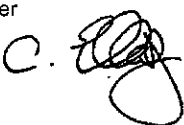




# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	IECEX SIR 06.0108X	issue No.:1	Certificate history: Issue No. 1 (2007-9-5) Issue No. 0 (2007-8-3)
Status:	Current		
Date of Issue:	2007-09-05	Page 1 of 4	
Applicant:	<b>Chalmit Lighting</b> PO Box 5575 Glasgow G52 9AP United Kingdom		
Electrical Apparatus: <i>Optional accessory:</i>	<b>Sterling Mk II and Sterling Mk II E Luminaires</b>		
Type of Protection:	Type nA and Dust		
Marking:	<b>Ex nA II T* Tamb = -20°C to +**C</b> <b>Ex tD A21 IP6X or</b> <b>Ex tD A22 IP6X</b> (* See Annexe for applicable temperature classes, ambient temperature ranges and temperatures for dust)		
Approved for issue on behalf of the IECEx Certification Body:	C Ellaby		
Position:	Certification Officer		
Signature: (for printed version)			
Date:	<u>2007-09-05</u>		

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

**SIRA Certification Service**  
Rake Lane  
Eccleston  
Chester  
CH4 9JN  
United Kingdom

**sira**  
CERTIFICATION



# IECEX Certificate of Conformity

Certificate No.: IECEx SIR 06.0108X

Date of Issue: 2007-09-05

Issue No.: 1

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Manufacturer: **Chalmit Lighting**  
PO Box 5575  
Glasgow  
G52 9AP  
United Kingdom

**Manufacturing location(s):**

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacture's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

**STANDARDS:**

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2004</b> Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-15 : 2005-03</b> Edition: Ed 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
<b>IEC 61241-0 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
<b>IEC 61241-1 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

**TEST & ASSESSMENT REPORTS:**

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

GB/SIR/ExTR07.0050/00  
GB/SIR/ExTR07.0079/00

Quality Assessment Report:

GB/BAS/QAR06.0027/00



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The Sterling Mk II and Sterling Mk II E Fluorescent Luminaires are manufactured with single or twin T8 bi-pin lamps. They are used with either a 120 or 240 V a.c. high frequency ballast or via a 120 to 240 V a.c. step up transformer with the 240V Hf ballast or with the copper/iron control gear. The Luminaires comply with EN 60598. For a full description, see Certificate Annexe.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. The Luminaire shall only be installed where there is a low risk of mechanical damage. When refitting the diffuser, the fixing clamps shall be re-secured with the original or replacement self-tapping screws.
2. The Luminaires shall be fitted with suitably certified cable glands and blanking devices maintaining with the enclosure an ingress protection rating minimum of IP54 (non-combustible dusts) or IP64 (combustible dusts).
3. Fasteners through the enclosure used for mounting purpose shall be fitted with appropriate sealing washers to maintain the ingress protection rating of the enclosure.



# IECEx Certificate of Conformity

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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

This Issue introduced the following changes:

1. Table B for the Range of Emergency Luminaires with HF Control Gear was corrected to rectify typographical errors.
2. Tables A and B were amended to recognise the addition of new Luminaires to these ranges.
3. Tables D and E were introduced to recognise the addition of new, 120 – 254 Volts rated, Non-Emergency and Emergency Luminaires with HF Control Gear to the range.
4. The information shown on the product marking label was rationalised.

**Annexe to:** IECEx SIR 06.0108X Issue 1  
**Applicant:** Chalmit Lighting  
**Apparatus:** Sterling II or Sterling II E Luminaires



### **Product Description**

The Sterling Mk II Fluorescent Luminaires are manufactured with single or twin T8 bi-pin lamps. For use with either a 120 or 240 V a.c. high frequency ballast or via a 120 to 240 V a.c step up transformer with the 240V Hf ballast, or also as specified below with the copper/iron control gear. The Luminaires comply with EN 60598.

Each unit comprises a glass filled polyester or stainless steel body with a polycarbonate diffuser secured by stainless steel clips. The enclosure is sealed by an EPDM gasket, which fits between the body and diffuser. At each end of the body, there are cable entry holes, which are fitted with blanks.

Inside the luminaire, there is a gear tray and, when fitted with an electronic ballast, comprises lamp holders, terminal blocks and optional transformer. When fitted with the alternative copper iron wound ballast additionally has a capacitor and starter fitted.

The gear tray is held in place by stainless steel spring clips, which are mounted directly to the body. Additionally the gear tray is fitted with suspension cords to the main body to aid maintenance.

The Sterling Mk II E Fluorescent Luminaires are the emergency versions of the Sterling Mk II Fluorescent Luminaires and are supplied in single or twin lamp versions. On failure of the supply, a single lamp is maintained by the internal battery pack. The emergency versions are further fitted with a battery pack and charger/inverter unit.

