Product description
• Emergency lighting LED driver with DALI interface and automatic test function
• For self-contained emergency lighting
• SELV for output voltage < 60 V DC
• Low profile casing (21 x 30 mm cross-section)
• 5 years guarantee (conditions at www.tridonic.com)

Properties
• Non maintained operation
• DALI interface for controlled testing and monitoring
• Constant current mode
• With either screw or clip fastening (clip-fix)
• 1, 2 or 3 h rated duration
• Selectable operating time (jumper)
• Two-colour status display LED
• SELV (outputs powerLED, battery, status LED, test switch)
• Very low energy consumption from the battery after activation of the deep discharge protection

Battery management
• Intelligent charge system
• Deep discharge protection
• Temperature protection
• Polarity reversal protection

Batteries
• LiFePO4 batteries with Tridonic LiFeGuard
• Overcharge-/Overdischarge protection
• Ensures safety in use
• Up to 8 year design life
• 4 year guarantee

Standards, page 5
Wiring diagrams and installation examples, page 6
**Technical data**

- **Rated supply voltage**: 220 – 240 V
- **AC voltage range**: 198 – 264 V
- **Mains frequency**: 50 / 60 Hz
- **Overvoltage protection**: < 120 %
- **U-OUT (including open- / short-circuit and double load)**: 15 V
- **Max. open circuit voltage**: 15 V
- **Output current tolerance**: ± 10 %
- **Output current**: see chapter 5.3
- **Ambient temperature range ta**: -25 ... +55 °C
- **Max. casing temperature tc**: 75 °C
- **Mains voltage changeover threshold**
  - according to EN 60598-2-22
- **Mains surge capability (between L – N)**: 1 kV
- **Surge voltage at output side (against PE)**: < 2 kV
- **Mains surge capability (between L/N – PE)**: 2 kV
- **Type of protection**: IP20
- **Lifetime**: up to 100,000 h
- **Guarantee**: 5 years

**EM powerLED PRO NM LiFePO4 4 W**

**Combined emergency lighting LED driver 1 – 4 W**

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Article number</th>
<th>Dimensions L x W x H</th>
<th>Max. number of LEDs</th>
<th>Packaging, carton</th>
<th>Packaging, pallet</th>
<th>Weight per pc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screw fastening version</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM pLED PRO NM 204 LiFePO4 4W SCREW</td>
<td>89800808</td>
<td>139 x 30 x 21 mm</td>
<td>25 pc(s)</td>
<td>1,200 pc(s)</td>
<td>0.055 kg</td>
<td></td>
</tr>
<tr>
<td>Clip fastening version</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM pLED PRO NM 204 LiFePO4 4W CLIP</td>
<td>89800807</td>
<td>127 x 30 x 21 mm</td>
<td>25 pc(s)</td>
<td>1,200 pc(s)</td>
<td>0.055 kg</td>
<td></td>
</tr>
</tbody>
</table>

**Specific technical data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Rated duration</th>
<th>Number of LEDs</th>
<th>Typ. a (at 230 V, 50 Hz)</th>
<th>Forward voltage LED module&lt;sup&gt;4&lt;/sup&gt;</th>
<th>Non-maintained operation&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 h</td>
<td>1</td>
<td>0.53C</td>
<td>2.6 – 3.4 V</td>
<td>20/11 mA / 2.2/0.9 W</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>0.53C</td>
<td>5.2 – 6.8 V</td>
<td>20/11 mA / 2.2/0.9 W</td>
</tr>
<tr>
<td>EM pLED PRO NM 204 LiFePO4 4W</td>
<td>2 h</td>
<td>1</td>
<td>0.53C</td>
<td>2.6 – 3.4 V</td>
<td>22/11 mA / 2.6/0.9 W</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>0.53C</td>
<td>5.2 – 6.8 V</td>
<td>22/11 mA / 2.6/0.9 W</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>1 0.53C</td>
<td>2.6 – 3.4 V</td>
<td>26/11 mA / 3.2/0.9 W</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 0.53C</td>
<td>5.2 – 6.8 V</td>
<td>26/11 mA / 3.2/0.9 W</td>
</tr>
</tbody>
</table>

<sup>1</sup> EM = Emergency

<sup>2</sup> For LiFePO4 batteries voltage dependent constant current charging is used. The values displayed are for charging on / charging off

<sup>3</sup> When exceeding the rated power of 4 W the LED current is reduced proportionally.

