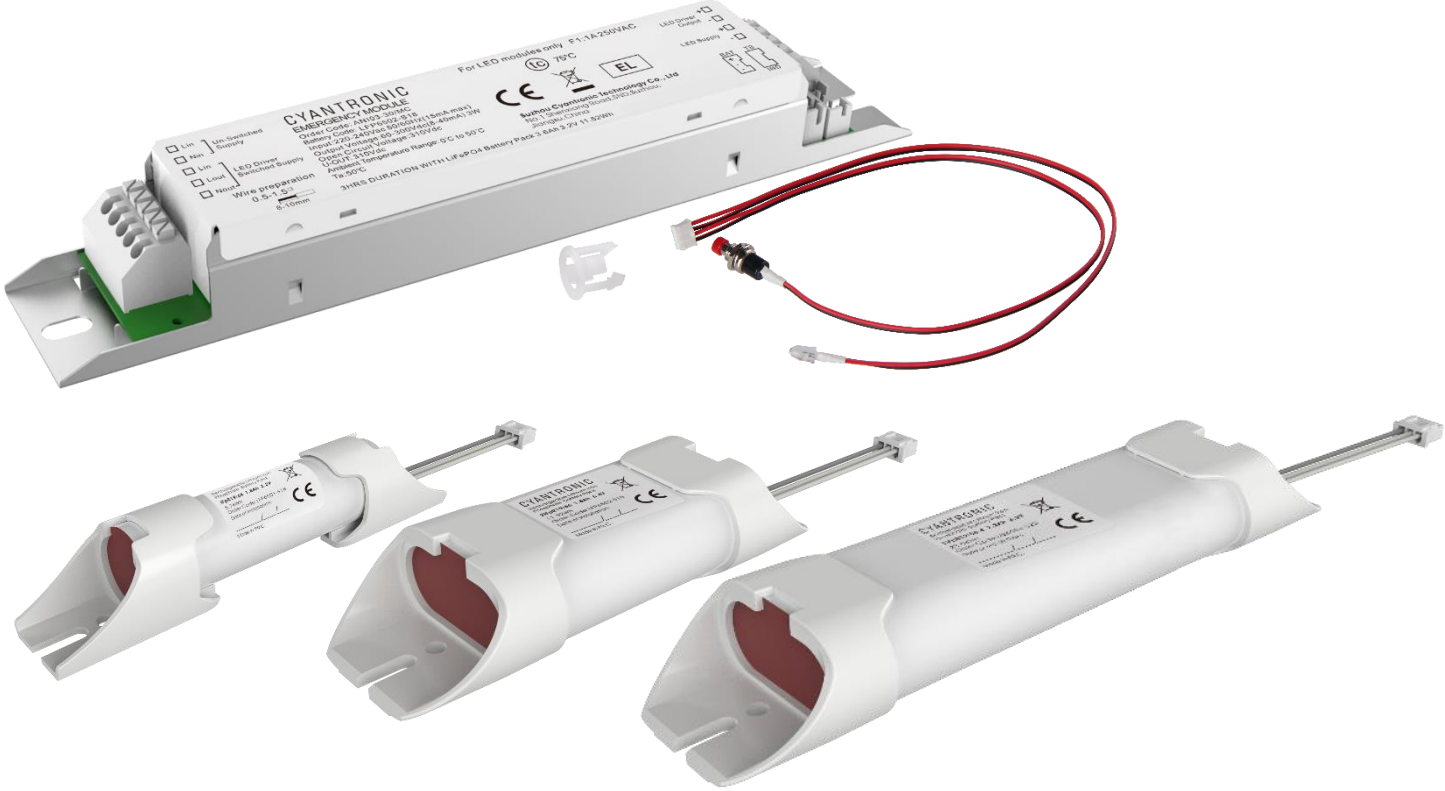
α-ni

Emergency Module for LED Luminaires

With Automatic Self-Test Technology

适用于 LED 灯具的带自检功能的应急电源



Product Information 产品描述

This emergency module with Automatic Self-Test Technology is used in LED luminaires with integrated LEDs and separate LED drivers. It is designed for installing within the fitting to provide a battery back-up supply in the event of a power cut. The emergency module requires a permanent live un-switched supply to maintain the battery charge. In the event of a power cut, the battery will supply the luminaires at a reduced output.

