

## FlashLED 2

### Manual



VERSION	MODIFICATIONS
0821	
0422	Correction protection category IP light and und charging station
1.2	Charging/discharging requirements after commissioning p5 + p15
1.3	Dimensions 5-fold charging station FlashLED 2 BABS P. 9
1.4	Details of USB-C functions P9
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1.6	P11 Exploded view protection glass with 6 lenses and PT screws 3.5x13mm adjusted

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## 1 General information

### 1.1 Marking concept for hazards and hints

 **Hazard**

Hazardous situation which will cause serious injury or even death if it is not prevented.

 **Caution**

Hazardous situation which could cause slight to moderate injury if it is not prevented.

 **Hint**

Indicates information which does not concern personal injury, e.g. hints in respect of material damage.

 **Protective measures**

Increase safety by applying a protective measure.

### 1.2 Responsibilities of the operator

- Make sure that this document is always kept in a safe place in a legible form together with the product.
- Read these instructions carefully before first start-up of the product.
- This product has been developed and produced exclusively for the use indicated in these documents. Every other use, which is not mentioned explicitly, could affect the intactness of the product and/or could constitute a source of danger.
- The manufacturer rejects any liability for damage which has been caused by incorrect or non-intended use of the product.
- In countries, which do not belong to the European Community, the national legal reference regulations as well as the standards and regulations applicable in these countries have to be observed for warranty of a corresponding safety level.
- The installation has to be carried out according to the applicable regulations.
- The manufacturer assumes no liability for inexperienced execution of installation as well as deformations which may occur during operation.
- The electric power supply has to be switched off before executing any action on the installation.
- Exclusively original parts of the manufacturer shall be used for maintenance. Maintenance work may be carried out by qualified staff only.
- All procedures which are not explicitly mentioned by the manufacturer in the instructions are not permitted.
- The packing material must not be stored within the reach of children as it could be a potential source of danger.

 **Hint**

Although the FlashLED 2 lamp has been designed for harsh environments, it must be ensured that it is used according to the IP65 protection standard to prevent damage and malfunctions.

It should also be ensured that the loading station of the FlashLED 2 lamp is operated in a dry place according to its protection standard (IP54).

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## 1.3 Start-up

### Hint

The FlashLED 2 is delivered with a battery capacity of ~80%.

When using the unit for the first time or when replacing the battery (point 4.9), the charge level display may initially differ from the actual battery capacity.

In order to adjust the accuracy of the charge level display to the battery capacity, we therefore recommend carrying out three full charge/discharge cycles when commissioning the unit.

To do this, the lamp is charged in the charging station and then discharged outside the charging station with full light until it switches itself off.

If this is not done, the accuracy will be automatically corrected as the number of charging cycles increases during normal use.

## 1.4 Storage / transport

### Hint

The light can be stored for no more than one year with the factory charging. After more than one year, the battery must be re-charged.

- Store batteries at room temperatures between 10° and 20° C.
- Always protect the battery from temperatures below 0° C and above 45° C e.g. continuous sun exposure, fire, water and moisture.
- In the emergency light setting, a fully charged lamp in the charging station, may be exposed to a temperature in the charging station below 0°C or above +40°C for a maximum of 72h. The battery is not charged under these conditions and the energy for emergency light monitoring is drawn from the battery. If this is not complied with, the battery will be deep discharged after only a few days and have to be replaced.
- The original packaging protects the lamp from damage.
- To avoid short circuits, cover the charging contacts when the product is not in use.
- Do not place highly flammable material in the vicinity of the lamp or the charger.
- The lamp should only be transported using the handles provided.
- With respect to battery life, the perfect load capacity is at 40 to 60% at the beginning of the storage (orange or first green LED is lit on the charge status display)
- Fully charge the battery to obtain a longer storage time.

## 1.5 Cleaning

If it is dirty, clean the lamp with a cleaning cloth. Do not use abrasives or solvents!

### 1.1 Disposal of the device



This product must not be thrown in the garbage.

In accordance with official local and national regulations, this product is to be recycled appropriately.

European directive 2012/19/EU; waste electrical and electronic equipment (WEEE).

