

# 出路指示牌

## EMERGENCY EXIT SIGN

### Galaxy 緊急出路燈 (LED) 掛牆式 (GF-ES02-3)

Galaxy self-contained emergency Exit sign box (wall mount type)

#### 特徵

Feature

一般模式 及 緊急模式 下的光度相同  
Same Lumen output in both Normal and Emergency mode

持續式  
Maintained type

充電指示, 故障指示  
Charging indication, Fault indication

轉換時間小於 1 秒  
Change over complete in less than 1 second

鎳鎘充電電池  
Ni-Cd rechargeable battery

3 小時備用電池用於緊急照明  
3 Hours battery backup for emergency operation

定期維護檢查 測試 按鈕  
Provided with TEST button for regular maintenance check



#### 產品規格 Specifications

| 項目 Item                          | GF-ES02-3                                    |
|----------------------------------|--|
| 功率 Power                         | 3.5 W  |
| 電源輸入 Main Supply                 | 220V +/-10%, AC 50Hz                         |
| 光源 Light Source                  | LED  |
| 燈具類型 Luminaires Type             | Maintained Type                              |
| 電池類型 Battery Type                | 4.8V 1.2Ah Sealed Ni-Cd Rechargeable Battery |
| 應急時間 Emergency Duration          | 3 Hours                                      |
| 電池充電時間 Battery Recharge Duration | Less than 12 Hours                           |
| 溫度範圍 Temperature Range           | 0-45 °C                                      |
| 防護等級 Waterproof Protection       | IP20   |
| 機身尺寸 Body Dimension              | L430*H180*W45mm                              |

- BS5266 Part1
- HK F. S. D Code of Practice (clause 5.10)
- BS5499 Part3
- HK F. S. D PPA/104(A) (4th Revision)
- BS5499 Part4
- 850°C Non-flammability

# 產品認證證書

## CERTIFICATION

Galaxy 緊急照明燈 (LED) 暗裝式  
Galaxy self-contained twin spot LED Luminaire  
(recess mount type)

型號: (GF-EL01-3)

消防處  
牌照及審批總區  
香港九龍尖沙咀東部康莊道1號5樓  
消防總部大廈



FIRE SERVICES DEPARTMENT  
LICENSING & CERTIFICATION COMMAND  
FIRE SERVICES HEADQUARTERS BUILDING,  
5/F, No. 1 Hong Chong Road,  
Tsim Sha Tsui East, Kowloon,  
Hong Kong

本處檔號 Our Ref.: (168A) in FP(LC) 321/12 Pt.19

來函檔號 Your Ref.: G190012, G190013 & G190014

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20 November 2019

Galaxy Fire Services Co., Ltd.  
20/F, THE BEDFORD  
91-93 Bedford Road,  
Tai Kok Tsui, Kowloon  
Hong Kong

Dear Sir / Madam,

### Application for Acceptance of Exit Sign / Directional Sign

Please be informed that according to FSD Circular Letter No. 1/2007, Exit / directional sign plate (Model: GF-ES03-3, GF-ES02-3 & GF-ES01-3) are not on the list of "Fire Service Installations and Equipment Requiring FSD Approval" and therefore application for its prior acceptance by this Department is not required. Please refer to the following website for more information:-

[http://www.hkfsd.gov.hk/home/eng/source/circular/2007\\_01.pdf](http://www.hkfsd.gov.hk/home/eng/source/circular/2007_01.pdf)

Should you have any enquiries, please feel free to contact the Policy Division of FSD at 2733 4083.

Yours faithfully,

(CHEUNG Ngao-tin)  
for Director of Fire Services

# 產品認證證書

## CERTIFICATION

Galaxy 紧急出路燈 (LED) 掛牆式  
Galaxy self-contained emergency Exit sign box  
(wall mounted type)

型號: (GF-ES02-3)



THE HONG KONG  
POLYTECHNIC UNIVERSITY  
香港理工大學

DEPARTMENT OF BUILDING SERVICES ENGINEERING  
屋宇設備工程學系

銀河消防服務有限公司 Galaxy Fire Services Co.,Ltd.  
20/F, THE BEDFORD  
91-93 Bedford Road, Tai Kok Tsui  
Kowloon  
Hong Kong

Our reference: MH-18-T013

Issue date: 4 October 2018

The self-contained emergency exit sign supplied by you was tested in our laboratory on 27 September 2018 and the results were presented as follows;