<sup>4</sup> Tolerance range for electrical data ±10 %
Product description

- For connection to the emergency lighting unit
- For checking the device function

Test switch EM2

Ordering data

<table>
<thead>
<tr>
<th>Type</th>
<th>Article number</th>
<th>Packaging, bag</th>
<th>Packaging, carton</th>
<th>Weight per pc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test switch EM 2</td>
<td>89805277</td>
<td>25 pc(s)</td>
<td>600 pc(s)</td>
<td>0.011 kg</td>
</tr>
</tbody>
</table>

Product description

- Two-colour status display LED
- Green: system OK, red: fault

Status indication bi-colour LED

Ordering data

<table>
<thead>
<tr>
<th>Type</th>
<th>Article number</th>
<th>Packaging, bag</th>
<th>Packaging, carton</th>
<th>Weight per pc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED EM bi-colour</td>
<td>89899720</td>
<td>25 pc(s)</td>
<td>200 pc(s)</td>
<td>0.017 kg</td>
</tr>
<tr>
<td>LED EM bi-colour, high brightness</td>
<td>89899753</td>
<td>25 pc(s)</td>
<td>800 pc(s)</td>
<td>0.015 kg</td>
</tr>
</tbody>
</table>
Product description

- Extension cable for LiFePO⁴ batteries
- Cable length 500 mm
- 3-pole plug connection

Ordering data

<table>
<thead>
<tr>
<th>Type</th>
<th>Article number</th>
<th>Packaging bag</th>
<th>Packaging carton</th>
<th>Weight per pc</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTENSION CABLE LiFePO₄ 500mm</td>
<td>28002661</td>
<td>10 pc(s)</td>
<td>200 pc(s)</td>
<td>0.01 kg</td>
</tr>
</tbody>
</table>
1. Standards

- EN 61347-2-7
- EN 61347-2-13
- EN 62384
- EN 55015
- EN 61000-3-2
- EN 61000-3-3
- EN 61547
- EN 60068-2-29
- EN 60068-2-30
- EN 60068-2-64
- EN 62386 (according to DALI standard V2)
- according to EN 50172
- according to EN 60598-2-22
- according to EN 62034

Meaning of marking 🌐
Double or reinforced insulation for built-in electronic LED drivers.

1.1 Glow-wire test

according to EN 61347-1 with increased temperature of 850 °C passed.

1.2 Insulation and electric strength testing of luminaires

Electronic LED drivers can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an insulation test with 500 V for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal. The insulation resistance must be at least 2 MΩ.

As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1,500 V (or 1,414 x 1,500 V DC). To avoid damage to the electronic devices this test must not be conducted.

2. Thermal details and lifetime

2.1 Lifetime

Average lifetime 100,000 hours under rated conditions with a failure rate of less than 10 %. Average failure rate of 0.2 % per 1000 operating hours.

<table>
<thead>
<tr>
<th>Expected lifetime</th>
<th>t&lt;sub&gt;s&lt;/sub&gt; 40 °C</th>
<th>t&lt;sub&gt;s&lt;/sub&gt; 45 °C</th>
<th>t&lt;sub&gt;s&lt;/sub&gt; 50 °C</th>
<th>t&lt;sub&gt;s&lt;/sub&gt; 55 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM pLED PRO NM LiFePO4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ts</td>
<td>60 °C</td>
<td>65 °C</td>
<td>70 °C</td>
<td>75 °C</td>
</tr>
<tr>
<td>lifetime</td>
<td>&gt;100,000 h</td>
<td>&gt;100,000 h</td>
<td>&gt;100,000 h</td>
<td>76,000 h</td>
</tr>
</tbody>
</table>

The emergency lighting LED driver is designed for a lifetime stated above under reference conditions and with a failure probability of less than 10 %.

