Operating Instructions

Lite-Ex LED 8

CONTENTS

1. INTRODUCTION

Easy to operate, the ECOM Lite-Ex LED 8 is a compact and robust LED torch, making it ideal for use in confined and restricted spaces within Ex-hazardous areas classified as either Zone 1 or 2 according to IEC/CENELEC (TÜV-Authorisation) also classified as either Zone 2, 1 and 0 according to NEC (FM Approved).

2. SAFETY ADVICE

Safe operation of the equipment is maintained providing that all instructions and warnings contained in this manual are fully observed. In case of doubt (due to translation and/or printing errors) reference should be made to the original German instruction manual.

3. FAULTS AND DAMAGE

If there is any reason to suspect that the safety of the unit has been affected then it must be immediately withdrawn from use and precautionary measures taken in order to prevent any further use of in the Ex-hazardous area.
It is recommended that the equipment be then sent back to the manufacturers for testing.

The safety and integrity of the unit may be compromised by, for example:

- External damage to the housing.
- Exposure to excessive loads.
- Incorrect storage of the unit.
- Damage sustained in transit
- Correct certification is illegible.
- Functioning errors occur
- The permitted limitations are exceeded

4. SAFETY REGULATIONS

The use of the intrinsically safe Lite-Ex LED 8 meets the requirements of the regulations providing that the user observes and applies the requirements as laid down in the regulations and that improper and incorrect use of the unit is avoided.
The device must not be opened within the Ex-hazardous area.
Batteries (see technical data) must only be changed outside the Ex-hazardous area.
The LED (see technical data) must only be changed outside of the Ex-hazardous area.

5. EX-DATA

Certificate of Confomity: : TÜV 01 ATEX 1692

Certification :  II 2 G EEx ia IIC T4

Permitted for Zone 1, Equipment group II, Gas group C hazardous gases, vapour or mist, Temperature class T4.

Report Job Identification No.: 3010859
FM-Certification: Class I Zone 0 AEx ia IIC T4
I.S. Class I Division 1 Group A-D T4

Permitted for Zone 0, Equipment group II, Gas group C, Temperature class T4.

6. TECHNICAL DATA

Storage Temperature	-20°C … +50°C
Ambient operating temperature	-20°C … +50°C
Operating time	max. 300 Std.
Dimensions	14mm x 66mm [Ø x length]
Weight	approx. 37 g
IP rating	IP 54
CE-Marking	CE 0102
Batteries	3 x cell type LR 44 according IEC Alkaline manganese

Description:	**Manufacturer:**
LR44 Power Cells Alkaline	Panasonic
V13GA Electronics	Varta
LR44 Alkaline	Duracell
A76 Alkaline Cell	GP
L1154 Alkaline Cell	Vinnic
AG13 Battery	Chromex

LED	
Type	Gallium-Nitrit LED (NSPW500BS)
Manufacturer	Nichia Corporation
Brightness	5.600 mCd
Outflow Angle	15°
Durability	100000 operating hours
Wavelength	455 nm

7. APPLICATION

OPERATION
In order to operate the pressure switch, turn the safety clip.
To turn on the torch: press the push-button switch.
To turn off the torch: press the push-button switch. Isolate the switch from unintentional operation by replacing the safety clip.

KEY-OPERATION
Place the key over the clip: The torch will then switch on when pressure is put on the clip, when the pressure is released the torch switches off.

WARNING
The safety clip should not be used as a securing clip, as in doing so, the button will be permanently pressed, thereby reducing the battery life. Furthermore, the synthetic cap on the switch may also be damaged.

REPLACEMENT OF LED:
When replacing the LED ensure that only the following type is used:
Gallium-Nitrit LED (see technical data)
The LED must only be changed outside the Ex-hazardous area.
The use of any other type of LED is strictly forbidden in that it will invalidate the Ex-data certification.
Unscrew the LED-protective cap in an anticlockwise direction. Remove the synthetic ring. Remove the defective LED and replace with a new one and test by operating the push-button switch.
Refit the synthetic ring and protective cap - screwing in a clockwise direction.

REPLACEMENT OF BATTERIES:
When replacing the batteries ensure that only the following type is used:
3 x LR44 according to IEC (see technical data)
The batteries must only be changed outside the Ex-hazardous area.
The use of any other type of batteries is strictly forbidden in that it will invalidate the Ex-data certification.
Keeping the torch in a horizontal position, unscrew the battery cap in an anticlockwise direction. Next, tilt the torch to remove the defective batteries, replace with new ones - taking care to ensure correct polarity. The positive pole should be the one visible.
Refit the cap - screwing in a clockwise direction.

8. REPAIRS
The general terms and conditions of ELEX V apply to repair work. The manufacturer must carry out the repair work in order to check for the safe functioning of the protective circuits.

9. CLEANING AND MAINTENANCE
The equipment should only be cleaned using a cloth or sponge dampened with water. Do not use solvents, abrasives or other cleaning solutions.
It is recommended that the manufacturer tests the operation and accuracy of the equipment every 2 years.