The battery pack comprises five nickel-cadmium cells connected in series as a single unit. The battery is rated at 6.0 V, 4 Ah.

The Luminaires may be supplied as through wired versions with a terminal block at each end of the gear tray. With the stainless steel bodied Luminaires also having the facility for looping conductors.

Fixing of the Luminaire is by holes drilled in the enclosure body. Sealing washers are provided to ensure the enclosure is sealed. For Luminaires intended to be used in hazardous dust atmospheres, self-tapping screws are provided to secure the lens clips in position.

The rating marking, including the voltage rating, the type of lamp and the power rating is indicated on the product label.

### **Attitude positions**

Standard & Emergency Luminaires with either: Ceiling / pendant mounting, horizontal wall mounting-lamp forward or outreach pole facing down or horizontal-lamp forward mountings.

### **Conditions of Manufacture**

The manufacturer shall note the following conditions of manufacture:

- i An electrical strength test of 1890V, rms  $[1.2 \times 1.05(2U + 1000)]$  shall be applied between live and neutral for at least 100 ms as required by clause 34.2.1 of EN 60079-15:2005.
- ii When Arlen EFAFTB1 fused type supply terminals are fitted. A label is to be fitted close to the fuse holder to indicate the correct fuse type and rating.

Annexe to: IECEx SIR 06.0108X Issue 1

Applicant: Chalmit Lighting

Apparatus: Sterling II or Sterling II E Luminaires



**Temperature Ratings**

<b>TABLE A</b>				
<b>Range of Non-Emergency Luminaires with HF Control Gear</b>				
<b>Nom. Volts:</b> 120 V - 240 V with HF Ballast		<b>Inverter:</b> N/A	<b>T Class:</b> T4	<b>Max Surface Temp (Dust):</b> +85°C
<b>Lamp</b>	<b>Body</b>	<b>Body Material</b>	<b>Ballast</b>	<b>Tamb Max</b>
1 x 18 W	Single	GRP	1 x 18 W	+45°C
1 x 18 W	Twin	GRP	1 x 18 W	+45°C
1 x 18 W	Twin	SS	1 x 18 W	+45°C
2 x 18 W	Twin	GRP	2 x 18 W	+45°C
2 x 18 W	Twin	SS	2 x 18 W	+45°C
1 x 36 W	Single	GRP	1 x 36 W	+45°C
1 x 36 W	Twin	GRP	1 x 36 W	+45°C
1 x 36 W	Twin	SS	1 x 36W	+45°C
2 x 36 W	Twin	GRP	2 x 36 W	+45°C
2 x 36 W	Twin	SS	2 x 36 W	+45°C
1 x 58 W	Single	GRP	1 x 58 W	+45°C
1 x 58 W	Twin	GRP	1 x 58 W	+45°C
1 x 58 W	Twin	SS	1 x 58 W	+35°C
2 x 58 W	Twin	GRP	2 x 58 W	+45°C
2 x 58 W	Twin	SS	2 x 58 W	+45°C
<b>Nom. Volts:</b> 120 V with step-up Transformer and 240 V HF Ballast		<b>Inverter:</b> N/A	<b>T Class:</b> T4	<b>Max Surface Temp (Dust):</b> +85°C
<b>Lamp</b>	<b>Body</b>	<b>Body Material</b>	<b>Ballast</b>	<b>Tamb Max</b>
1 x 18 W	Single	GRP	1 x 18 W	+30°C
1 x 18 W	Twin	GRP	1 x 18 W	+30°C
1 x 18 W	Twin	SS	1 x 18W	+30°C
2 x 18 W	Twin	GRP	2 x 18 W	+30°C
2 x 18 W	Twin	SS	2 x 18 W	+30°C
1 x 36 W	Single	GRP	1 x 36 W	+30°C
1 x 36 W	Twin	GRP	1 x 36 W	+30°C
1 x 36 W	Twin	SS	1 x 36 W	+30°C
2 x 36 W	Twin	GRP	2 x 36 W	+30°C
2 x 36W	Twin	SS	2 x 36 W	+30°C
1 x 58 W	Single	GRP	1 x 58 W	+30°C
1 x 58 W	Twin	GRP	1 x 58 W	+30°C
1 x 58 W	Twin	SS	1 x 58 W	+20°C
2 x 58 W	Twin	GRP	2 x 58 W	+30°C
2 x 58 W	Twin	SS	2 x 58 W	+30°C

