

# DET NORSKE VERITAS


## 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: **DNV 12 ATEX 10807X**
- [4] Equipment or Protective System: **BAD85 Series Explosion-proof LED Lightings**
- [5] Applicant – Manufacturer or Authorized representative: **Warom Technology Incorporated Company**
- [6] Address: **No.555, BAOQIAN ROAD, JIADING DISTRICT, SHANGHAI, CHINA**
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 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 systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential reports listed in section 14.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60079-0: 2009, EN 60079-1: 2007, EN 60079-31:2009**
- [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 and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.
- [12] The marking of the equipment or protective system shall include the following:



**II 2 GD** Ex d IIC T6/T5 Gb  
Ex t IIIC T80°C /T95°C Db IP66

Høvik, 2012-04-19  
for Det Norske Veritas AS

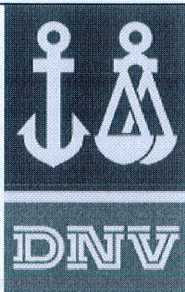
  
for Marianne Spæren  
Certification Manager



Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

The digitally signed and electronically distributed document is the original and valid certificate. Ref.: [www.dnv.com/digitalsignatures](http://www.dnv.com/digitalsignatures)

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 300,000. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE No.:** DNV 12 ATEX 10807X

**Certificate History**

Revision	Description	Report no.	Issue date
-	Original certificate	2012-3184	2012-04-19

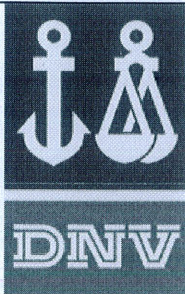
[15] **Description of Equipment or Protective System**

BAD85 Explosion-proof LED lightings has independent LED lamp Cavity ,cavity of constant current and constant voltage controller and wiring cavity, it adopts cross-ventilation head dissipation structure. Enclosure is made of aluminium; transparent cover is made of glass. There is a threaded hole which is blanked by plug in the outlet sleeve, the entry is installed with explosion-proof cable gland or plug which have obtained ATEX certificated according to service condition.

**Type Identification**

<b>BAD85</b>	-□	-□	-□
			Mounting Type
			G: Pendant pole type
			B: Wall type
			L: Pole type
			X:Ceiling Type
			D:Hook Type
			Lamp wattage (W) :
			BAD85-30:20W; 30W
			BAD85-70:50W; 70W
			BAD85-120:100W; 120W
			Enclosure type: 30; 70; 120
			Explosion-proof LED lightings

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**Electrical Data**

Rated Voltage :187V~265V 50/60Hz

Type	Rated power
BAD85-30	20W and 30W
BAD85-70	50W and 70W
BAD85-120	100W and 120W

**Degrees of protection (IP Code)**

IP 66

**Ambient temperatures**

-40°C ≤ Ta ≤ +40°C : Equipment rated T6/T80°C

-40°C ≤ Ta ≤ +55°C : Equipment rated T5/T95°C

[16] Project No.: PRJC-307404-2011-PRC-CHN

**Descriptive Documents**

Number	Title	Rev.	Date
IHRW 000 031	BAD85-30 Explosion-proof LED lightings	1.0	2011.04.13
IHRW 000 030	BAD85-70 Explosion-proof LED lightings	1.0	2011.04.13
IHRW 000 029	BAD85-120 Explosion-proof LED lightings	1.0	2011.04.13
IHRW 010 011	Assembly of wiring board	1.0	2011.04.13
IHRW 100 038	Wiring board	1.0	2011.04.13
WM5HR 101 228	LED Lamp	1.0	2011.04.13
WM8HR 003 1240	Enclosure cover for BAD85-30	1.0	2011.04.13
WM8HR 003 1380	Enclosure for BAD85-30	1.0	2011.04.13
WM8HR 351 276	Outlet sleeve for BAD-30	1.0	2011.04.13
WM8HR 003 1379	Thermal relief for BAD85-30	1.0	2011.04.13
WM8HR 003 1470	Enclosure for BAD85-70	1.0	2011.04.13
WM8HR 403 359	Glass Cover for BAD85-30	1.0	2011.04.13
WM8HR 313 1338	Cover for BAD85-70	1.0	2011.04.13
WM8HR 351 236	Outlet sleeve	1.0	2011.04.13
IHRW 020 037	Enclosure ring for BAD85-70/120explosion-proof LED Lighting	1.0	2011.04.13
WM8HR 215 086	Iron bush for BAD85-70	1.0	2011.04.13
WM8HR 178 019.2	Plug	1.0	2011.04.13
WM8HR 091 496	Enclosure ring for BAD85-70	1.0	2011.04.13
WM8HR 091 479	Clamping ring for BAD85-70	1.0	2011.04.13
WM8HR 403 438	Glass cover for BAD85-70	1.0	2011.04.13
WM8HR 003 1482	Thermal relief for BAD85-70	1.0	2011.04.13
WM8HR 091 493	Enclosure ring for BAD85-120	1.0	2011.04.13
WM8HR 003 1471	Thermal relief for BAD85-120	1.0	2011.04.13
WM8HR 860 852	Nameplate for BAD85-30	1.0	2011.04.13
WM8HR 403 435	Glass Cover for BAD85-120	1.0	2011.04.13
WM8HR 860 958	Nameplate for BAD85-70/120	1.0	2011.04.13

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**Routine tests**

Each enclosure must be subjected for routine pressure testing according to clause 16 of EN/IEC 60079-1, with the following pressures:

Terminal Compartment: 2MPa

Lamp Compartment: 1MPa

Constant current power compartment: 1Mpa

**[17] Special Conditions for Safe Use**

Repairs of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 1 and 2 of EN/IEC 60079-1.

The yield stress of the fastener elements of each part of the flame proof casing must be at least equal to 450N/mm<sup>2</sup>.

**[18] Essential Health and Safety Requirements**

See part 9 of this certificate

END OF CERTIFICATE

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