Automatic Self-Test technology that will perform regular automatic function and duration tests as required by EN 62034, reporting the results via a bi-coloured LED indicator.

此具有自检功能的应急电源适用于 LED 灯具，并安装于灯具内部。应急电源需要持续通电以维持电池电量。在停电的情况下，电池以较低的功率给灯具中 LED 模组供电。

自检功能指按照 EN62034 的要求执行定期的自动功能和持续时间测试，并通过双色 LED 指示灯报告结果。

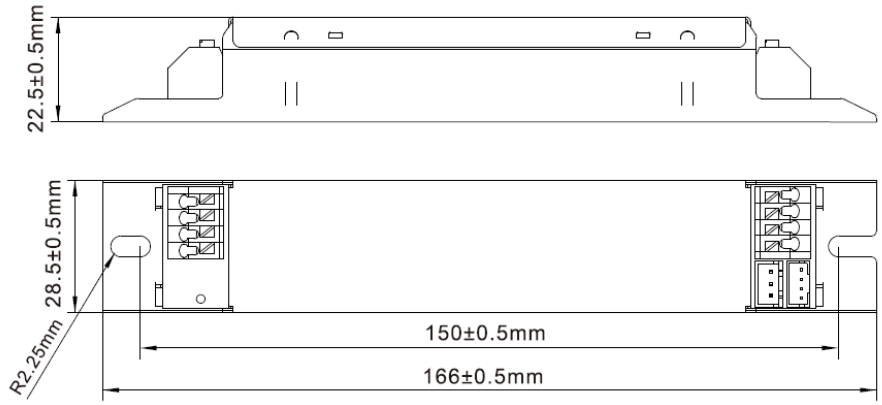
Features 产品特色

- For LED modules with a forward voltage of 30-300Vdc
- For maintained or non-maintained emergency lighting systems
- Automatic Self-Test technology conforming to EN 62034
- Conforms to EN 61347-1 and EN 61347-2-7
- Wired between driver and LED module via internal terminals
- Suitable for use in luminaires for high-risk task area lighting
- Voltage change-over threshold according to EN 60598-2-22
- 1.5 hours or 3 hours rated duration
- LiFePO4 battery pack
- Over-charge, over-current, short-circuit and deep discharge protection for battery
- Bi-coloured status LED indicator
- Weekly function test and yearly duration test
- For building-in
- Constant power output

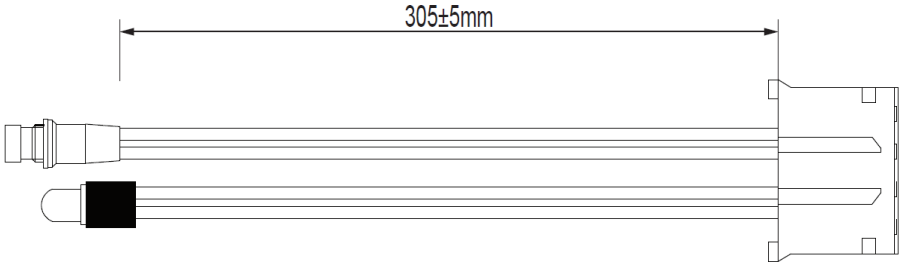
- 适用于电压为30-300Vdc的LED模组
- 用于持续式或非持续式应急照明灯具
- 自检功能符合标准EN 62034
- 符合标准EN 61347-1,EN 61347-2-7
- 通过端子与电源及LED模组连线
- 适用于高风险任务区照明灯具
- 应急转换符合标准EN60598-2-22
- 1.5小时或3小时应急工作时间
- 磷酸铁锂电池组
- 具有过充、过流、短路、电池深度放电保护功能
- 双色状态指示灯
- 每周功能检测年度持续时间检测
- 内置式应用
- 恒功率输出