10. GUARANTEE AND LIABILITY
ECOM issue a guarantee of 2 years - starting from the date of delivery - for the operating and material of this product under normal operating and maintenance conditions.

This guarantee does not apply to products used improperly, altered or neglected, accidental damages or unusual operating conditions, as well as exposure to improper handling.

Guarantee claims can only be granted if the defective equipment is returned. We reserve the rights to repairs, new adjustments or exchanges of equipment.

The existing regulations are the only right to compensation and are valid exclusively in place of all other contractual or legal guarantees. ECOM takes no responsibility for special, unavoidable or consequential damage, such as losses, including the loss of data, irrelevant of whether legitimate or illegitimate handling can be traced back to violation of the guarantee.
In case of some countries, where the restrictions of a legal guarantee as well as the exception or restriction of consequential damages is not permitted, it could be that the above mentioned limitations and exceptions are not valid for every purchase. Should any condition of these guarantee regulations be found to be ineffective or not acceptable by a responsible court, the effectiveness or force of any other condition, under these regulations, remains untouched.

11. DECLARATION OF EC-CONFORMITY

We ***ECOM Rolf Nied GmbH, Industriestraße 2, D-97959 Assamstadt*** declare under our sole responsibility that the product Lite-Ex LED 8 to which this declaration relates is in accordance with the provision of the following directives.

94/9/EG 89/336/EWG

and is in conformity with the following standards or other normative documents

EN 50014:1997	Electrical apparatus for potentially explosive atmospheres General requirements
EN 50020:1994	Electrical apparatus for potentially explosive atmospheres Intrinsic safety "i"
EN 50081-1:1993	Electromagnetic compatibility (EMC); generic emission standard;
EN 50082-1:1997	Electromagnetic compatibility (EMC) - Generic immunity standard -

ECOM Rolf Nied GmbH

Rolf Nied
Managing Director

Assamstadt, den 13.11.01

12. APPROVAL REPORT

Factory Mutual Research

FLASHLIGHT
LITE-Ex-LED 8
FOR HAZARDOUS (CLASSIFIED) LOCATIONS

Prepared for:
ECOM Rolf Nied GmbH
Industriestraße 2 · D-97959 Assamstadt, Germany

Project ID, 3010859
Class 36 10
Date: June 30, 2001

Factory Mutual Research,
P.O. Box 9102
1151 Boston-Providence Turnpike
Norwood, MA 02062-9102

An FM Global Affiliate

13. CERTIFICATE OF CONFORMITY

TÜV CERT

Translation

(1) **EC TYPE-EXAMINATION CERTIFICATE**

(2) Equipment or Protective System intended for use in potentially explosive atmospheres **- Directive 94/9/EC**

(3) EC-Type Examination Certificate Number

TÜV 01 ATEX 1692

(4)	Equipment or Protective System:	Explosion proofed torch type Lite-Ex LED 8
(5)	Manufacturer:	ECOM Rolf Nied GmbH
(6)	Address:	Industriestraße 2 D-97959 Assamstadt

(7) This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate.

(8) The TÜV Hannover/Sachsen-Anhalt e.V., TÜV Certification Body N° 0032 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), certifies that this equipment or protective system has been found to comply with the Basic Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential report N° 01 PX 06410.

(9) Compliance with the Basic Health and Safety Requirements has been assured by compliance with:

EN 50 014 : 1997 **EN 50 020 : 1994**

(10) If the sign "X" is placed after the certification 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 and construction of the specified equipment or protective system according to Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and placing on the market of this equipment or protective system.

(12) The marking of the equipment or protective system must include the following:

Ex II 2 G EEx ia IIC T4

Hannover, 2001-03-22

TÜV Hannover/Sachsen-Anhalt e.V.
TÜV CERT-Zertifizierungsstelle
Am TÜV 1
D-30519 Hannover

Head of the Certification Body

TÜV NORD

(13) **SCHEDULE**

(14) **EC-TYPE EXAMINATION CERTIFICATE N° TÜV 01 ATEX 1692**

(15) Description of equipment or protective system

The explosion proofed torch type Lite-Ex LED 8 may be used in explosion hazardous areas that require apparatus of the category 2 resp. 3.

The maximum permissible ambient temperature is 50°C.

Electrical data

Supply circuit (internal battery) 3 pcs. button cells LR 44 according to IEC, U = 4,5 V; 125 mAh

Only batteries successfully type-examined according to Section 10.9 of the EN 50020:1994 are permissible.
The manufacturers and the types have to be indicated in the operating instructions.

Lighting element Gallium Nitride LED type NSPW500BS
company: Nichia Corporation

It is not allowed to open the torch in the hazardous explosive area (information plate).

(16) Test documents are listed in the test report No. 01 Px 06410.

(17) Special condition for safe use

none

(18) Basic Health and Safety Requirements

no additional ones

BA 02 11.98 1.000.000

ecom instruments GmbH

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Z-Nr. 540B0202 11/01 Änderungen vorbehalten!