The relation of tc to ta temperature depends also on the luminaire design. If the measured tc temperature is approx. 5 K below tc max., ta temperature should be checked and eventually critical components (e.g. ELCAP) measured. Detailed information on request.
3. Installation / Wiring

3.1 Wiring diagram

3.1.1 Wiring with one or multiple LED modules

Serial:

Parallel:

Take care that the LED is connected with the right polarity. LEDs that are connected to the EM powerLED devices should have a reverse polarity protection device such as a schottky diode fitted, otherwise irreversible damage could occur if the LED is connected in reverse polarity. Any protection device must be capable of handling in excess of 1,000 mA.

3.1.2 Wireless set-up

1) Use 230 V Test switch
2) For further information see basicDIM Wireless datasheet at www.tridonic.com
3.2 Wiring type and cross section

LED module/LED driver/supply:

Use solid/stranded wire with a cross section of 0.5 – 1.5 mm² for wiring. Strip 8.5 – 9.5 mm of insulation from the cables to ensure perfect operation of terminals.

wire preparation:

<table>
<thead>
<tr>
<th>0.5 – 1.5 mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5 – 9.5 mm</td>
</tr>
</tbody>
</table>

Status indication LED / Test switch:

Use solid wire with a cross section of 0.2 – 0.5 mm² for wiring. Strip 8.5 – 9.5 mm of insulation from the cables to ensure perfect operation of terminals.

wire preparation:

<table>
<thead>
<tr>
<th>0.2 – 0.5 mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5 – 9.5 mm</td>
</tr>
</tbody>
</table>

3.3 Battery connection

LiFePO₄: Direct connection

To ensure that a luminaire containing LED emergency units complies with EN 55015 for radio frequency conducted interference in both normal and emergency mode it is essential to follow good practice in the wiring layout.

3.5 Wiring guidelines

- The LED terminals, battery, indicator LED and test switch terminals are classified as SELV (output voltage < 60 V DC). Keep the wiring of the input terminals separated from the wiring of the SELV classified terminals or consider special wiring (double insulation, 6 mm creepage and clearance) when these connections should be kept SELV.
- The output to the LED is DC but has high frequency content, which should be considered for good EMC compliance.
- LED leads should be separated from the mains connections and wiring for good EMC performance.
- Maximum lead length on the LED terminals is 3 m. For a good EMC performance keep the LED wiring as short as possible.
- The secondary wires (LED module) should be routed in parallel to ensure good EMC performance.
- Maximum lead length for the Test switch and Indicator LED connection is 1 m. The test switch and Indicator LED wiring should be separated from the LED leads to prevent noise coupling.
- Battery leads are specified with 0.5 mm cross section and a length of 0.8 m.
- To avoid the damage of the control gear, the wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.)

3.6 Maximum lead length

- LED: 3 m (6 m loop)¹
- Test switch: 1 m
- Status indication LED: 1 m
- Batteries: 0.8 m

¹ Note: Do not exceed the length of LED leads to the LED module. Leads should always be kept as short as possible.

3.4 Loose wiring

Press down the “push button” and remove the cable from front.
4. Mechanical values

4.1 Housing properties

- Casing manufactured from polycarbonate.
- Type of protection: IP20

Recommended fixing details for clip fixing

Max. torque for mounting screws: 0.8 Nm

4.2 Mechanical data accessories

LED status indicator
- Green
- Mounting hole 6.5 mm diameter, 1 – 1.6 mm thickness
- Lead length 0.3 m / 0.6 m / 1.0 m
- Insulation rating: 90 °C