Dimensions 产品尺寸

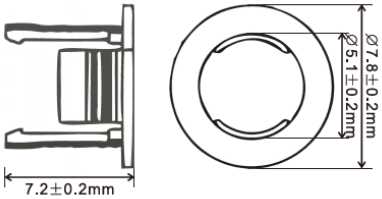
Emergency Module 应急模块



Indicator and Test Button 指示器和测试按钮

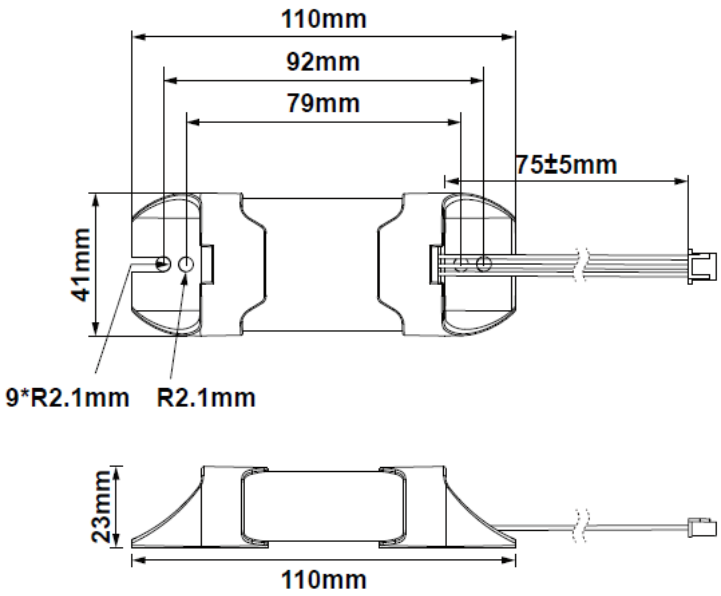


Indicator Holder 指示灯固定座

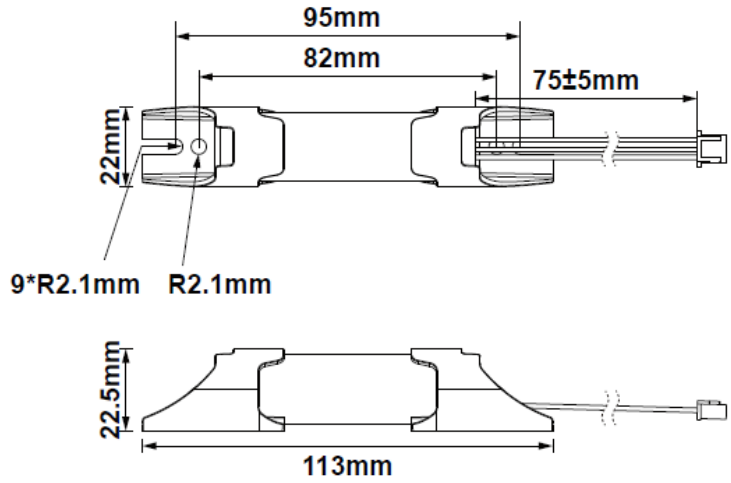


Battery Pack 电池组

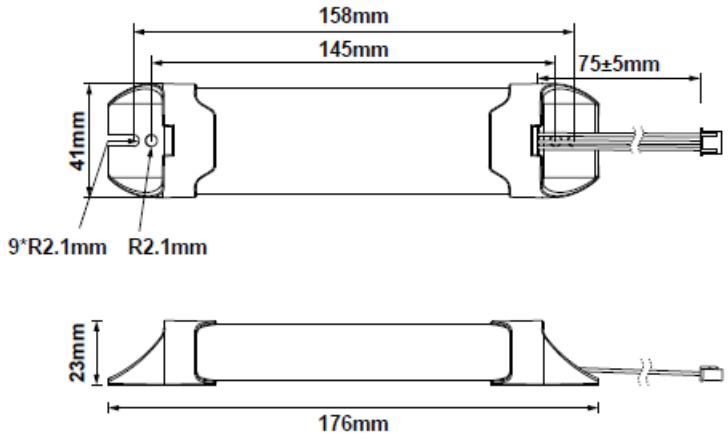
LFP6502-S18



LFP6501-S18



LFP6504-S20



Specifications 产品参数

Output Wattage **输出功率**	**3W**	**5W**
Input Voltage **输入电压**	220-240Vac 50/60Hz	220-240Vac 50/60Hz
Input Current (max) **输入电流（最大值）**	15mA	15mA
Output Voltage **输出电压**	30-300Vdc	30-300Vdc
Output Current **输出电流**	8-65mA	15-130mA
Open Circuit Voltage **开路电压**	310Vdc	310Vdc
Maximum Working Voltage **工作电压（最大值）**	310Vdc	310Vdc
Protection **IP 及防护等级**	IP20, For built-in installation IP20，内置安装	IP20, For built-in installation IP20，内置安装
Input to Output Protection **输入到输出防护等级**	Double Insulation 双重绝缘	Double Insulation 双重绝缘
Emergency Operation Time **应急工作时间**	>3 h	>3 h
Emergency Onversion Time **应急转换时间**	<1s	<1s
Test Function **检测方式**	Automatic and Manual 自动/手动	Automatic and Manual 自动/手动
Length x Width x Depth **长*宽*深**	166 x 28.5 x 22.5mm	166 x 28.5 x 22.5mm
