

MICA ML-800 ATEX:

VTT Technical Research Centre of Finland certificate for explosive facilities
VTT 04 ATEX 062X
II 2GD Ex ib IIC T4, device category 2, zone 1
EMC Directive 89/336/EC
Electronic devices in explosive facilities, Directive 94/9/EC

**TECHNICAL DATA (ML-800 ATEX)**

Bulbs: Luxeon high power LED 1W
Luxeon high power LED 3W
Battery: NiMH 6V 1800mAh
Lens: 41.5x 3 mm, toughened glass
Reflector: Aluminum
Operation temperature: -20°C ... +40°C (lamp)
Charging temperature: 0°C ... +40°C
Operating time: 7h (1W LED), 3h (3W LED)
Charging time: 2.5h from empty to full
Enclosure class: IP 66
Dimensions (h x w x d): 120 x 64 x 55mm with belt clip
Weight: 370g

CHARGING TECHNOLOGY (MLC)

Quick charge voltage: 750mA
Maintenance charge voltage: 100mA
Charging temperature range: 0°C ... +40°C
Maximum charging time: 4h
Conditions for ending charging: -dV, Tmax -45°C, tout -4h
Feed voltage for charging stand: 12VDC ... max.24VDC
Weight of charging stand: 170g

WARRANTY CONDITIONS

Warranty period for the lamp, the charging stand and the battery is one year. The warranty period begins when the lamp is purchased. The warranty covers manufacturing and raw material defects in line with general warranty conditions. Under the warranty period, the lamp may be serviced by an authorized MICA service agent only. If you need the lamp to be serviced under the warranty, please contact the retailer from whom you purchased your MICA lamp.

ML-800 ATEX 1W EM and ML-800 ATEX 3W EM LAMPS WITH SAFETY LIGHT FUNCTION

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.). EM lamp will always be automatically switched on in the safety light mode when placed in the charging stand.

For more information, please visit our web site at www.mica.eu

EC DECLARATION OF CONFIRMITY

We hereby declare that the product described below has been designed and manufactured in accordance with the following standards/directives:
-Directive 94/9/EC Equipment (ATEX) for use in potentially explosive atmospheres
-EMC directive 89/336/EC

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Product name, model, serial number, year of manufacture:	Mica ML-800 ATEX Serial number (in eight digits) and year of manufacture marked on the ID tag.
Certificate number:	VTT 04 ATEX 062X
Product type:	Rechargeable hand lamp

Helsinki, October. 25, 2004


Matti Öhman, CEO
MICA ELEKTRO OY LTD.

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ML-800 ATEX User Manual

ML-800 ATEX 1W, ML-800 ATEX 1W EM, ML-800 ATEX 3W
& ML-800 ATEX 3W EM



Please read this manual carefully in order to secure your lamp a long service life.

TO USER

MICA ML-800 ATEX is a small and effective rechargeable hand lamp that can be used in explosive facilities. The lamp's bright light pattern is achieved by using a long life high power LED and an aluminum reflector. The optimal operating time, more than 7 hours (with 1W LED), will be achieved with a fully charged NiMH battery. Please check that the lamp is suitable for use in the facility in which you plan to use it prior to taking it into use!



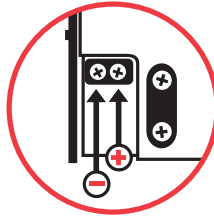
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TAKING INTO USE

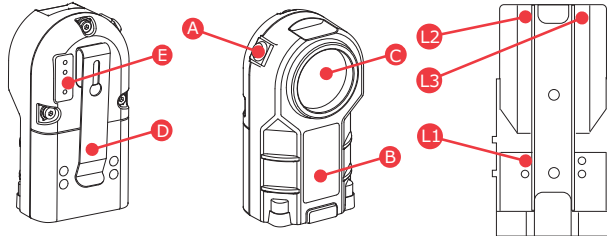
1. Mounting the quick charger stand MICA MLC

- Choose a suitable installation place and mount the MLC charging stand with two screws. The stand may not be placed on a platform manufactured of a highly flammable material.
- Connect the power feed wire (use either a vehicle battery or a MICA IL-2 AC/DC adapter) in the charging stand's round quick coupling. Alternatively, you can connect the feed wire in the screw terminals on the back of the stand (be sure to connect the plus and the minus poles correctly and finally tighten the cable clamp; the plus wire (+) is marked with red). *Please see the figure!*
- The red light **L1** will come on when the feed wire is connected, at the same time lights **L2** and **L3** will flash.
- Feed voltage to the charging stand must be continuous and it may not be disconnected by using a timer or a similar device.



2. Charge the lamp before using it

- The battery of a new lamp is never charged and it must be charged very carefully prior to taking the lamp into use.
- Please note that the lamp will not offer its full operating time until after it has been charged and discharged ca. 5 – 10 times.



LAMP PARTS

- A = Switch
- B = Type plate
- C = High power LED
- D = Belt clip
- E = LED indicator for battery charge

CHARGING ON MICA MLC CHARGING STAND

The MLC charging/holding stand is to be used with ML lamps only. The battery will be charged from empty to full in approximately two hours. The smart charging technology guarantees optimal and safe charging in any situation. Feed voltage must be taken from a MICA IL-1 AC/DC adapter or a 12/24 V vehicle battery.

1. The red light **L1** will be lit when the charging stand is attached to proper feed voltage (12- 24V).
2. The ML lamp must be placed on the MLC charging stand. When charging begins, orange light **L2** marked "charging" will come on. The lamp will be automatically turned off when it is placed in the MLC charging stand. The ML-800 ATEX lamp can be charged under temperature of 0°C ... +40°C only.
3. When the battery is fully charged, the green light **L3** marked "ready" will be lit (and the light **L2** will be turned off). At that time, the lamp is ready to be used and the charging stand will switch to the maintenance charging mode.
4. The lamp must always be stored in the charging stand in order for it to be ready for use at all times. The MICA MLC quick charging stand will not overcharge the battery of the lamp.