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## 2 Introduction

To ensure proper installation, the following steps and notes must be complied with under all circumstances. Only this way can it be ensured that the product will work to complete satisfaction.

### **i** Hint

Read all instructions before starting installation. Our sales department will be happy to answer any questions you may have.

### 2.1 Scope of delivery

#### 2.1.1 FlashLED 2 work and inspection lamp with emergency light function



#### 2.1.2 FlashLED 2 charging station 85-264 VAC



#### 2.1.3 FlashLED 2 vehicle connection cable with cigarette lighter

Plug for 12-24 VDC charging station.



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## 2.2 Technical data

### 2.2.1 FlashLED 2 specifications

Operating voltage from charging station	10 - 42VDC
Electric power supply:	Li-Ion-Akku 14,4VDC, 2600mAh
Power consumption:	10W@24VDC
Charging time for full charge	5h
LED-Module:	5 LED with optics 3 x 10°, 2 x 55°

	<u>Max. Power</u>	<u>Original setting</u>
Luminous period:		
Spot light (3 LED):	5h	10h
Work light (2 LED):	8h	14h
Full light (5 LED):	3h	6h
Emergency light (5 LED):	-	5h

Luminous flux white:	<u>Max</u> 1250lm
Light colour white	5000K
Protection category:	IP65
Protection class:	III
Temperature range	
Operating:	-20°C to +45°C
Charging:	0°C to +40°C
Dimensions	
Lamp:	251 x 124 x 94mm (L x W x H)
Lamp incl. charging station:	323 x 149 x 108mm
Weight:	1060g

### 2.2.2 Charging station specifications

Operating voltage	
230V:	85 - 264VAC 50/60Hz, 120 - 370VDC
Low voltage 12-24VDC:	11 - 30VDC
Low voltage 48VDC:	22 - 72VDC
Protection category:	IP54
Protection class:	
230V:	II
Low voltage 12-24VDC/48VDC:	III
Dimensions:	276 x 149 x 95mm (L x W x H)
Weight:	0,43kg
Emergency light function:	selectable using magnetic switch