Annexe to: IECEx SIR 06.0108X Issue 1

Applicant: Chalmit Lighting

Apparatus: Sterling II or Sterling II E Luminaires



<b>TABLE B</b>				
<b>Range of Emergency Luminaires with HF Control Gear</b>				
<b>Nom. Volts:</b> 120 V - 240 V with HF Ballast		<b>Inverter:</b> VL111 with or without auto test facility	<b>T Class:</b> T4	<b>Max Surface Temp (Dust):</b> +85°C
<b>Lamp</b>	<b>Body</b>	<b>Body Material</b>	<b>Ballast</b>	<b>Tamb Max</b>
1 x 18 W	Twin	GRP	1 x 18 W	+40°C
1 x 18 W	Twin	SS	1 x 18 W	+40°C
2 x 18 W	Twin	GRP	2 x 18 W	+40°C
2 x 18 W	Twin	SS	2 x 18 W	+40°C
1 x 36 W	Twin	GRP	1 x 36 W	+40°C
1 x 36 W	Twin	SS	1 x 36 W	+40°C
2 x 36 W	Twin	GRP	2 x 36 W	+40°C
2 x 36 W	Twin	SS	2 x 36 W	+40°C
1 x 58 W	Twin	GRP	1 x 58 W	+40°C
1 x 58 W	Twin	SS	1 x 58 W	+30°C
2 x 58 W	Twin	GRP	2 x 58 W	+40°C
2 x 58 W	Twin	SS	2 x 58 W	+40°C
<b>Nom. Volts:</b> 120 V with step-up Transformer and 240 V HF Ballast		<b>Inverter:</b> VL111 with or without auto test facility	<b>T Class:</b> T4	<b>Max Surface Temp (Dust):</b> +85°C
<b>Lamp</b>	<b>Body</b>	<b>Body Material</b>	<b>Ballast</b>	<b>Tamb Max</b>
1 x 18 W	Twin	GRP	1 x 18 W	+30°C
1 x 18 W	Twin	SS	1 x 18 W	+30°C
2 x 18 W	Twin	GRP	2 x 18 W	+30°C
2 x 18 W	Twin	SS	2 x 18 W	+30°C
1 x 36 W	Twin	GRP	1 x 36 W	+30°C
1 x 36 W	Twin	SS	1 x 36 W	+30°C
2 x 36 W	Twin	GRP	2 x 36 W	+30°C
2 x 36 W	Twin	SS	2 x 36 W	+30°C
1 x 58W	Twin	GRP	1 x 58 W	+30°C
1 x 58W	Twin	SS	1 x 58 W	+20°C
2 x 58 W	Twin	GRP	2 x 58 W	+30°C
2 x 58 W	Twin	SS	2 x 58 W	+30°C

Date: 5 September 2007

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Annexe to: IECEx SIR 06.0108X Issue 1

Applicant: Chalmit Lighting

Apparatus: Sterling II or Sterling II E Luminaires



<b>TABLE C</b>						
<b>Range of Non-Emergency Luminaires with Cu / Fe Control Gear</b>						
<b>T Class:</b>			<b>Max Surface Temp (Dust):</b>			
<b>T4</b>			<b>+85°C</b>			
<b>Lamp</b>	<b>Body</b>	<b>Body Material</b>	<b>Nom. Volts</b>	<b>Choke</b>	<b>Circuit Type</b>	<b>Tamb Max</b>
1 x 18 W	Single	GRP	200 - 250	1 x 18 W	Series	+35°C
1 x 18 W	Twin	GRP	100 - 130	1 x 18 W	Series	+40°C
1 x 18 W	Twin	SS	100 - 130	1 x 18 W	Series	+40°C
1 x 18 W	Twin	GRP	200 - 250	1 x 18 W	Series	+40°C
1 x 18 W	Twin	SS	200 - 250	1 x 18 W	Series	+40°C
2 x 18 W	Twin	GRP	100 - 130	2 x 18 W	Parallel	+45°C
2 x 18 W	Twin	SS	100 - 130	2 x 18 W	Parallel	+45°C
2 x 18 W	Twin	GRP	200 - 250	1 x 36 W	Series	+50°C
2 x 18 W	Twin	SS	200 - 250	1 x 36 W	Series	+50°C
2 x 18 W	Twin	GRP	200 - 250	2 x 18 W	Parallel	+40°C
2 x 18 W	Twin	SS	200 - 250	2 x 18 W	Parallel	+40°C
1 x 36 W	Single	GRP	100 - 130	1 x 36 W	Series	+35°C
1 x 36 W	Single	GRP	200 - 250	1 x 36 W	Series	+40°C
1 x 36 W	Twin	GRP	100 - 130	1 x 36 W	Series	+45°C
1 x 36 W	Twin	SS	100 - 130	1 x 36 W	Series	+35°C
1 x 36 W	Twin	GRP	200 - 250	1 x 36 W	Series	+50°C
1 x 36 W	Twin	SS	200 - 250	1 x 36 W	Series	+40°C
2 x 36 W	Twin	GRP	100 - 130	2 x 36 W	Parallel	+40°C
2 x 36 W	Twin	SS	100 - 130	2 x 36 W	Parallel	+40°C
2 x 36 W	Twin	GRP	200 - 250	2 x 36 W	Parallel	+45°C
2 x 36 W	Twin	SS	200 - 250	2 x 36 W	Parallel	+45°C
1 x 58 W	Single	GRP	100 - 130	1 x 58 W	Series	+25°C
1 x 58 W	Single	GRP	200 - 250	1 x 58 W	Series	+30°C
1 x 58 W	Twin	GRP	100 - 130	1 x 58 W	Series	+35°C
1 x 58 W	Twin	SS	100 - 130	1 x 58 W	Series	+25°C
1 x 58 W	Twin	GRP	200 - 250	1 x 58 W	Series	+40°C
1 x 58 W	Twin	SS	200 - 250	1 x 58 W	Series	+30°C
<b>T Class:</b>			<b>Max Surface Temp (Dust):</b>			
<b>(150°C) T3</b>			<b>+85°C</b>			
<b>Lamp</b>	<b>Body</b>	<b>Body Material</b>	<b>Nom. Volts</b>	<b>Choke</b>	<b>Circuit Type</b>	<b>Tamb Max</b>
2 x 58 W	Twin	GRP	100 - 130	2 x 58 W	Parallel	+25°C
2 x 58 W	Twin	SS	100 - 130	2 x 58 W	Parallel	+25°C
2 x 58 W	Twin	GRP	200 - 250	2 x 58 W	Parallel	+30°C
2 x 58 W	Twin	SS	200 - 250	2 x 58 W	Parallel	+30°C