Description of luminaire: "Galaxy" self-contained emergency exit sign box (wall mounted type)

Complete set model: GF-ES02-3

Input: AC 220V +/-10% 50Hz

Battery: Sealed Ni-Cd / Ni-MH rechargeable battery pack (4.8V 1.2Ah)

Full charge period / Duration: 12 hours / 3 hours

Lamp type: LED lamp

Test button and charging LED: Incorporated

Low voltage cut off: Incorporated

Power cables: No power cables extended outside the enclosure of the self-contained emergency luminaire

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型號: (GF-ES02-3)

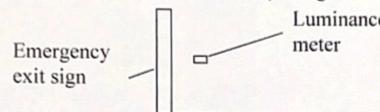


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Test procedures:

1. After 12 hours of charging at 220V 50 Hz AC supply, the emergency exit sign has attained 100% of its rated battery capacity.
2. The emergency exit sign was placed vertically on a desk and a luminance meter was placed at a distance of about 5 cm away pointing to the exit sign. Luminance measurement was carried out in a dark room so that light emitted by the emergency exit sign will not affect the measurement. (see figure below)



3. The test button on the exit sign was pressed so that the emergency exit sign was now powered by its own battery and the battery voltage and luminance was measured at 5 s, 1 min, 30 min and then at 30 min intervals until the rated duration. The total duration of emergency exit sign box was recorded.

The results are as follows:

1. Luminance of emergency exit sign (operated on battery supply)

| Time (min) | Battery Volt (V) | Luminance (cd/m <sup>2</sup> ) |
|------------|------------------|--------------------------------|
| Normal     |                  | 130                            |
| 5 s        | 5.5              | 128                            |
| 1          | 5.4              | 128                            |
| 30         | 5.3              | 128                            |
| 60         | 5.2              | 128                            |
| 90         | 5.1              | 128                            |
| 120        | 5                | 128                            |
| 150        | 4.8              | 128                            |
| 180        | 4.3              | 123                            |

2. The total discharge time is 183 minutes at which the batteries were disconnected by the incorporated low voltage cut out device.
3. The emergency luminaire passed the resistance to flame and ignition as stipulated in BSEN 60598-2-22:2014 and the external parts passed the 850°C glow wire test detailed in IEC60695-2-10: 2013.

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### Summary of compliance with PPA/104(A)(4<sup>th</sup> Revision)

| Item | Test Requirement of PPA/104(A) (4 <sup>th</sup> Revision)  | Result-Remark | Verdict |
|------|--|---------------|---------|
| B.3  | Emergency lighting luminaires shall comply with the non-flammability (resistance to flame and ignition) provisions specified in BS EN 60598-2-22:2014 and external parts shall also be subjected to the 850°C glowing/hot wire test; any burning parts should self-extinguish within 30 seconds.   |               | pass    |
| B.4  | All power cables extended outside the enclosure of a self-contained emergency lighting luminaire, other than the wiring connecting the luminaire to normal supply, shall conform to BS EN 60702-1:2002+A1:2015, BS EN 60702-2:2002+A1:2015 and BS 6207-3:2001 as appropriate or to BS 6387:2013 Cat. CWZ or other international standards acceptable to the Director of Fire Services. |               | pass    |
| B.5  | An automatic trickle charger with a 220-volt input and suitable output and fitted with pilot lights or other indicating device shall be provided for the batteries. The charger shall be capable of recharging the battery to 100% of the rated capacity in not more than 12 hours.  |               | pass    |
| B.6  | The self-contained luminaires emergency lighting systems shall be capable of maintaining the stipulated lighting levels for a period of not less than one hour (rated duration).   |               | pass    |
| B.7  | Upon failure of the main lighting system or in the event of power failure, the emergency lighting shall automatically light up to at least 90% of the stipulated illumination level within 5 seconds.  |               | pass    |
| B.8  | Each unit shall be provided with a properly labeled 'TEST' switch and charge monitor light. A low voltage cut out shall also be provided to disconnect the batteries when fully discharged.  |               | pass    |

Our measurement complied with relevant sections of BS 5266-1:2016. The test results complied with BS 5499-3:1990, BS 5499-4:2013, FSD COP for Minimum Fire Service Installations (2012) Clause 5.10 on Exit and Directional Signs and Regulation PPA104(A) (4<sup>th</sup> Revision) of Fire Services Department specifications.



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