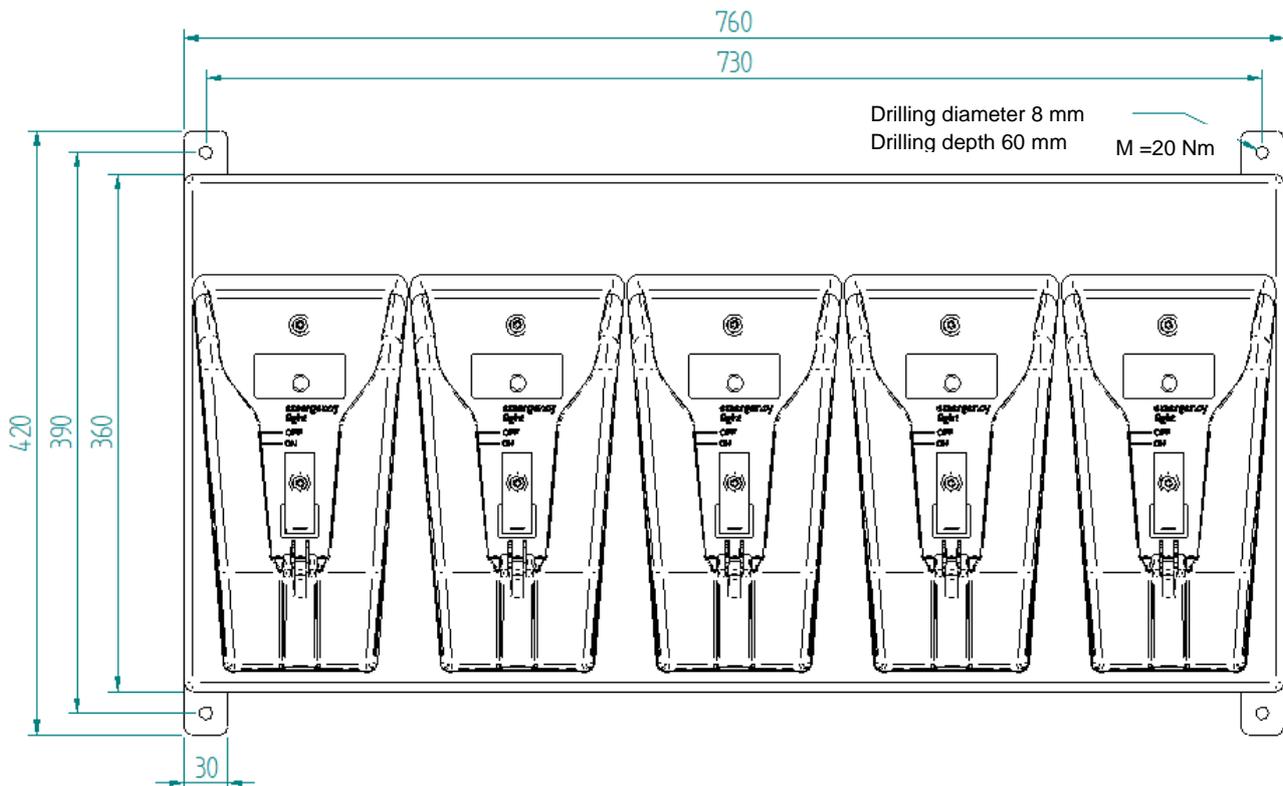


## 2.2.4 Dimensions 5-fold charging station FlashLED 2 BABS

Verwendung in EX-Zone verboten  
 Proibito l'utilizzo nella zona EX  
 Utilisation in EX-zone forbidden  
 Interdit en zones EX

Bolt flank approved for fastening:

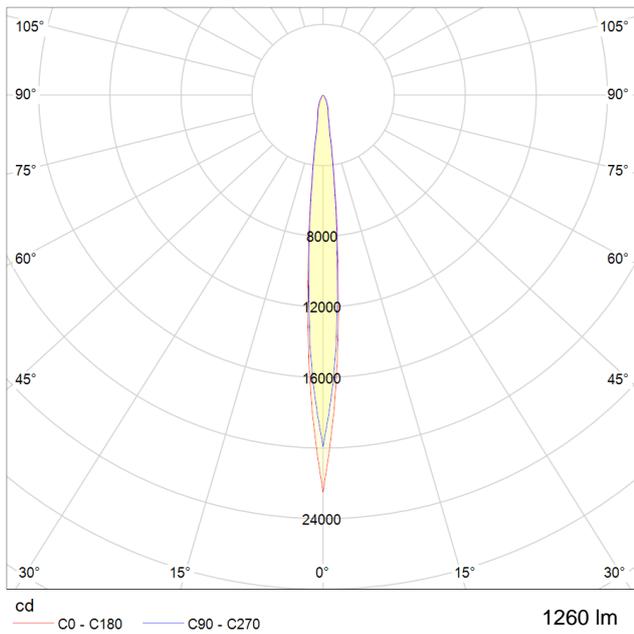
- Hilti HST3 M8 (4 piece)
- MKT-BZ 8 plus (4 piece)


**Hint**

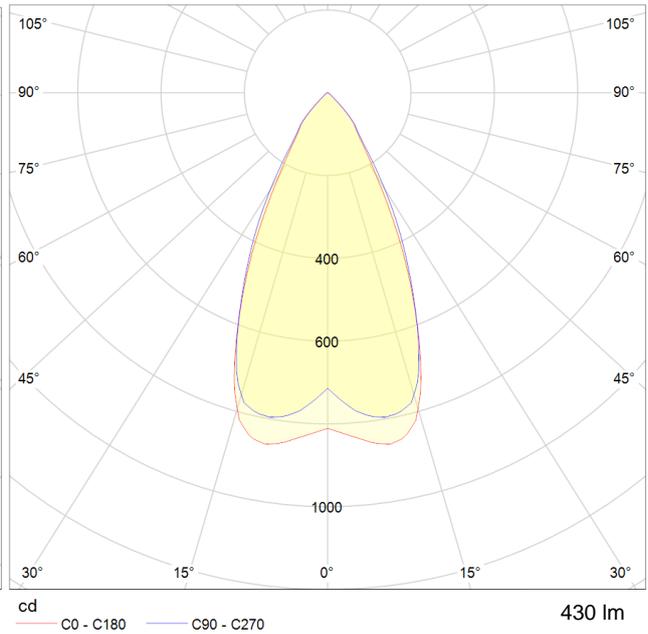
The BABS version with 5 charging stations also has three ferrite cores in the 230V connection cables of each of the 5 charging stations.

