



**Translation**

(1) **EC-Type Examination Certificate**

(2) **- Directive 94/9/EC -**  
**Equipment and protective systems intended for use**  
**in potentially explosive atmospheres**

(3) **DMT 02 ATEX E 159**

(4) **Equipment:** Light-emitting diodes LED type LD\*/\*\*\*

(5) **Manufacturer:** W. Vershoven GmbH

(6) **Address:** 45141 Essen, Germany

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

(8) The certification body of Deutsche Montan Technologie GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential 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 test and assessment report BVS PP 02.1103 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 50014:1997+A1+A2 General requirements  
EN 50020 :1994 Intrinsic safety

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment 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 in accordance to Directive 94/9/EC.

Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate

(12) The marking of the equipment shall include the following:

 **I M2 EEx ia I**

**Deutsche Montan Technologie GmbH**

Essen, dated 08. August 2002

Signed: Dr. Eickhoff

Signed: Dr. Wittler

\_\_\_\_\_  
Certification body

\_\_\_\_\_  
Special services unit

(13) Appendix to

(14) **EC-Type Examination Certificate**

**DMT 02 ATEX E 159**

(15) 15.1 Subject and type

LED type LD\*/\*\*\*

Maximum voltage and current  
 no mark: max. 2.5 V and 20 mA  
 two numbers and letter V  
 stating max. voltage, e.g. 12 V  
 design

15.2 Description

The LED type LD\* / \*\*\* which is used as an accessory in intrinsically safe circuits contains only components that do not interfere with the type of protection intrinsic safety 'i'.

The LED type LD\* / \*\*\* is intended to be screwed into the existing bores of intrinsically safe equipment whereas the type of protection IP 54 of the apparatus shall be maintained.

The LEDs serve the purpose of signalling and line monitoring.

15.3 Parameters

15.3.1 For LED type LD\*

Voltage	$U_i$	DC	2.5 V
Current	$I_i$		20 mA

15.3.2 For LED type LD\*/\*\*\*

Voltage up to the nominal voltage stated in the full marking of	$U_i$	AC/DC	60 V
---	-------	-------	------

15.3.3 Ambient temperature range

$-20\text{ °C} \leq T_a \leq 55\text{ °C}$

(16) Test and assessment report

BVS PP 02.1103 EG as of 08.08.2002

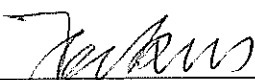
(17) Special conditions for safe use

None

We confirm the correctness of the translation from the German original.  
 In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 12.03.2007  
 BVS-Kem/Ar E 0339/07

**EXAM BBG Prüf- und Zertifizier GmbH**

  
 Certification body

  
 Special services unit



Translation

1st Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate  
DMT 02 ATEX E 159

Equipment: Light-emitting diodes type LD\*/\*\*\*

Manufacturer: W. Vershoven GmbH

Address: 45141 Essen; Germany

Description

The Light-emitting diodes type LD\*/\*\*\* were tested according to the standards EN 60079-0:2006 and EN 60079-11:2007.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 60079-0:2006 General requirements  
EN 60079-11:2007 Intrinsic safety 'i'

The marking of the equipment shall include the following:

I M2 Ex ia I

Parameters

Unchanged

Special conditions for safe use

None

Test and assessment report

BVS PP 02.1103 EG as of 24.02.2009

**DEKRA EXAM GmbH**

Bochum, dated 24. February 2009

Signed: Dr. Eickhoff

Signed: Dr. Wittler

\_\_\_\_\_  
Certification body

\_\_\_\_\_  
Special services unit

We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 02.03.2009  
BVS-Rip/Ar E 0333/09

DEKRA EXAM GmbH

\_\_\_\_\_  
Certification body

\_\_\_\_\_  
Special services unit