

HIGH POWER LED AS RESERVE BULB

You can purchase a white high power LED as an accessory for the MICA IL-60 lamps. The white LED can be used as a reserve bulb when the halogen bulb is out of order.

IL-60EM and IL60NiMH EM SAFETY LIGHT

The light will be automatically turned on when the lamp is in the charging stand and the charging power is cut off (power failure etc.). Model EM is equipped with a small green LED that is on when the lamp is in the charging stand. The LED shows that the lamp is in standby mode. If the LED is not on, please check the lamp's bulb. *The EM models do not include a capacity indicator under the handle. Further, a high power LED is not available for the EM models.* IL-60EM will always be automatically switched on in the safety light mode when placed in the charging stand.

Operating Times (NiMH battery)

Bulb	Half-power	Full-power
6 W	12h 00min	8h 00min
10 W	8h 00min	5h 00min
20 W	4h 00min	2h 30min

Operating Times (NiCd battery)

Bulb	Half-power	Full-power
6 W	8h 30min	5h 20min
10 W	4h 50min	3h
20 W	2h 15min	1h 20min

Use a bulb corresponding with the overall illumination period or operating target of your choice. The higher the illumination capacity, the shorter the illumination period. Please use bulbs sold by MICA merchants only.

TECHNICAL DATA

Battery:	NiCd 6V 5,5Ah NiMH 6V 8.5AH
Lens:	109,5 x 5mm
Reflector:	narrow beam (medium and flood beam as an accessory)
Operating temperature range:	-20°C...+40°C
Protection class:	IP-67 (MICA IL-60 and MICA IL-60EM) IP-66 (MICA IL-60NiMH and MICA IL-60NiMH EM)
Dimensions:	121 x 121 x 216mm
Weight:	with NiCd battery 1,3kg with NiMH battery 1.4kg

WARRANTY CONDITIONS

IL-60 lamps, IL-35 charging stands and ILC charging stands are covered by a one year warranty starting from the purchasing date. The warranty covers possible manufacturing and raw material defects in line with general warranty conditions. The warranty is not valid if the electronics component adjustment values have been adjusted or the components have been damaged in any way. For maintenance under the warranty, please send the lamp and the charging stand as well as a copy of your receipt with the lamp.

MICA SERIES LAMPS AND ACCESSORIES

Mica Elektro Oy Ltd specialises in designing and manufacturing high-class rechargeable MICA lamps and safety lighting systems. For contact information of the MICA retailer closest to you, please contact us. *You can also study our products at www.mica.fi*

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IL-60 Professional Rechargeable Handlamp User's Guide

(Models: MICA IL-60, MICA IL-60EM, MICA IL-60NiMH and MICA IL-60NiMH EM)

Please read this manual carefully in order to experience the full benefits of your MICA IL-60 lamp. Please store the manual for later use.

TAKING INTO USE

The electric charge of the lamp's battery will be reduced when the lamp is stored. The lamp must be fully charged prior to taking it into use by using a MICA ILC or MICA IL-35 charging stand. The battery will be charged from empty to full in 8 to 11 hours depending on the temperature and the condition of the battery. A new battery will reach its full capacity when it has been charged/discharged about ten times.

NOTICE:

The first charging of a new lamp must take at least 12 continuous hours !



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USING LAMP

Electronics controlled by the push switch are used to turn the lamp on, to switch the illumination capacity between half and maximum power and to turn the lamp off. The series of LEDs under the lamp's handle show the battery charge (not included in models IL-60EM and IL-60NiMH EM). When only one of the LEDs is on and/or the lamp begins to flash approximately every 15 seconds, the battery is almost empty. Thus, control electronics will automatically turn off the lamp prior to deep discharge of the battery. In an emergency, the lamp can still be used for a short period of time. However, if you use the lamp at that time, its service life will be reduced. Operation time of a fully loaded battery depends on the bulb and the illumination efficiency used. Overall illumination time of the lamp will be longer if it is used for short periods of time only.

TO BE TAKEN INTO ACCOUNT WHEN USING LAMP

In order to guarantee as long a service life as possible, the lamp should be discharged from time to time by leaving the lamp on until it automatically shuts off. Especially the NiCd batteries should be discharged approximately once a month. Thus, a battery memory phenomenon will not occur. The phenomenon will reduce the illumination period of the lamp. The illumination period will also become shorter as the battery ages. If overall illumination period remains clearly below the values stated in the table below even when the battery has been charged full, the battery must be replaced. Please note that you may not install a NiMH battery in a NiCd lamp!