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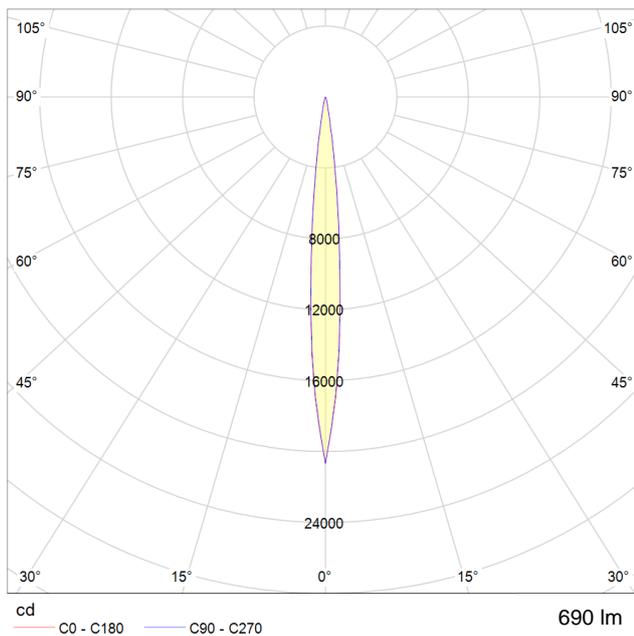
Full light white (2 x 55° & 3 x 10°)



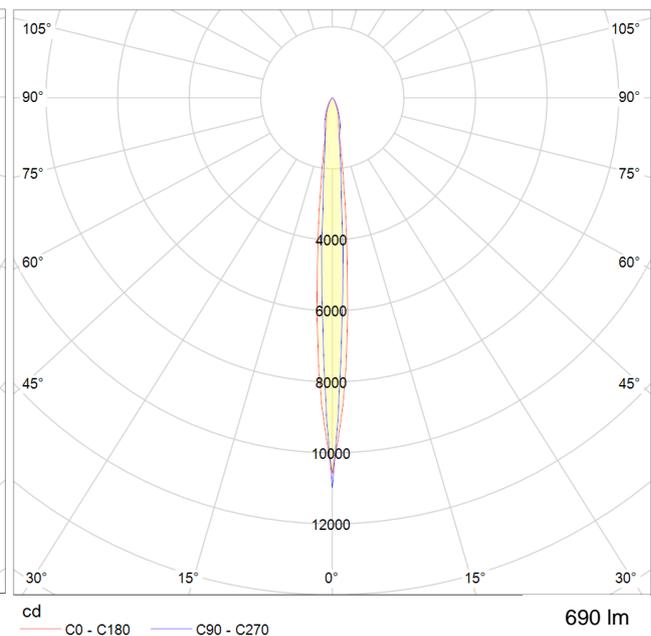
Work light white (2 x 55°)



