

EVO-40 / 50 Fa&Mi is one of the most technologically advanced diving torch currently available.

The computer generated design, the materials the construction and the rigorous testing which it has undergone assure that these torches are of exceptional quality, reliability and security.

For optimal use and maximum duration, as well as more detailed information on the lamp, we suggest that you carefully read the following technical characteristic and scrupulously follow the directions for use and care of the lamp.

TECHNICAL CHARACTERISTICS

- Led High Lux of the new generation with electronic control and reflection lens.
- The torch can be used outside the water without any problem.
- Electromagnetic switch with a security on the Off position.
- High luminosity/size ratio.
- Ergonomic handle.
- Water tightness assured by O-rings viton placed in all the assembling parts.
- Hole for adjustable security cord.
- M8 Hole for speleo/video application.
- No anterior ring: the glass is sealed with 3 o-rings
- Anterior lens in optical tempered glass (thickness: 4mm).
- Rechargeable battery pack NiMH 2,3 Ah 6V
- Electronic charger (110/220V automatic selection)
- Body in anodised aluminium.
- Maximum depth: 200 MT.
- Very resistant.

TECHNICAL DATA

EVO-40

n.3 Led High Lux 3W efficiency 40W (middle life 50.000 h)
 Reflection lens 12°
 Autonomy: 8h total (2h 100/70%>, 3h 50%>, 3h 30%)
 Colour temperature: 5000-6000°K
 Weight in water: 300 gr (negative).
 Weight dry: 700 gr.
 Diameter: 60 mm. Length: 160 mm.

EVO-50

n.4 Led High Lux 3W efficiency 50W (middle life 50.000 h)
 Reflection lens 12°
 Autonomy: 3h/(1,5h 100/70%>, 1,5h 70/0%)
 Colour temperature: 5000-6000°K
 Weight in water: 300 gr (negative).
 Weight (dry): 700 gr.
 Diameter: 65 mm. Length: 160 mm.



REMEMBER THAT THE BATTERIES MUST NOT BE COMPLETELY DISCHARGED AND THEY MUST NOT STAY DISCHARGED TOO LONG
 Read the directions carefully!

EXTERNAL CHARGE

- **EXTERNAL CHARGE**
 - **USE ONLY THE CHARGER GIVED WITH THE TORCH: CODE SW1000 SETUP 5 WITH 2 LEDS (GREEN /YELLOW) AND WITH 2 JACKS (RED AND BLACK)**
 - **NEVER LIGHT UP THE TORCH DURING THE CHARGE!**
- 1) Switch OFF the torch.
 - 2) Connect the charger to a 110/220V source. Put the lamp horizontally and plug in:
 - the RED PLUG of the charger into the CONNECTOR MARKED WITH A RED SIGN (on the back cup of the torch)
 - the BLACK PLUG of the charger into the other connector
 The green led on and the yellow led flashing (every 2 seconds) indicate the connection.
ATTENTION: do not invert the wires!
 - 3) When The yellow start to flash quickly the charge is on.
THE FIRST CHARGE REQUIRES 24 HOURS: keep the battery under charge even if the yellow led stop flashing.
For the following charges it will be necessary only a normal charge: the charger will stop automatically the charge after **3/6 max**. When the recharge is completed the yellow led will stop flashing and will stay on like the green one and in the battery only a modest maintenance current will flow.
 In case of overdischarged battery (tension < 0,4V/element), the BATTERY CHARGER will automatically supply a moderate levelling charge; when the tension of 0,6V/element is reached the real recharge will begin.
 In any time you will eventually notice a reduction of the autonomy of the battery, please repeat the 24h charge!
 - 4) When the recharge has been completed first disconnect the plug from the 220V source, thereafter the connectors from the torch.

SW1000 SETUP 5

WITH 2 LEDS AND 2 JACKS (RED AND BLACK) AUTOMATIC CHARGER FOR BATTERIES Ni-MH WITH EXTERNAL CHARGE

Read carefully the directions of "RECHARGE" and respect the following minimum and maximum capacities:

Feeding	230Vac ±10%50H	Minimum capacity	800mA/h
Recharge current	0,8 A	Maximum capacity	3,8 A/h
Maintenance current	70mA	Recharge time	5h
Conformity	CE		

This battery charger has an internal 0,2A fuse.

ATTENTION:

- Respect the polarity: + positive (red), - negative (black).
- Respect the minimum and maximum capacity indicated on the BATTERY CHARGER and in the instructions.
- **It is not required any preventive discharge of the battery.**
- Do not recharge a battery parallel with another one.
- Do not recharge batteries in hermetic containers.
- Do not recharge lead batteries or alkaline piles, or carbon-zinc piles, or mercury piles,... **DANGER OF EXPLOSION!**
- Do not recharge lithium-ion batteries. **DANGER OF EXPLOSION!**
- Do not recharge immediately overheated batteries especially when the overheat is due to a violent discharge or a short circuit.
- Do not recharge batteries that have a deformation of the covering or a fluid leak.
- **USE THE BATTERY CHARGER ONLY IN SHELTERED ROOMS (MAX 38° CENTIGRADE).**

If connecting the charger to the 110/220 socket the green led will not light up, please verify the internal fuse.