Input Connection **输入端连接方式**	Push-fit terminals 0.5-1.5mm2 按压快接端子 0.5-1.5mm²	Push-fit terminals 0.5-1.5mm² 按压快接端子 0.5-1.5mm²
Output Connection **输出端连接方式**	Push-fit terminals 0.5-1.5mm2 按压快接端子 0.5-1.5mm²	Push-fit terminals 0.5-1.5mm2 按压快接端子 0.5-1.5mm²
Maximum Case Temperature **外壳最高温度(°C)**	75°C	75°C
Ambient Temperature Range **工作环境温度(°C)**	0 to 50°C	0 to 50°C

Notes:Not suitable for use on a battery supply with a trickle or intermittent re-charging circuit. The emergency module is not protected against supply voltage polarity reversal.
注意：不适用于带涓流或间歇充电电路的电池供电，应急电源无电池极性反接保护功能。

Battery Pack Options 电池组选项

Battery Code 电池型号	LFP6501-S18	LFP6502-S18	LFP6504-S20
Battery Type 电池类型	LiFePO4 18650	LiFePO4 18650	LiFePO4 18650
Battery Capacity 电池容量	**1800mAh**	**3600mAh**	**4000mAh**
Battery Voltage 电池电压	3.2V	3.2V	6.4V
Battery Charge Voltage 电池充电电压	3.6 Vdc	3.6 Vdc	9 Vdc
Battery Charge Current 电池充电电流	250mA	250mA	400mA
Battery Discharge Voltage 电池放电电压	2.5-3.6 Vdc	2.5-3.6 Vdc	6.0-8.2 Vdc
Battery Discharge Current 电池放电电流	450-550mA	850-950mA	350-700mA
Charging Time 充电时间	>24h	>24h	>24h
Battery Life 电池寿命	3 Years	3 Years	3 Years