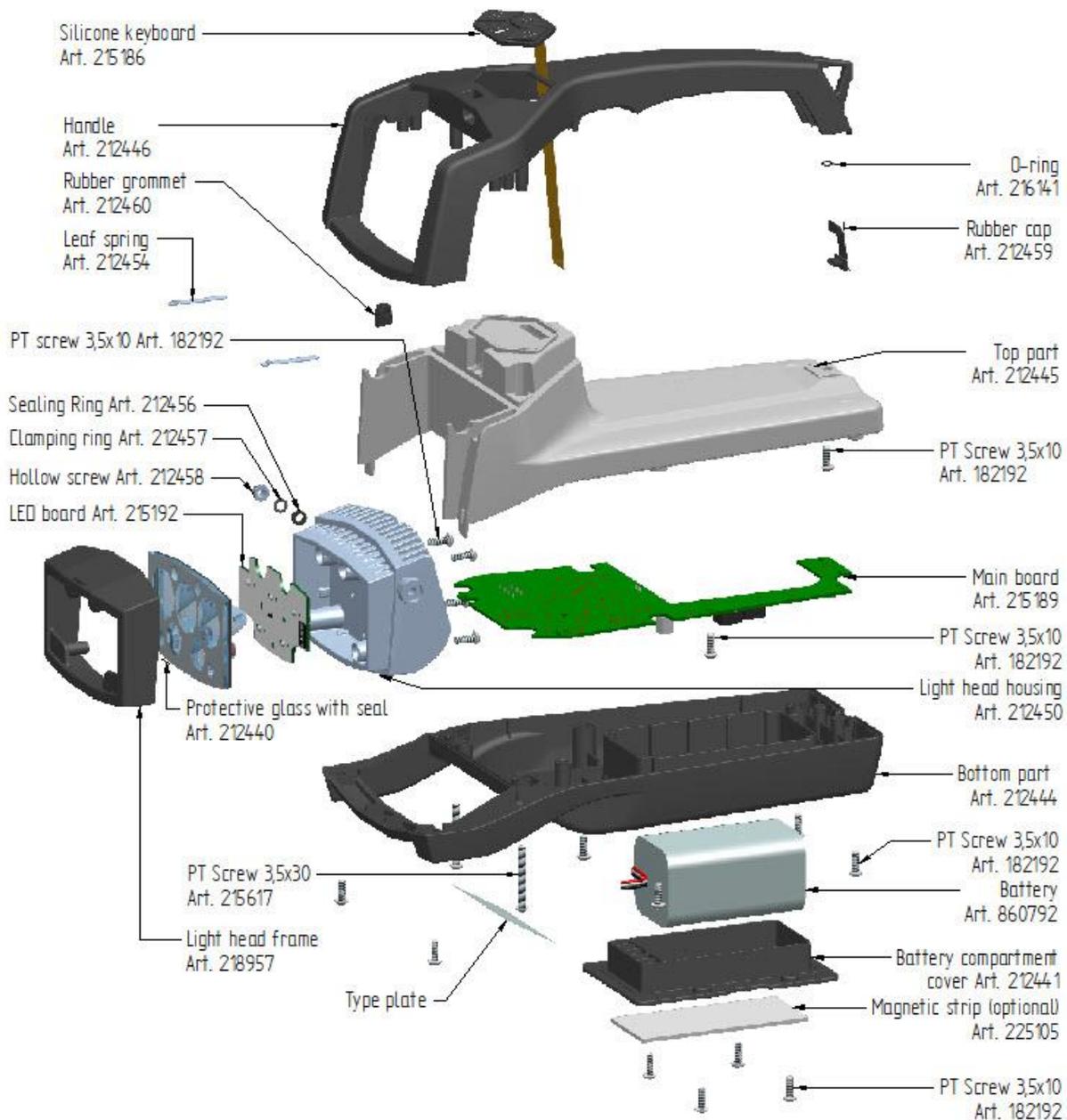
Spot light white (3 x 10°)



Emergency light white (2 x 55° & 3 x 10°)



### 3 Setting up the lamp



#### 3.1 Notes on spare parts

##### Hint

The main board is exchanged by GIFAS-ELECTRIC. Return the device for repair in this case.

The Li-Ion battery can be replaced by the customer. When replacing the battery, an original GIFAS battery must be used, otherwise any warranty claims for the light and battery will be void.

No spare parts are available for the charging stations. The complete charging station must be replaced.