Test switch
- Mounting hole 7.0 mm diameter
- Lead length 0.55 m

Battery connection
- Plug connection 0.3 m
- Extension 0.5 m

5. Electrical values

5.1 Maximum loading of automatic circuit breakers

<table>
<thead>
<tr>
<th>Automatic circuit breaker type</th>
<th>B10</th>
<th>B13</th>
<th>B16</th>
<th>B20</th>
<th>C10</th>
<th>C13</th>
<th>C16</th>
<th>C20</th>
<th>Ιₚ₅₅</th>
<th>Iₚ₅₅ μs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Ø</td>
<td>15 mm²</td>
<td>15 mm²</td>
<td>2.5 mm²</td>
<td>2.5 mm²</td>
<td>15 mm²</td>
<td>15 mm²</td>
<td>2.5 mm²</td>
<td>2.5 mm²</td>
<td>Iₚ₅₅</td>
<td>Iₚ₅₅ μs</td>
</tr>
<tr>
<td>EM pLED PRO NM LiFePO₄</td>
<td>90</td>
<td>130</td>
<td>130</td>
<td>130</td>
<td>160</td>
<td>260</td>
<td>260</td>
<td>260</td>
<td>6 A</td>
<td>55 μs</td>
</tr>
</tbody>
</table>

5.2 Insulation matrix

<table>
<thead>
<tr>
<th></th>
<th>Mains</th>
<th>Switched Live</th>
<th>Battery, Test switch, Indicator LED</th>
<th>DALI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains</td>
<td>–</td>
<td>*</td>
<td>**</td>
<td>*</td>
</tr>
<tr>
<td>Switched Live</td>
<td>*</td>
<td>–</td>
<td>**</td>
<td>*</td>
</tr>
<tr>
<td>Battery, Test switch, Indicator LED</td>
<td>**</td>
<td>**</td>
<td>–</td>
<td>*</td>
</tr>
<tr>
<td>DALI</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>–</td>
</tr>
</tbody>
</table>

- Represents basic insulation
- ** Represents double or reinforced insulation

DALI terminals are not SELV. Wire the terminals in accordance with the requirements of low voltage installations.
5.3 LED current

<table>
<thead>
<tr>
<th>Type</th>
<th>EM pLED PRO NM LiFePO4 4W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article no.</td>
<td>89800807, 89800808</td>
</tr>
<tr>
<td>LED current in emergency</td>
<td></td>
</tr>
<tr>
<td>operation</td>
<td></td>
</tr>
<tr>
<td>1 x LED</td>
<td>1,000 mA</td>
</tr>
<tr>
<td>2 x LED</td>
<td>700 mA</td>
</tr>
<tr>
<td>LED current in mains</td>
<td></td>
</tr>
<tr>
<td>operation</td>
<td></td>
</tr>
<tr>
<td>1 x LED</td>
<td>1,000 mA</td>
</tr>
<tr>
<td>2 x LED</td>
<td>700 mA</td>
</tr>
</tbody>
</table>

6. Electrical values

6.1 Duration link selection

<table>
<thead>
<tr>
<th>Duration</th>
<th>Link Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 hr</td>
<td>without jumper</td>
</tr>
<tr>
<td>2 hr</td>
<td>position A</td>
</tr>
<tr>
<td>3 hr</td>
<td>position B</td>
</tr>
</tbody>
</table>

6.2 Jumper selection

Module supplied with jumper in 3 hours position (position B).

The position of the link will only be read on first power up. If it is changed afterwards both the battery and mains supply must be disconnected for 10 seconds to enable the EM powerLED to read the new link position on reconnection of the battery and mains. It will lead to a false battery failure indication if the link is changed after installation without this reset.

6.3 Status indication

System status is indicated by a bi-colour LED and by a DALI status flag.