CHARGING AND STORAGE

Do not charge lamps equipped with a NiMH battery with any other charger than a MICA ILC charging stand. Lamps equipped with a NiCd battery may be charged in a MICA ILC or MICA IL-35 charging stand. The nameplate of your lamp shows which battery has been installed. You should store all IL lamps in their stands when they are not being used. The MICA chargers will keep the battery operational at all times.

MAINTENANCE

Please handle the bulb and the reflector with care, since impurities in these components will reduce the lamp's illumination efficiency. You can clean a dirty reflector or bulb by using a piece of cloth and a suitable solvent. When disassembling your lamp, please remember to keep in mind the correct places of all conductors and correct polarity. *During the warranty period, components may be replaced by an authorised MICA service agent only and you may not use any other spare parts than original MICA spare parts.*

Replacing bulb:

In order to replace the bulb, unscrew the closing ring and remove the glass lens by touching the edges only. Cover your fingers with a clean piece of cloth when pulling the bulb from its socket and replacing it with a new one. If your lamp is equipped with a narrow reflector, press the new bulb with a shielded hand into the socket so that the point formed when pointing the beam of light on a wall, for example, is as sharp as possible.

Disassembling the lamp:

First remove the bulb, unscrew the two screws on the reflector and remove the reflector. Open the contacts by unscrewing the Phillips screws on the bottom of the lamp in order to remove the carriage unit from the cover. If the carriage is stuck, lightly tap the lamp against the edge of a table. Pull the carriage halfway out of the cover and disassemble the operating switch contactor (black wires). Pull the carriage completely out of the cover. Note: Do not touch the circuit board when pulling the carriage out of the cover.

Battery package:

Open the battery contactors (red and black wires). You can now lift the battery out of the carriage.

Electronics unit:

Unscrew the screws keeping the charging contacts in their place. Next, remove the back screw holding the electronics unit. You can now remove the electronics unit from the carriage.

Push switch:

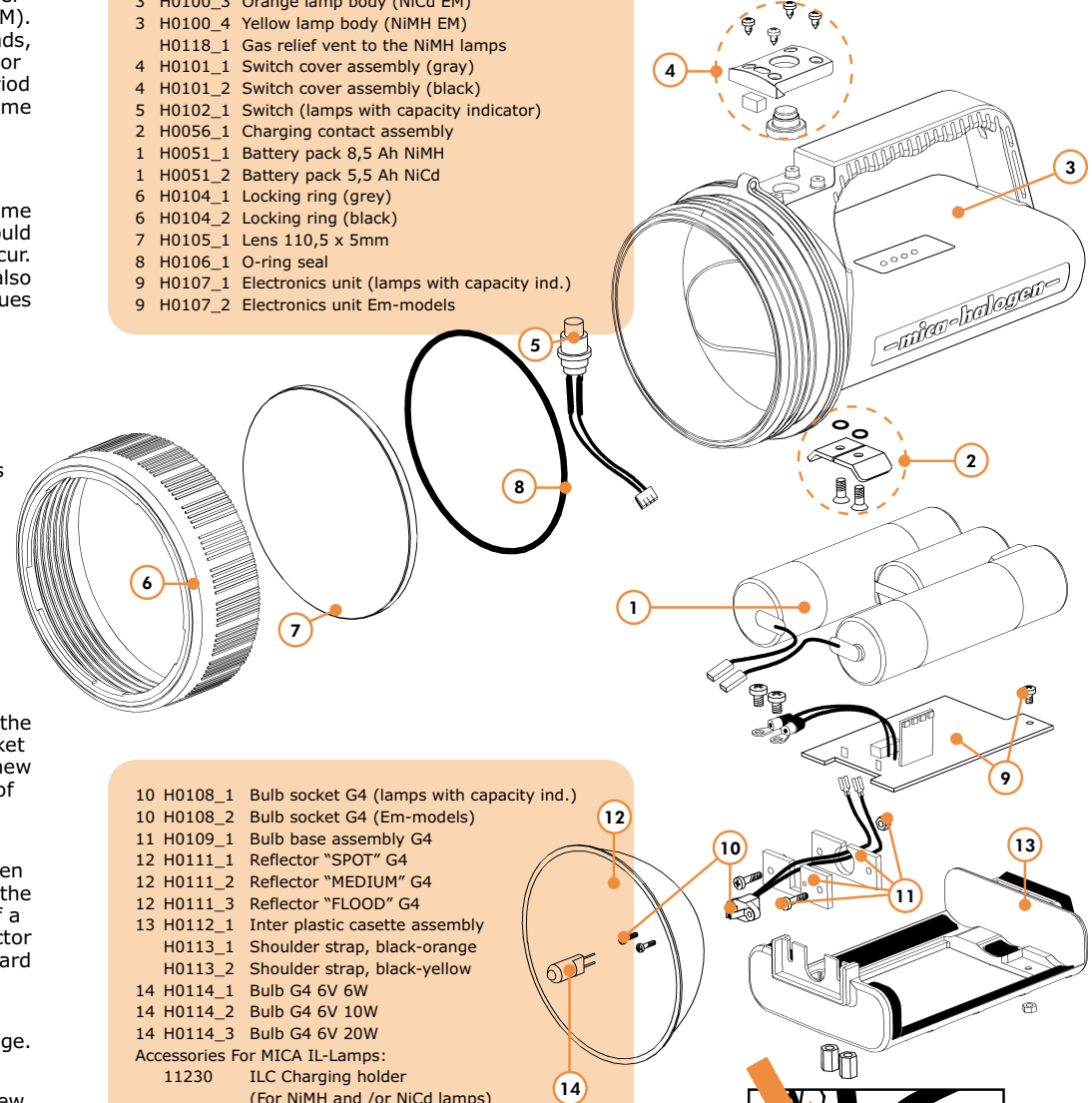
Begin removing the switch from the outside of the cover by unscrewing the four screws holding the switch cover plate in place. Remove the cover plate and the rubber shield, and disassemble the switch from the inside of the cover. When doing this, remember to check that the rubber switch shield is intact because its condition is important to the sealing capacity of the lamp.