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## 4 Overview of functions



### 4.1 Indicator functions

	Icon	Function	Description
1		full light 5 x LED	light mode: full light Symbol blinks: Factory setting has been overridden Symbol flashes: indicates emergency light operation while the light is in the charging station
2		work light 2 x LED 55°	light mode: work light Symbol blinks: Factory setting has been overridden
3		spot light 3 x LED 10°	light mode: spot light Symbol blinks: Factory setting has been overridden
4		charge display	Each of the 4 segments (op down: green, green, orange, red) represents 25% of the available capacity of the battery. Capacity < 15%: red segment blinks slowly (~ 0.5 Hz) The red segment blinks quickly (~ 2 Hz) before automatic shutdown

### 4.2 Stylus functions

	Icon	Function	Description
5		Main switch	Switching light on and off: each time the light is switched on, the memory function is activated (most recent selected setting). In function mode: «Flashing» Long press: quicker / slower
6		Light mode	The operating modes are switched over by pressing the button «Spotlight – Work light – Full light» and the corresponding symbol in the display are lit Pressing button briefly: returns to default settings.
7		Brightness	By pressing the button, the dim function is activated, always from minimum to maximum or reverse.

## 4.3 Further functions

### 4.3.1 Remaining light mode

The remaining charge before the safety switch-off is activated ensures that the light will continue shining at least 15 minutes at the lowest level. This timespan guarantees that the user is not left in the dark unexpectedly and can recharge the light in time. Indicated by a flashing red LED.

### 4.3.2 Emergency light

The selection of the Normal/Emergency Light operating mode with the magnet switch determines the behaviour of the light if the power supply is interrupted at the charging station.

As soon as the supply voltage is detected, the light checks the magnet position. When Emergency Light ON is activated, the emergency light is activated after a delay of <5 seconds in the event of a power failure. The light switches off when the voltage returns and is recharged if required.

If the light is removed from the charging station in the normal manner, the emergency light does not switch on.

Operating mode	Charge status display 	Light mode display 
Emergency light ON	Based on the charge status, the LED flashes while the battery is charging	Top blue LED strobe-flashes
	When the battery is full, the top green LED is permanently lit	Top blue LED strobe-flashes
Emergency light OFF	Based on the charge status, the LED flashes while the battery is charging	No display
	When the battery is full, the top green LED is permanently lit	No display

### 4.3.3 Morse function

Light impulses  (Morse code) can be created when the light is switched off. The light must be in WIDE mode white.

### 4.3.4 Blinking function

Blinking function: Pressing the brightness button  and the main switch  together for >1 sec. activates the blinking function of the light. (The brightness button  must be pressed slightly earlier).

The blinking frequency can be increased or decreased by pressing the main switch  permanently. The blinking mode is started in the last stored mode. The brightness is changed to the maximum or minimum by pressing the brightness button .

## 4.4 Monitoring functions

The intelligent Gifas Battery Management System protects the Li-ion battery from high temperatures, overcharging and deep discharges, thereby giving it an especially long service life.

### 4.4.1 Lamp head temperature control

As the head can become very hot when operating at maximum performance in areas with a high ambient temperature, it is equipped with a temperature monitor.

If the maximum permissible lamp head temperature of 65° C is exceeded, the light intensity is reduced until the light head cools down. Following this the brightness will be restored to the last set value.

### 4.4.2 Battery temperature control

The electronics switch the device off before the battery overheats: The lamp will only function within an operating temperature range of -20°C to +45°C. The light can only be charged within a temperature range of 0°C to +40°C. In the emergency light setting, a fully charged lamp in the charging station, may be exposed to a temperature in the charging station below 0°C or above +40°C for a maximum of 72h. The battery is not charged under these conditions and the energy for emergency light monitoring is drawn from the battery. If this is not complied with, the battery will be deep discharged after only a few days and have to be replaced.

### 4.4.3 Deep discharge protection

The FlashLED 2 features electronic deep discharge protection which ensures that the battery is not completely discharged. This protects the battery from irreparable damage, if the lamp is charged immediately after the deep discharge protection has been activated.

#### Hint

Recharge the discharged battery after use whenever possible.

If the battery has suffered from deep discharge due to a too long storage time, the charging indicator does not work anymore, even though the battery is charging in the station. Nevertheless, the indicator appears again after a few minutes.

## 4.5 Charging station

The emergency light function can be activated by positioning the magnet.