<table>
<thead>
<tr>
<th>LED indication</th>
<th>Status</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent green</td>
<td>System OK</td>
<td>AC mode</td>
</tr>
<tr>
<td>Fast flashing green (0.1 sec on – 0.1 sec off)</td>
<td>Function test underway</td>
<td></td>
</tr>
<tr>
<td>Slow flashing green (1 sec on – 1 sec off)</td>
<td>Duration test underway</td>
<td></td>
</tr>
<tr>
<td>Red LED on</td>
<td>Load failure</td>
<td>Open circuit / Short circuit / LED failure ①</td>
</tr>
<tr>
<td>Slow flashing red (1 sec on – 1 sec off)</td>
<td>Battery failure</td>
<td>Battery failed the duration test or function / battery is defective / Incorrect battery voltage</td>
</tr>
<tr>
<td>Fast flashing red (0.1 sec on – 0.1 sec off)</td>
<td>Charging failure</td>
<td>Incorrect charging current</td>
</tr>
<tr>
<td>Double pulsing green</td>
<td>Inhibit mode</td>
<td>Switching into inhibit mode via controller</td>
</tr>
<tr>
<td>Binary transmission of address via green/red LED</td>
<td>Address identification</td>
<td>During address identification mode</td>
</tr>
<tr>
<td>Green and red off</td>
<td>DC mode</td>
<td>Battery operation (emergency mode)</td>
</tr>
</tbody>
</table>

① If the EM powerLED (operated in non-maintained mode) detects a fault at the LED module, the red LED indicator lights up and the output is stopped. After the correction of the fault disconnect the unswitched phase from the mains supply or carry out a function or duration test. This will detect the new LED module and reset the error display.

6.4 Testing

DALI Control

A DALI command from a suitable control unit can be used to initiate function and duration tests at individually selected times. Status flags are set for report back and data logging of results.

When a DALI bus has not been connected or when a DALI bus is connected but the DALI default DELAY and INTERVAL times have not been re-set by sending appropriate DALI commands, then the EM powerLED will conduct self-tests in accordance with the default times set within the EEPROM. These default times are factory pre-set, in accordance with the DALI standard EN 62386-202, to conduct an automatic function test every 7 days and a duration test every 52 weeks. Since the DELAY time is factory pre-set to Zero, all units are tested at the same time. Test times can be changed with a command over the DALI bus.

The DELAY and INTERVAL time values must be re-set when the emergency system test times are to be scheduled by a DALI control and monitoring system.

Note that once the default values have been set to Zero, tests will only be conducted following a command from the control system. If the DALI bus is disconnected the EM powerLED does not revert to self-testing mode.

Commissioning

After installation of the luminaire and initial connection of the mains supply and battery supply to the EM powerLED the unit will commence charging the batteries for 24 hours (initial charge). Afterwards the module will conduct
a commissioning test for the full duration. The 24 hours recharge occurs also if a new battery is connected or the module exits the rest mode condition. The following automatic commissioning duration test is only performed when a battery is replaced and fully charged (after 20 hrs) and the interval time is not set to zero, otherwise the system is expected to perform the testing.

Functional test
The time of day and frequency of the 5 seconds function test can be set by the DALI controller. The default setting is a 5 seconds test on a weekly basis.

Duration test
The time of day and frequency of the duration test can be set by the DALI controller. The default setting is a duration test conducted every 52 weeks.

Prolong time
Prolong time can be set by the DALI controller. This is the delay time between return of the mains supply and the end of the emergency operation. The default prolong time is set as 0 minutes as specified within the DALI standard. Indicator LED will stay off for the duration of the prolong time.

Rest Mode / Inhibit Mode
Emergency operation is automatically started when the mains supply is switched off. If the Rest Mode is activated, the discharging of the battery will be minimized by switching off the LED output. If the Inhibit Mode has been activated before the mains supply is switched off, Rest Mode will be automatically switched on if the mains supply is switched off within 15 minutes. Rest Mode and Inhibit Mode can be initiated by the DALI controller. The REST command has to be sent after the mains supply has been disconnected and whilst the EM powerLED is in emergency operation. The INHIBIT command has to be sent while the EM powerLED is supplied by mains. After a mains reset the EM powerLED exits the Rest Mode. Rest Mode and Inhibit Mode can both be disabled by sending the RE-LIGHT/RESET INHIBIT command.

In combination with a 1-cell battery the EM powerLED does not support Rest Mode / Inhibit Mode.

