lamp emergency light.
- LED lamps provide high efficiency, durability and low energy consumption.
- Weatherproof version is housed in a IP65 rated polycarbonate capsule and certified by TÜV SÜD PSB, ideal for outdoor areas such as dusty, humid and corrosive environments including car parks, loading bays, workshops, laboratories and corridor areas.



### Technical Data

|                       |                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained                                                                            |
| Lamp                  | 2 x 3W High flux white LED                                                                |
| Operating Temperature | ta 0°C ~ 50°C                                                                             |
| Mains Supply          | 230V AC 50Hz/60Hz                                                                         |
| Power Consumption     | < 2W                                                                                      |
| Battery               | High temperature Ni-Cd battery                                                            |
| Charger               | Fully automatic                                                                           |
| Charging Monitor      | Ø 5mm green LED                                                                           |
| Recharge Period       | 24 hours                                                                                  |
| Testing Facility      | Test-switch for independent testing                                                       |
| Emergency Duration    | 3 hours                                                                                   |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                  |
| Construction          | Casing / Weatherproof capsule - Injection moulded fire retardant polycarbonate            |
| Weight (Nett/Gross)   | 1.7 kg / 2 kg                                                                             |
| Compliance            | SS 563-1:2010/A1:2017<br>SS 563-2:2010/A2:2017<br>IEC 60598-2-22:2021<br>IEC 60598-1:2020 |
| Installation          | Wall or suspended mounting                                                                |
| Cable Entry           | Standard 20mm Ø knockout hole                                                             |
| IP Rating             | IP65 rated TÜV SÜD PSB certified*                                                         |
| Warranty              | 1 year                                                                                    |



### Ordering Information

| MODEL        | LAMP                   |
|--------------|------------------------|
| DL 2301NM WP | 3W High flux white LED |

### Remarks

\* For Weatherproof (IP65) installation, a cable gland (PG9 to PG13.5) is required for the AC incoming cable entry to ensure IP65 rating.

# LUNA-11NM AUX / LUNA-13NM AUX

## LED EMERGENCY CONVERSION KIT

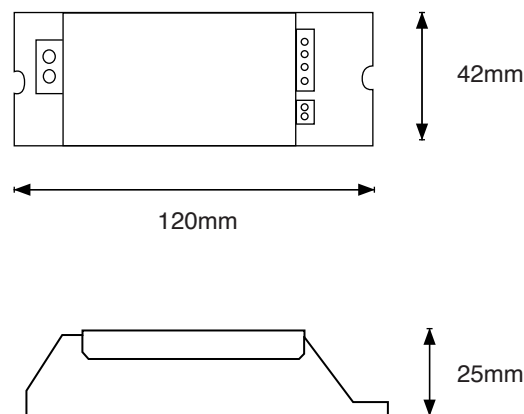
### Features and Application

- Self-contained emergency conversion kit.
- High efficiency conversion unit providing long backup duration.



### Technical Data

|                       |                                                                                                                             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Mode of Operation     | Non-maintained                                                                                                              |
| LED Module            | LUNA-11NM AUX: 3V 190mA<br>LUNA-13NM AUX: 3V 450mA                                                                          |
| Operating Temperature | ta 0°C ~ 40°C                                                                                                               |
| Mains Supply          | 230V AC 50/60Hz, Protection against polarity reversal                                                                       |
| Power Consumption     | LUNA-11NM AUX: < 1W<br>LUNA-13NM AUX: < 2W                                                                                  |
| Battery               | LUNA-11NM AUX:<br>High temperature Ni-Cd battery<br>LUNA-13NM AUX:<br>High temperature Ni-MH battery                        |
| Charger               | Fully automatic                                                                                                             |
| Charging Monitor      | Green LED                                                                                                                   |
| Recharge Period       | 24 hrs                                                                                                                      |
| Testing Facility      | Test-switch for independent testing                                                                                         |
| Emergency Duration    | 3 hours                                                                                                                     |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery                                                                    |
| Construction          | Electro-galvanised steel casing with epoxy powder coating                                                                   |
| Compliance            | SS IEC 61347-2-7:2011/AMD1:2017<br>SS IEC 61347-2-13:2014/AMD1:2016<br>SS IEC 62384:2006/AMD1:2009<br>SS 563-2:2010/A1:2013 |
| Warranty              | 1 year                                                                                                                      |



### Ordering Information

| MODEL         | LED MODULES COMPATIBILITY |
|---------------|---------------------------|
| LUNA-11NM AUX | LED Module 3V 190mA       |
| LUNA-13NM AUX | LED Module 3V 450mA       |

# LED1880-M

## LED EMERGENCY CONVERSION

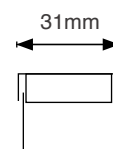
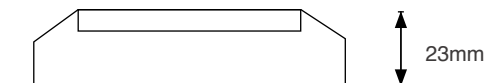
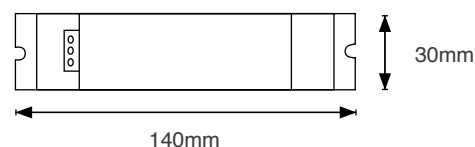
### Features and Application

- Self-contained emergency conversion kit designed to strike various types of LED modules.
- High efficiency conversion unit providing long backup duration.
- High compability with wide range of LED modules.