Order Codes 产品型号

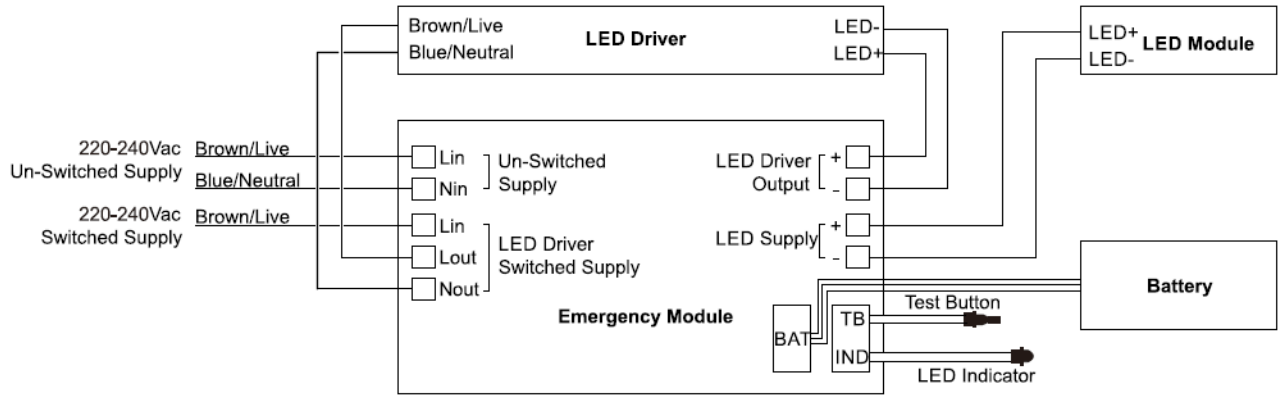
Order Code 产品型号	Description 描述
ANI03-15/MC/ST	**α-ni Selftest, 3W** output wattage, **1.5hours** emergency operation time, **LFP6501-S18, Built-in** **α-ni 自测试版，3W 输出功率，1.5 小时应急工作时间, LFP6501-S18,内置式应用**
ANI03-30/MC/ST	**α-ni Selftest, 3W** output wattage, **3.0hours** emergency operation time, **LFP6502-S18, Built-in** **α-ni 自测试版，3W 输出功率，3 小时应急工作时间, LFP6502-S18,内置式应用**
ANI05-30/MC/ST	**α-ni Selftest, 5W** output wattage, **3.0hours** emergency operation time, **LFP6504-S20, Built-in** **α-ni 自测试版，5W 输出功率，3 小时应急工作时间, LFP6504-S20,内置式应用**

Customizable Accessories 可定制配件

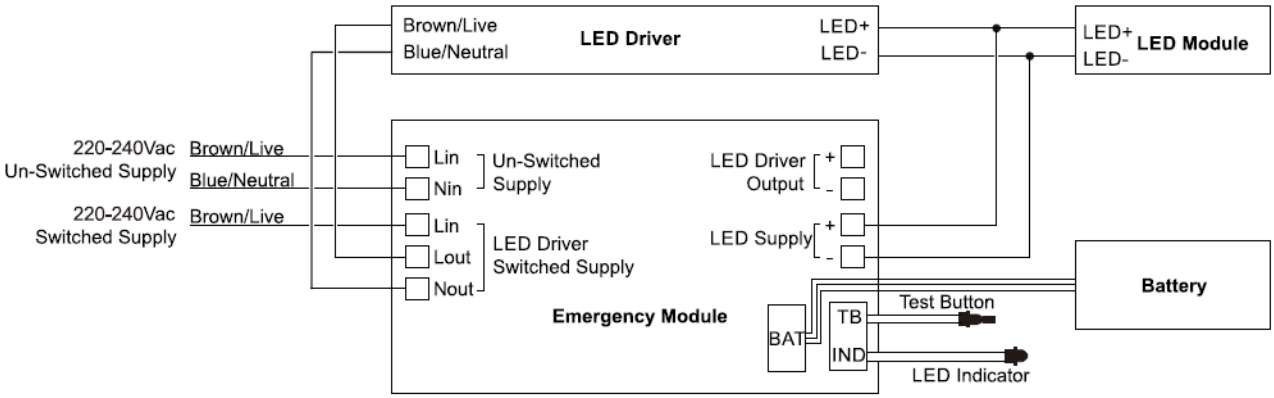
Type 类型	描述 Description
LED indicator & Test button cable 指示灯及测试按钮线	**Bi-coloured status LED indicator and test button cable with 4-pole plug 带 4 位连接器的双色状态指示灯和测试按钮电线**
Extension cable for battery 电池组延长线	**Extension cable for battery with 3-pole plug, available in 75mm or 130mm 带 3 位连接器的电池延长线，有 75mm 或 130mm 2 种选择**

Wiring Diagram接线图

Driver output current ≤ 0.8A 驱动输出电流≤0.8A



Drive output current＞0.8A 驱动输出电流＞0.8A



Automatic Self-Test Emergency Module User Guide

Please read these instructions thoroughly before use and retain for future reference.

If you are in any doubt about using this product, please consult a qualified electrician.