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Annexe to: IECEx SIR 06.0108X Issue 1

Applicant: Chalmit Lighting

Apparatus: Sterling II or Sterling II E Luminaires



<b>TABLE D</b>				
<b>Range of Non-Emergency Luminaires with HF Control Gear</b>				
<b>Nom. Volts:</b> 120 V - 254 V with HF Ballast		<b>Inverter:</b> N/A	<b>T Class:</b> T4	<b>Max Surface Temp (Dust):</b> +85°C
<b>Lamp</b>	<b>Body</b>	<b>Body Material</b>	<b>Ballast</b>	<b>Tamb Max</b>
1 x 18 W	Single	GRP	1 x 18 W	+35°C
1 x 18 W	Twin	GRP	1 x 18 W	+35°C
1 x 18 W	Twin	SS	1 x 18 W	+35°C
2 x 18 W	Twin	GRP	2 x 18 W	+32°C
2 x 18 W	Twin	SS	2 x 18 W	+32°C
1 x 36 W	Single	GRP	1 x 36 W	+35°C
1 x 36 W	Twin	GRP	1 x 36 W	+35°C
1 x 36 W	Twin	SS	1 x 36 W	+35°C
2 x 36W	Twin	GRP	2 x 36 W	+35°C
2 x 36W	Twin	SS	2 x 36 W	+35°C
1 x 58 W	Single	GRP	1 x 58 W	+35°C
1 x 58 W	Twin	GRP	1 x 58 W	+35°C
1 x 58 W	Twin	SS	1 x 58 W	+25°C
2 x 58 W	Twin	GRP	2 x 58 W	+35°C
2 x 58 W	Twin	SS	2 x 58 W	+35°C

<b>TABLE E</b>				
<b>Range of Emergency Luminaires with HF Control Gear</b>				
<b>Nom. Volts:</b> 120 V - 254 V with HF Ballast		<b>Inverter:</b> VL111 with or without auto test facility	<b>T Class:</b> T4	<b>Max Surface Temp (Dust):</b> +85°C
<b>Lamp</b>	<b>Body</b>	<b>Body Material</b>	<b>Ballast</b>	<b>Tamb Max</b>
1 x 18 W	Twin	GRP	1 x 18 W	+35°C
1 x 18 W	Twin	SS	1 x 18 W	+35°C
2 x 18 W	Twin	GRP	2 x 18 W	+35°C
2 x 18 W	Twin	SS	2 x 18 W	+35°C
1 x 36 W	Twin	GRP	1 x 36 W	+35°C
1 x 36 W	Twin	SS	1 x 36 W	+35°C
2 x 36 W	Twin	GRP	2 x 36 W	+35°C
2 x 36 W	Twin	SS	2 x 36 W	+35°C
1 x 58 W	Twin	GRP	1 x 58 W	+35°C
1 x 58 W	Twin	SS	1 x 58 W	+25°C
2 x 58 W	Twin	GRP	2 x 58 W	+35°C
2 x 58 W	Twin	SS	2 x 58 W	+35°C

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