### Technical Data

|                           |                                                                                                      |
|---------------------------|------------------------------------------------------------------------------------------------------|
| Mode of Operation         | Maintained                                                                                           |
| LED Modules Compatibility | LED modules 10Vdc - 110Vdc                                                                           |
| Operating Temperature     | ta 0°C ~ 50°C                                                                                        |
| Mains Supply              | 230V AC 50/60Hz, Protection against polarity reversal                                                |
| Power Consumption         | < 2W                                                                                                 |
| Battery                   | High temperature Ni-Cd battery                                                                       |
| Charger                   | Fully automatic                                                                                      |
| Charging Monitor          | Green LED                                                                                            |
| Recharge Period           | 24 hrs                                                                                               |
| Testing Facility          | Test-switch for independent testing                                                                  |
| Emergency Duration        | 3 hours                                                                                              |
| Safety Feature            | Low-voltage cut-off to prevent over-discharge of battery                                             |
| Construction              | Electro-galvanised steel casing with epoxy powder coating                                            |
| Weight (Nett/Gross)       | Control gear - 0.1 kg / 0.2 kg<br>Battery - 0.21 kg                                                  |
| Compliance                | IEC 61347-2-7:2011/A2:2021<br>IEC 61347-2-13:2014/A1:2016<br>IEC 62384:2020<br>SS 563-2:2010/A2:2017 |
| Warranty                  | 1 year                                                                                               |



### Ordering Information

| MODEL     | LED MODULES COMPATIBILITY     |
|-----------|-------------------------------|
| LED1880-M | LED Modules<br>10Vdc - 110Vdc |

# FL140M-EV58

## COMPACT EMERGENCY CONVERSION KIT

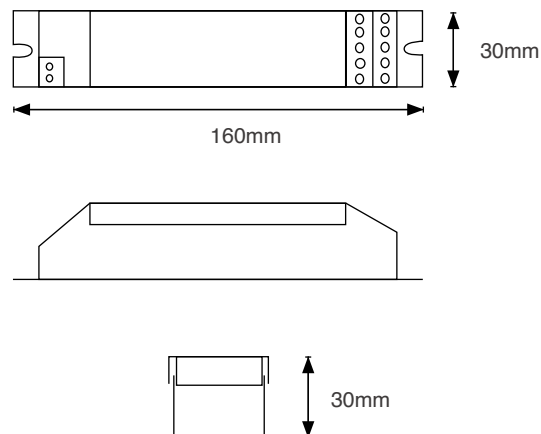
### Features and Application

- Designed for use in light fittings with various fluorescent and compact fluorescent lamps.
- Compact size allows for installation in various types and sizes of fittings.
- High efficiency inverter system used to ensure long backup duration.



### Technical Data

|                       |                                                           |
|-----------------------|-----------------------------------------------------------|
| Mode of Operation     | Maintained                                                |
| Lamp Compatibility    | 4-pin Fluorescent lamp                                    |
| Operating Temperature | ta 0°C ~ 50°C                                             |
| Mains Supply          | 230V AC 50/60Hz                                           |
| Power Consumption     | < 3W                                                      |
| Battery               | High temperature Ni-Cd battery                            |
| Charger               | Fully automatic                                           |
| Charging Monitor      | Ø 5mm green LED                                           |
| Recharge Period       | 24 hours                                                  |
| Testing Facility      | Test-switch for independent testing                       |
| Emergency Duration    | 2 hours                                                   |
| Safety Feature        | Low-voltage cut-off to prevent over-discharge of battery  |
| Construction          | Electro-galvanised steel casing with epoxy powder coating |
| Weight (Nett/Gross)   | Control gear - 0.22 kg / 0.32 kg<br>Battery - 0.35 kg     |
| Compliance            | SS IEC 61347-2-7:2011<br>SS 563-2/A1:2013                 |
| Warranty              | 1 year                                                    |



### Ordering Information

| MODEL       | LAMP COMPATIBILITY                           |
|-------------|----------------------------------------------|
| FL140M-EV58 | Fluorescent lamp<br>Compact fluorescent lamp |

# DENKO SUNLITE 18 SERIES

## LED SURFACE MOUNT LUMINAIRE

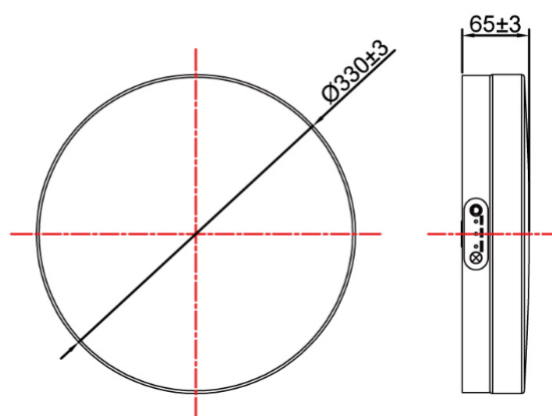
### Features and Application

- Aesthetically pleasant, resilient and innovative product.
- The product provides simple energy-saving solutions for LED surface mount applications.
- The luminaire body is made of ABS base with PMMA diffuser to allow uniform illumination.
- Suitable for mounting on walls and staircase ceiling applications.