Commissioning

- Commissioning takes place by connecting the battery and then the un-switched supply. The battery must be connected first.
- The green LED will immediately flash 1 x second to indicate that there is a pending duration test.
- A duration test will occur at a random point between 24 hours and 48 hours after commissioning to allow up to 24 hours for battery charging.
- Any faults found in the duration testing will be reported via the LED indicator, as detailed below.
- Disconnecting the un-switched supply and then the battery resets the emergency module's schedule, this means that a function test will be performed 7 days form the time of reset and a duration test will be performed in 52 weeks.

Note: Resetting the module will **not** clear **Battery Duration Fault and Lamp or Luminaire Fault**. The user should initiate Duration Test or Functional Test to clear these faults. Please refer to the following instructions for details.

Note: The indicator will only be illuminated when connected to a supply, and not when in emergency mode. In the case of both a fault and duration test pending, only the fault will be displayed.

LED Indicator

●	**Green**	**= System Healthy**	●	**Red**	**= Battery Charging Fault**
✳	**Green Flash 1 x Second**	**= Duration Test Pending**	✳	**Red Flash 2 x Second**	**= Battery Duration Fault**
✳	**Green Flash 2 x Second**	**= Duration Test Running**	✳	**Red Flash 4 x Second**	**= Lamp or Luminaire Fault**
✳	**Green Flash 4 x Second**	**= Functional Test Running**			

Duration Testing (3 hours)

- An automatic duration test will occur at a random point between 24 hours and 48 hours after commissioning to allow for battery charging.
- An automatic duration test will occur annually at a random point in the 52nd week after commissioning.
- A duration test will occur after pressing the manual test button for 5-10 seconds. The battery will be allowed to fully charge for up to a maximum of 24 hours, then a duration test will occur at a random point in following 24 hours.
- A duration test may be delayed by other events, such as a power cut that interrupts the test or a lack of charging time, in which case the green LED will continue to flash 1 x second to indicate there is a pending duration test.
- Any faults found in the duration testing will be reported via the LED indicator, as detailed above.
- A functional test will not override Battery Duration Fault. A full duration test or re-commissioning is required to clear such fault.

Functional Testing (<2 minutes)

- A short automatic functional test will occur every 7 days.
- A manual functional test will start immediately after pressing the manual test button for 1-2 seconds.
- Any faults found in the functional testing will be reported via the LED indicator, as detailed above.
- A functional test will not override Battery Duration Fault. A full duration test or re-commissioning is required to clear such fault.

Manual Testing

- Manual functional test: Press the manual test button for 1-2 seconds. A manual functional test lasting <2 minutes will start immediately.
- Manual duration test: Press the manual test button for 5-10 seconds. A manual duration test will occur at a random point between 0 and 24 hours after pressing the manual test button for 5-10 seconds. Time will be added to allow the battery to charge if the battery has been charging less than 24 hours.

Pending Duration Testing

- A duration test may be delayed by other events, such as a power cut that interrupts the test or charging period, in which case the green LED will flash to indicate there is a pending duration test that the emergency module has rescheduled until charging is complete.

Lamp or Luminaire Fault

- Turn off the supply and replace or correct the fault with the lamp or luminaire, and then reconnect the supply.
- Press the manual test button for 1-2 seconds. A manual functional test lasting <2 minutes will start immediately to clear the fault.
- Alternatively press the manual test button for 5-10 seconds. A manual duration test will occur at a random point between 0 and 24 hours after pressing the manual test button for 5-10 seconds. Time will be added to allow the battery to charge if the battery has been charging less than 24 hours. The fault LED indication is overridden, during the pending and testing period.
- If the battery and power have been disconnected the module will re-commission and automatically test the replacement.
- A functional test will not override Battery Duration Fault. A full duration test or re-commissioning is required to clear such fault.

Battery Charging Fault & Battery Duration Fault

- Turn off the un-switched supply to the emergency module and replace the battery, and then reconnect the supply.
- If the fault was because the battery was not connected, the un-switched supply must still be turned off when connecting the battery to clear the battery charging fault.
- To clear a battery duration fault after replacing the battery a duration test will need to be successfully completed, see duration test procedure.