Assembly:

Assemble the lamp in reverse order. For the correct manner of assembling the push switch connector, please see figure "PIC 1".

- 3 H0100_1 Orange lamp body (NiCd)
- 3 H0100_2 Yellow lamp body (NiMH)
- 3 H0100_3 Orange lamp body (NiCd EM)
- 3 H0100_4 Yellow lamp body (NiMH EM)
- H0118_1 Gas relief vent to the NiMH lamps
- 4 H0101_1 Switch cover assembly (gray)
- 4 H0101_2 Switch cover assembly (black)
- 5 H0102_1 Switch (lamps with capacity indicator)
- 2 H0056_1 Charging contact assembly
- 1 H0051_1 Battery pack 8,5 Ah NiMH
- 1 H0051_2 Battery pack 5,5 Ah NiCd
- 6 H0104_1 Locking ring (grey)
- 6 H0104_2 Locking ring (black)
- 7 H0105_1 Lens 110,5 x 5mm
- 8 H0106_1 O-ring seal
- 9 H0107_1 Electronics unit (lamps with capacity ind.)
- 9 H0107_2 Electronics unit Em-models

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- 10 H0108_1 Bulb socket G4 (lamps with capacity ind.)
- 10 H0108_2 Bulb socket G4 (Em-models)
- 11 H0109_1 Bulb base assembly G4
- 12 H0111_1 Reflector "SPOT" G4
- 12 H0111_2 Reflector "MEDIUM" G4
- 12 H0111_3 Reflector "FLOOD" G4
- 13 H0112_1 Inter plastic cassette assembly
- H0113_1 Shoulder strap, black-orange
- H0113_2 Shoulder strap, black-yellow
- 14 H0114_1 Bulb G4 6V 6W
- 14 H0114_2 Bulb G4 6V 10W
- 14 H0114_3 Bulb G4 6V 20W

- Accessories For MICA IL-Lamps:
- 11230 ILC Charging holder (For NiMH and /or NiCd lamps)
 - 11351 Green filter
 - 11352 Orange filter
 - 11350 Red filter
 - 11266 Filter pouch
 - 11265 Flashlight stand

All parts of your handlamp are available as spare parts through Mica Elektro Oy Ltd. NOTICE: When ordering spare parts please tell the type and serial number of your lamp/charger.