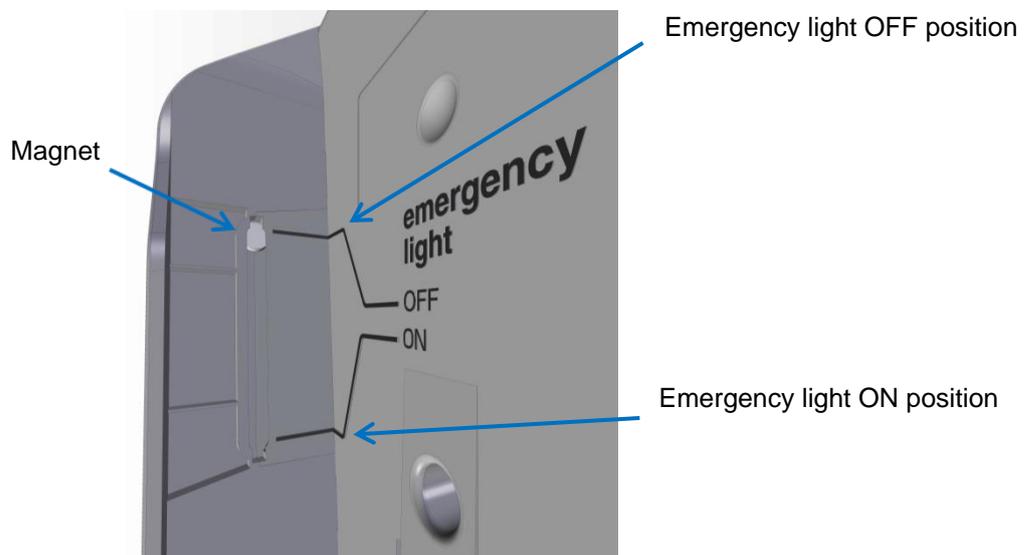
Emergency light ON: Factory setting

If the supply voltage of the charger fails, the lamp switches to emergency lighting.

Emergency light OFF: If the supply voltage of the charger fails, the light remains switched off. Recommended for charging from a car battery.

### **i** Hint

In the 12-24V version for use in vehicles, the light draws its power from the electrical system, which causes the car battery to discharge more when the vehicle engine is switched off.



## 4.6 Emergency light function

- When it is in the charging station, the lamp can be switched on and used as a continuous light by pressing the main switch. Press the main switch again to turn the lamp off.
- When the charging station is active, neither the lighting mode nor dimming can be adjusted in continuous light mode; the lamp can only be switched on or off.
- If the switched-on lamp is placed in the active charging station, it switches off.
- If the switched-on lamp is placed in the inactive charging station, the light stays on (the lamp functions the way it does when disconnected from the charging station).

### 4.6.1 Emergency light ON

In the event of a power failure, the light switches to emergency lighting within 5 seconds until the power supply returns (no matter whether it was set to OFF or continuous light beforehand).

### 4.6.2 Emergency light OFF

When in continuous lighting mode, the lamp turns off when the power fails. When the power supply returns, the light stays off.

#### 4.7 Software update via USB-C port

A firmware update can be carried out with the FlashLED 2 Service Tool and individual parameters can be read out via the USB-C port.

The functions are described in detail in the *FlashLED 2 Service Tool* instructions, which are available separately.

#### 4.8 Charging via USB-C port

The FlashLED 2 can also be charged via the USB-C port instead of the FlashLED charging station. As standard, charging is provided at 5V 0.5A with a long charging time. A USB-PD capable charger allows up to max. 20V 0.75A with a significantly shorter charging time.

#### 4.9 Reset function (learning cycle of capacity display)

The replacement batteries of the FlashLED 2 are delivered with a battery capacity of ~80%.

When using the unit for the first time (point 1.2) or when replacing the battery, the charge level display may initially differ from the actual battery capacity.

In order to adjust the accuracy of the charge level display to the battery capacity, we therefore recommend carrying out three full charge/discharge cycles when commissioning the unit.

To do this, the lamp is charged in the charging station and then discharged outside the charging station with full light until it switches itself off.