### Technical Data

|                    |                           |
|--------------------|---------------------------|
| Housing Material   | ABS                       |
| Diffuser Material  | PMMA Opal Polycarbonate   |
| Light Source       | LED SMD 2835              |
| Mains Supply       | 230V AC, 50/60Hz          |
| Wattage (Max)      | 18W (Max) / 4W (Dim down) |
| Lumens (lm)        | 1530lm (18W) / 416lm (5W) |
| Power Factor       | ≥0.80                     |
| Colour Temperature | 2700K, 3000K, 6500K       |
| Colour Rendering   | RA ≥80                    |
| Dimension          | Ø 330 x 65 mm             |
| IP Rating          | IP 44                     |



### Ordering Information

| MODEL                            | DESCRIPTION                                    |
|----------------------------------|------------------------------------------------|
| DENKO SUNLITE 18                 | 18W LED                                        |
| With Emergency Power Pack        | Add on suffix 'E' - i.e. DENKO SUNLITE 18E     |
| With Motion Sensor               | Add on suffix 'MS' - i.e. DENKO SUNLITE 18MS   |
| With Powerpack and Motion Sensor | Add on suffix 'EMS' - i.e. DENKO SUNLITE 18EMS |

# Denko Battery Packs

## Tested compliant to international EN standards



**Battery packs play a pivotal role in all emergency lighting systems.** During AC power failure, the battery pack is automatically activated to power up the emergency light at the rated duration to guide occupants to safety. At Denko Lighting, our rechargeable Ni-Cd, Ni-MH and LiFePO4 batteries are tested and compliant to international EN standards. All our batteries are also rated to operate at high temperatures to ensure safety during normal and emergency operations.



Ni-Cd 3.6V AA900mAh (Side by Side)



Ni-Cd 3.6V AA900mAh (Triangle)



Ni-Cd 3.6V C2500mAh (Cane)



Ni-Cd 3.6V C2500mAh (Side by Side)



Ni-Cd 3.6V D4500mAh (Side by Side)



Ni-Cd 3.6V SC1600mAh (Cane)



Ni-Cd 4.8V SC1600mAh (Side by Side)



Ni-Cd 6V C2500mAh (Double Cane)



Ni-MH 3.6V 18700-4000mAh (Triangle)



Ni-MH 3.6V SC2200mAh (Side by Side)



Ni-MH 3.6V SC2200mAh (Triangle)



LiFePO4 3.2V 18500 1100mAh (Cane)



\*all images are not drawn to scale

### Ni-Cd Batteries

| BATTERY TYPE   | BATTERY CONFIGURATION<br>(Rows x No. of Cells) | CELL SIZE | COMPLIANCE                                          |
|----------------|------------------------------------------------|-----------|-----------------------------------------------------|
| 3.6V AA900mAh  | Side by Side (1 x 3)                           | AA        | EN 62133-1:2017<br>EN 61951-1:2017<br>EN 61959:2004 |
| 3.6V AA900mAh  | Triangle (1 x 3)                               | AA        |                                                     |
| 3.6V SC1600mAh | Cane (3 x 1)                                   | Sub-C     |                                                     |
| 4.8V SC1600mAh | Side by Side (1 x 4)                           | Sub-C     |                                                     |
| 3.6V C2500mAh  | Side by Side (1 x 3)                           | C         |                                                     |
| 3.6V C2500mAh  | Cane (3 x 1)                                   | C         |                                                     |
| 6V C2500mAh    | Cane (1 x 3) + (1 x 2)                         | C         |                                                     |
| 3.6V D4500mAh  | Side by Side (1 x 3)                           | D         |                                                     |

### Ni-MH Batteries

| BATTERY TYPE       | BATTERY CONFIGURATION<br>(Rows x No. of Cells) | CELL SIZE | COMPLIANCE                                          |
|--------------------|------------------------------------------------|-----------|-----------------------------------------------------|
| 3.6V SC2200mAh     | Triangle (1 x 3)                               | Sub-C     | EN 62133-1:2017<br>EN 61951-1:2017<br>EN 61959:2004 |
| 3.6V SC2200mAh     | Side by Side (1 x 3)                           | Sub-C     |                                                     |
| 3.6V 18700-4000mAh | Triangle (1 x 3)                               | 18700     |                                                     |

### LiFePO4 Batteries

| BATTERY TYPE       | BATTERY CONFIGURATION<br>(Rows x No. of Cells) | CELL SIZE | COMPLIANCE                               |
|--------------------|------------------------------------------------|-----------|------------------------------------------|
| 3.2V 18500 1100mAh | Cane (1 x 1)                                   | 18500     | EN 62133-2:2017/A1:2021<br>EN 62620:2015 |



CERT NO.: 2016-2-2382  
ISO 9001 : 2015



PLS Listed

*biz*SAFE<sub>3</sub>

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