If connecting the charger to the torch, the yellow led will not start to flash quickly check out the set-up 5 and eventually verify if the charger is the right one (see the label on the charger).

If the problem persist please consider the possibility of an excessive discharge of the batteries. In this case let the charger connected with the torch: a few hours later on it will start automatically.

FA & MI Srl is not responsible for damages to persons or things due to negligence, improper use or tampering of the product.

MAINTENANCE

Before using: RECHARGE THE BATTERY PACK EVEN IF IT IS ALREADY CHARGED: THE CHARGER IS AUTOMATIC AND SO IT WILL STOP HIMSELF AT CHARGING COMPLETED.

If, for any reason, you have unscrewed the cap of the external charge, check the good condition of the o-rings and, keeping the cap perfectly parallel with the body of the torch, screw it carefully through the end.

After using: rinse the lamp in fresh (not salt) water, RECHARGE it and put it into the plastic box.

Every 3-4 months: IF THE TORCH IS NOT SO MUCH USED, THE BATTERIES LOSE THEIR CHARGE (THEY LOSE THE CHARGE AROUND 40 DAYS). SO RECHARGE THE TORCH BECAUSE IT IS NOT GOOD FOR BATTERIES BE TOTALLY EMPTY.

Put a little bit of original grease on the o-rings.

Every year: change the o-ring on the back cap. Replace all the other o-rings every 3 years max.

OPTIONAL :

REF. TRAS-PL Spiralled cable (or smooth on demand) with 2 connection cap for the transformation of the torch into the cable system

WARNING

- The torch can be used also outside the water
- Do not expose the lamp to the direct sunlight and do not use the torch if the temperature is more than 40°C.
- During transportation or when the torch is not in use make sure that the torch is switched off and secure the switch. Keep it far from magnetic sources (minimum 20 cm).
- **TRANSPORT BY AIR: DO NOT BRING THE TORCH INTO THE HAND BAGGAGE: TAKE OFF THE O-RING PLACED UNDER THE MAGNETIC RING AND TAKE AWAY THE MAGNETIC RING DRAWING IT TOWARDS THE RECHARGE CAP. REPLACE THE O-RING IN ITS PLACE. KEEP TORCH AND LIGHTING RING SEPARATED TO AVOID ACCIDENTAL LIGHTING.**
- Turn off the lamp when the battery is almost discharged or as soon as the colour of the light starts changing from white to red. **RECHARGE THE BATTERY BECAUSE THE NIMH BATTERIES HAVE NOT MEMORY EFFECT AND YOU MUST NOT DISCHARGE THEM OVER THE NORMAL LEVEL OF DISCHARGE THAT YOU OBTAIN USING THE TORCH.**
- Avoid keeping the lamp assembled for long periods.
- Avoid keeping the torch in humid places. Do not place a wet torch inside the case: the humidity absorbed by the foam might damage the torch and the charger.
- **IN CASE OF WATER PENETRATION OPEN THE LAMP AS SOON AS POSSIBLE, TAKE OUT THE BATTERY PACK, RINSE WITH FRESH WATER AND DRY AS MUCH AS POSSIBLE. WAIT AT LEAST TWO DAYS BEFORE REASSEMBLING, AND RECHARGING.**
- Fa & Mi S.r.l. declines any responsibility in case of accident caused by poor knowledge of the product or misuse of the product. In case of malfunction, contact a service centre.
- **LEDS MIGHT CHANGE IN AUTONOMY, TEMPERATURE OF COLOUR AND EFFICIENCY ($\pm 25\%$) DEPENDING ON THE LUMILED PRODUCER'S SELECTION, THE TEMPERATURE DURING USE OR THE STATE OF THE BATTERIES.**
- Little changes of colour or aesthetics are synonymous of product evolution and effective 100% water tests (100mt) before selling

IF IT DOESN'T WORK CHECK OUT:

- The charge;
- The connection of the charger

POSSIBLE CAUSES OF ANOMALIES AND FORMATION OF GAS INSIDE THE TORCH

- The torch has been charged with a non-original charger
- At the end of the charge, the waiting time before lighting up (1 hour) has not been respected (see the charge instructions)
- The torch has not been closed well and the water has come inside causing a short circuit inside the battery.
- The torch has not been turn off when the colour of the light changed (from white to yellow/red)
- the torch has been used outside the water at a temperature of more than 40°C
- Into the torch has been put a non-original bulb (possible explosion)
- The torch has been disassembled and tampered
- The torch has been used even if the torch seemed to have an anomaly
- The torch has not been repaired with original spare parts.

**DO NOT DISCHARGE THE BATTERY VOLUNTARILY!
EFFECT VOLUNTARY DISCHARGES IS DANGEROUS!!!**

The torch EVO-40 / 50 has been tested for the use within the underwater activity, in the ways and in the suitable times indicated in the instructions. FA&MI is not responsible for damages to people or things, due to improper use or tampering of the product.

UK EVO-40 / 50 FA&MI data 01/03/05

Fa & Mi S.r.l. Va San Gottardo n° 100 - 21021 Angera (VA) Italy

Tel. +39-0331-931412 Fax +39-0331-960184

Web-site: www.fa-mi.com E-mail: fa-mi@fa-mi.com