

1. **EC-TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use
in Potentially explosive atmospheres
Directive 94/9/EC**

3. Reference: **VTT 03 ATEX 027X**

4. Equipment: **Hand lamp**

Certified type: **MICA IL-80 ATEX**

5. Manufactured by: **Mica Elektro Oy LTD.**

6. Address: **P.O. Box 42
FIN-00381 Helsinki
Finland**

7. This equipment or protective system and any acceptable variations thereto is specified in the schedule and possible supplement(s) to this Certificate and the documents therein referred to.

8. VTT Industrial Systems, notified body number 0537, in accordance with Article 9 of the Council Directive 94/9/EC of March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmospheres given in Annex II to the Directive

The examination and test results are recorded in confidential report no TUO26-032336.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with the standards:

**EN 50014 (1997) +A1&A2
EN 50019 (1994)
EN 50020 (2002)
EN 50281-1-1 (1998)**



10. If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
11. This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. This certificate does not cover these.
12. The marking of the equipment or protective system shall include the following:



II 2 G D EEx eib IIC T4 (T_{amb} = -20 °C ... +35 °C) / T3

Espoo, 14.04.2003

VTT INDUSTRIAL SYSTEMS
Ex-Laboratory



Risto Sulonen
Senior research scientist



I018
(EN45004, liite A)



Martti Siirola
Research scientist

13. **Schedule**14. **EC-TYPE EXAMINATION CERTIFICATE VTT 03 ATEX 027X**15. Description of Equipment

The Rechargeable hand lamp type MICA IL-80 ATEX is a portable lighting device. The hand lamp is equipped battery unit with five sealed Nickel Cadmium cells (5 x 1,2 V, 5 Ah) and an electrical fuse. The housing of the light unit is of anti-static plastic. The light unit is equipped with a switch.

Documents:

Mica IL-80 ATEX system description, Id:AS-116, 2 pages, 7.4.2003

IL-80 ATEX Critical parts 7.4.2003

Assembly, draw no. 001638_X, 22.1.2003

Assembly inside, draw no. 001639_X, 7.4.2003

Block diagram, draw no. 000851_x, 5 pages, 27.7.1995

Printed circuit board, IL-80 ATEX, IL-80 ATEX em, 000852_x, 8 pages, 7.3.2003

Printed circuit board, Part list, 01395_X, IL-80 ATEX, 000856_x, 3 pages,
7.4.2003

Printed circuit board, Part list, 01396_X, IL-80 ATEX em, 000914_x, 3 pages,
7.4.2003

Lens, draw no. 000849_x, 5.3.2002

Identification plate, Id:001646_X, 25.3.2003

16. Report No. TUO26-03233617. Special conditions for safe use:

- The halogen bulb shall be of type 2,4 W, 6 V, PX13,5S, Philips type HPR60.
- The hand lamp must be charged according to the manufactures recommendations
- The hand lamp must not be opened or charged in hazardous area.
- The ambient temperature range is for temperature class T4 is -20 ... +35 °C and for class T3: -20 ... +40 °C.

18. Essential Health and Safety Requirements

Met by compliance with the standards referred in point 9.

Espoo, 14.04.2003

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1. **SUPPLEMENT 1 TO EC-TYPE EXAMINATION
CERTIFICATE VTT 03 ATEX 027X**

2. Equipment: **Hand lamp**

Certified type: **MICA IL-80 ATEX**

3. Manufactured by: **Mica Elektro Oy LTD.**

4. In the lamp it can be used also a LED bulb, 1 W, 6 V, Philips type P160S

Irradiance of the used bulb type (halogen and LED) is below 5 mmW/mm²
(Research report 13230-07-003)

5. New Documents:

Mica IL-80 ATEX system description, Id: AS-116, rev MUR-0637-17
IL-80 ATEX Critical parts, rev MUR-0637-17

6. Compliance with the Essential Health and Safety Requirements has been assured
by compliance with the standards:

EN 60079-0 (2006)
EN 60079-7 (2007)
EN 60079-11 (2007)
EN 60079-28 (2007)
EN 61241-0 (2006)
EN 61241-1 (2004)

7. The marking of the equipment shall include the following:



**II 2 G D Ex eib op is IIC T4 (T_{amb} = -20 °C ... +35 °C) / T3
Ex tD IP66 T 135 °C**

Espoo, 14.5.2007

VTT
Technical Research Centre of Finland



Risto Sulonen
Senior research scientist



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Research scientist



1. **SUPPLEMENT 2 TO EC-TYPE EXAMINATION
CERTIFICATE VTT 03 ATEX 027X**

2. Equipment: **Hand lamp**

Certified type: **MICA IL-80 ATEX**

3. Manufactured by: **Mica Elektro Oy LTD.**

4. In the Hand lamp it can be used also a LED bulb, 1 W, 6 V, Philips type P161S

5. New Documents:

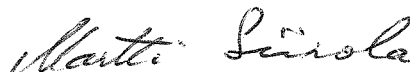
Mica IL-80 ATEX system description, Id: AS-116, 2 pages, rev MUR-0947-09
IL-80 ATEX Critical parts, rev MUR-0947-09

Espoo, 18.12.2009

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