Test switch
An optional test switch can be wired to each EM powerLED. This can be used to initiate a 5 seconds function test by a short press < 1 second.

DALI Controller
DALI controllers and hardware/software solutions are available from Tridonic. Please refer to the Lighting controls section.
7. Battery data

7.1 Battery selection

<table>
<thead>
<tr>
<th>Technology and capacity</th>
<th>Design</th>
<th>Number of cells</th>
<th>Type</th>
<th>Article no.</th>
<th>Assignable batteries</th>
</tr>
</thead>
<tbody>
<tr>
<td>LiFePO₄, 15 Ah 18650 cells</td>
<td>stick</td>
<td>1 x 2</td>
<td>ACCU-LiFePO₄ 2A CON</td>
<td>28002318</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>stick</td>
<td>1 x 4</td>
<td>ACCU-LiFePO₄ 6.0Ah 4A CON</td>
<td>28002322</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>stick</td>
<td>1 x 6</td>
<td>ACCU-LiFePO₄ 9.0Ah 6A CON</td>
<td>28002328</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>stick + stick</td>
<td>2 + 2</td>
<td>ACCU-LiFePO₄ 6.0Ah 4C CON</td>
<td>28002324</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>stick + stick</td>
<td>3 + 3</td>
<td>ACCU-LiFePO₄ 9.0Ah 6C CON</td>
<td>28002330</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>side by side</td>
<td>2 x 1</td>
<td>ACCU-LiFePO₄ 2B CON</td>
<td>28002319</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>side by side</td>
<td>4 x 1</td>
<td>ACCU-LiFePO₄ 6.0Ah 4B CON</td>
<td>28002323</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>side by side</td>
<td>6 x 1</td>
<td>ACCU-LiFePO₄ 9.0Ah 6B CON</td>
<td>28002329</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>remote box</td>
<td>1 x 2</td>
<td>PACK-LiFePO₄ 3.0Ah 2 CON</td>
<td>28003805</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>remote box</td>
<td>1 x 4</td>
<td>PACK-LiFePO₄ 6.0Ah 4 CON</td>
<td>28003807</td>
<td>*</td>
</tr>
</tbody>
</table>

7.2 Battery charge / discharge data

<table>
<thead>
<tr>
<th>Type</th>
<th>EM pLED PRO NM LiFePO₄ 4W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article no.</td>
<td>89800807, 89800808</td>
</tr>
<tr>
<td>Duration</td>
<td>1 h</td>
</tr>
</tbody>
</table>

Battery charge time
- Initial charge: 24 h
- Trickle charge: continuously

Charging current
- Initial charge: 240 – 300 mA
- Trickle charge: 240 – 300 mA / 0 mA

Discharge current: 1620 – 1980 mA
- Charge voltage range: 2.0 – 3.6 V per cell
- Discharge voltage range: 2.3 – 3.6 V per cell

Notes:
- Automatic recharge when battery voltage falls below 3.4 V. Charger off (0 mA) when battery voltage exceeds 3.6 V.
- Battery protected against operation at excessive temperatures (charging stopped when battery cell temperature < -5 °C or > 60 °C).
- The emergency lighting LED driver will recharge the battery normally after running the test of 61347-2-7 CL 22.3 (abnormal operating conditions).
- The battery will not be charged below 2.0 V.
8. Miscellaneous

8.1 Battery replacement

After a battery replacement and a subsequent full charge cycle (24 h) a duration test is mandatory to prove that with the new battery the rated duration is achieved.

8.2 Mains-connected transformers

The EM powerLED does not contain mains-connected windings of transformers.

8.3 FELV control terminals

FELV control terminals marked „Risk of electric shock“ are not safe to touch. Insulate circuits connected to any FELV control terminal for the Low Voltage supply voltage of the control gear. Protect terminals connected to the FELV circuit against accidental contact.

8.4 Additional information

Additional technical information at www.tridonic.com → Technical Data
Guarantee conditions at www.tridonic.com → Services

Lifetime declarations are informative and represent no warranty claim. No warranty if device was opened.