USING MICA ML-800 ATEX LAMP

A fully charged battery will allow you to work for approximately 7h 15min with 1W LED and 3h with 3W LED. If the lamp is used for shorter periods of time, the total operating time will be slightly longer. Approximately 30 minutes before the battery is empty, the light will begin to flash on and off in intervals of 15 seconds. When the operation time left is only approximately 5 minutes, the electronics will make the light flicker clearly faster. Control electronics will automatically turn off the lamp prior to deep discharge of the battery. When the lamp is not in use, it must be stored in the MICA MLC charging stand. The LED bulb's service life is extremely long and there is no need to maintain it in any way.

REPLACING BATTERY

It is time to replace the battery when the operating time remains clearly shorter than that given here.

The ML-800 ATEX lamp consists of two parts: A plastic frame including the battery and an aluminum back cover. All of the plastic parts must be replaced as one unit. When preparing to replace the battery, first open the three hexagonal socket-head screws on the back cover and detach the back cover with its electronics card from the frame. Then detach the battery from the electronics card on the cover and remove the aluminum back cover. After this, open the screws holding in place the reflector attachment plate and remove the reflector, the lens and the gasket. Attach these parts to the new battery unit, connect the battery wire to the electronics card on the cover and attach the back cover to the new battery unit. Please make sure that no wires are clamped between the parts and check the gasket surfaces prior to assembly.

A used battery is classified as hazardous waste! Please make sure that the battery is properly disposed of in accordance with instructions from the authorities. Do not dispose of the battery by burning it.

ACCESSORIES

1. -Wire for connecting to a cigarette lighter (01112)
2. -IL-2 AC/DC adaptor 230 VAC / 12VDC (11274)
3. -IL-5 automatic changer for five charging stands (11310)
4. -CR-15 charging ramp for up to ten MLC charging stands (11324)

SAFETY INSTRUCTIONS FOR MICA ML-800 ATEX LAMP

Taking lamp into use:

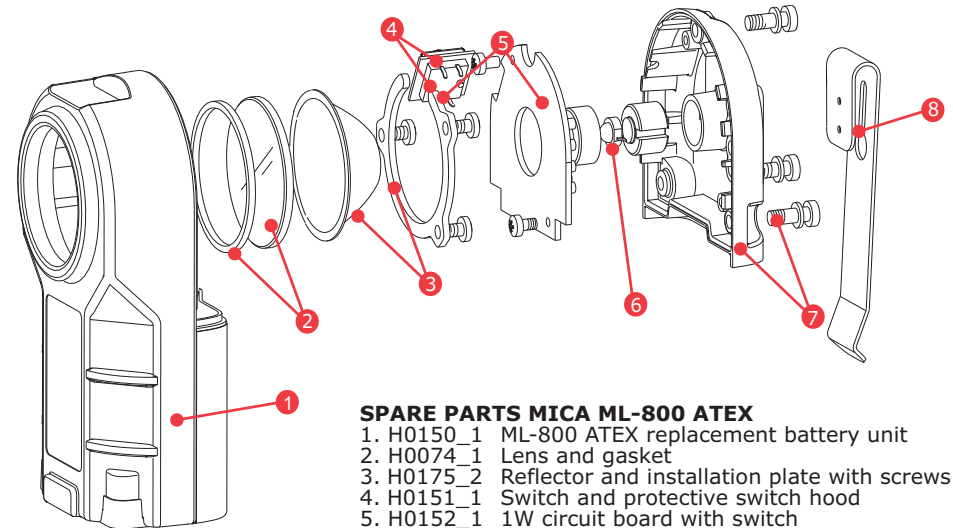
- The lamp must always be cleaned and otherwise prepared prior to moving into an explosive atmosphere.
- The charging stand must not be placed in an explosive atmosphere. The battery may not be charged in an explosive atmosphere.

Using lamp:

- The only approved power source for a ML-800 ATEX lamp is the original battery.
- The battery may not be charged in an explosive atmosphere.
- The battery may be charged with a MICA MLC charging stand only.
- Please check that your facility's classification corresponds to the lamp's device marking.

Lamp maintenance:

- A ML-800 ATEX lamp may not be opened or serviced in an explosive atmosphere.
- Spare parts included in the spare part list of the user manual only are to be used in a ML-800 ATEX lamp.
- You may not attempt to service the electronics units of a ML-800 ATEX lamp yourself.
- In case of a malfunction of a ML-800 ATEX lamp, please read the user manual and contact the retailer of the device.



SPARE PARTS MICA ML-800 ATEX

1. H0150_1 ML-800 ATEX replacement battery unit
2. H0074_1 Lens and gasket
3. H0175_2 Reflector and installation plate with screws
4. H0151_1 Switch and protective switch hood
5. H0152_1 1W circuit board with switch
H0152_2 1W EM circuit board with switch
H0152_3 3W circuit board with switch
H0152_4 3W EM circuit board with switch
6. H0153_1 1W LED unit
H0153_2 3W LED unit
7. H0154_1 Back cover with screws and gaskets
8. H0155_1 Belt clip with screws

SPARE PARTS MICA MLC

- H0085_2 Plastic cover and top bolt
- H0086_1 Back plate and receptacle
- H0087_1 Bottom bolt
- H0088_2 Printed circuit board

NOTICE: Do not mix 1W and 3W parts (circuit boards and LED units)!