If this is not done, the accuracy will be automatically corrected as the number of charging cycles increases during normal use.

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## 5 Maintenance and troubleshooting

### 5.1 Lithium-ion battery

The following information and rules apply for Li-ion batteries to ensure proper and safe operation:

Self-discharge:	At room temperature, self-discharge is generally 5% per month. It does not occur linearly and depends on various parameters, such as temperature, charge level, battery status, etc. The battery therefore needs to be recharged every 12 months.
Service life:	If the battery is maintained well, up to 1000 charge cycles are possible. To achieve a long service life, recharge the battery after each use. Do not use damaged batteries – send in the light for repair.
Charging conditions:	If at all possible, charge the battery at room temperature and only use GIFAS chargers. The Li-ion battery does not have a memory effect: it can be charged at any time, regardless of the charging level, without damaging the cells.
Storage:	Protect the battery from temperatures above 45° C (e.g. continuous sun exposure), fire, water and moisture. Always store batteries at room temperature and in a dry place.  With respect to battery life, the perfect load capacity is at 40 to 60% at the beginning of the storage (orange or first green LED is lit on the charge status display)
Warranty:	Batteries are parts that are subject to wear. If handled improperly, they can be damaged, thus significantly impairing their service life. For this reason, the battery is not provided with a warranty.

### 5.2 Inspection plan

Work to be carried out	Period / interval
Test the emergency light function	According to country-specific regulations / when needed

### 5.3 Description of maintenance work

The battery-powered lamp is maintenance-free and does not contain any parts that need to be serviced.

## 5.4 Troubleshooting

Fault / error message	Possible cause	Remedy
Fully charged luminaire works less than 1 hour, charging display indicates «empty»	Capacity value for lighting- and chargingtime calculation is wrong	Reset of capacity display (see point 4.7)
Discharged luminaire indicates «fully charged» after less than 1 hour charging time	Capacity value for lighting- and chargingtime calculation is wrong	Reset of capacity display (see point 4.7)
No LED flashing during charging	Deep battery discharge due to long disuse	Charge for at least 4 hours if the charge LED is not lit. Contact the manufacturer (GIFAS), send in the charging station and (if needed) the lamp
The charging status LED does not flash in the «emergency light function OFF» setting.	Ambient temperature below 0°C or above +40°C	Operate the charging station at an ambient temperature within the range of >0°C to <+40°C.
Lamp can no longer be charged	In an older charger (only 230V input voltage), the miniature fuse is defective	Contact the manufacturer (GIFAS), send in the charging station and (if needed) the lamp
Lamp can no longer be charged, but charging station is OK	Electronic deep discharge protection has been activated or the charging electronics or battery pack is defective	Contact the manufacturer (GIFAS), send in the charging station and (if needed) the lamp
Lamp can no longer be charged, but charging station is OK	Deep battery discharge due to long disuse	Contact the manufacturer (GIFAS), send in the charging station and (if needed) the lamp
Lamp can no longer be charged, but charging station is OK	The light was in the emergency lighting mode in the charging station at temperatures below 0°C or above +40° for more than 72h.	Contact the manufacturer (GIFAS), send in the charging station and (if needed) the lamp

## 5.5 Repair

Repairs may only be carried out by the manufacturer or by agents authorised by the manufacturer. This also applies to the illuminant contained in this light.

The battery is the only exception to this rule. This may be replaced by the user.

In this regard, remove the 4 screws on the battery compartment cover on the underside of the light, detach the cover, unplug the battery and replace it with a new one. Then re-attach the battery compartment cover in the reverse order.

Please note the battery learning cycle described in 4.9.

## 6 Service

### 6.1 Service addresses

GIFAS ELECTRIC GmbH Borsigstrasse 9  D-41469 Neuss	GIFAS-ELECTRIC S.r.l Via dei Filaracci 45 Piano del Quercione I-55054 Massarosa (LU)	GIFAS ELECTRIC GmbH Strass 2  A-5301 Eugendorf	GIFAS-ELECTRIC GmbH Dietrichstrasse 2 Postfach 275 CH-9424 Rheineck
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### 6.2 Imprint

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