

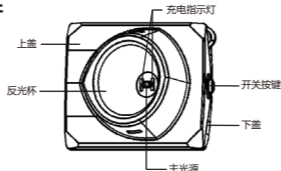
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2 技术规格

特性	技术规格		特性	技术规格	
型号	EH1	EH1S	型号	EH1	EH1S
额定容量	6.8Ah	3.4Ah	主光源工作寿命	≥100000h	
电池与电路板连接方式	直接连接		短路保护时间	<5ms	
持续放电时间	≥10 h	≥5 h	电池工作寿命 (重复充电)	500 次 (在合理的工作条件下)	
工作电压	3.6V		充电时间	8h	4h
工作电流	0.4A	0.4A	尺寸	82x70x51mm	
功率	1.44W	1.44W	重量	189g	149g
主光源光通量	260Lm	260Lm	工作环境温度	-20°C ≤ Ta ≤ +40°C	
一米的距离的初始亮度	10500Lux	10500Lux			

3 产品结构组件

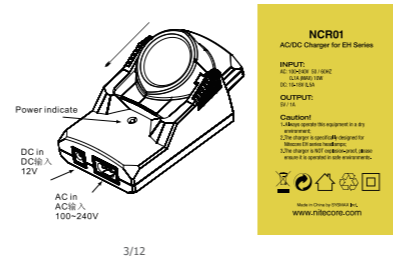


4 使用说明

4.1 充电方式

请使用 EH 系列灯具专用充电器 NCR01。NCR01 具有精确的输出电压及过流保护，可以保护 EH1/EH1S 在充电过程中不受损害。

将 NCR01 专用充电器接上“AC, 100-240V”的 AC 插座或 DC12V(10-18V) 电源接入 DC 插座，充电器的指示灯为红色。再将 EH1 置入专用充电器内充电。



EH1 (S) 便携防爆灯说明书

EH1: Explosion-Protected PC LED lamp instruction manual

1 产品特性

创新设计的 EH1 是经过精心的电子设计、软件设计和生产工艺设计的结晶。结合了最先进的 LED 光源技术和大容量锂电池技术，使得其更亮、更轻。产品独特的设计使其在矿用照明，工业照明，亦可用于户外活动、自行车夜间照明等领域，很受欢迎。

1.1 十万小时寿命和稳定的高亮度

产品采用了最先进的美国 CREE LED 光源和先进的驱动电路，在一定条件下主光源有 100000 小时的寿命。精心设计的反光杯有效减少光的吸收，以优化和提高光效，使得产品保持稳定的高亮度和长寿命。

1.2 重量轻

EH1 采用超轻量级的设计，EH1S 仅为 149g，远远轻于一般的便携式灯。

1.3 安全可靠，免维护，抗静电

EH1 所采用的锂电池具有免维护的特性。电池组的保护电路具有对过度充电、过度放电、电流过大、短路等问题的多重保护功能，保证电池不会因过充、温度过高、短路、撞击而产生爆炸或燃烧，从而确保多用途灯使用的安全。同时，所选外壳材质具有抗静电的特性。

1.4 耐冲击

EH1 的壳体使用防弹级 PC 材料制成。优化设计的模型不仅保证了壳体的强度并且减小了内应力，这使得 EH1 拥有更强的耐冲击力和更经久耐用。

4 使用说明

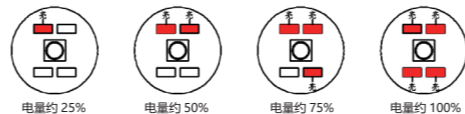
4.1 充电方式

请使用 EH 系列灯具专用充电器 NCR01。NCR01 具有精确的输出电压及过流保护，可以保护 EH1/EH1S 在充电过程中不受损害。

将 NCR01 专用充电器接上“AC, 100-240V”的 AC 插座或 DC12V(10-18V) 电源接入 DC 插座，充电器的指示灯为红色。再将 EH1 置入专用充电器内充电。

4.2 充电指示功能

EH1 有专门的充电指示灯。充电指示灯为红色，并且在闪烁时表示正在充电；红灯亮的个数表示电量的多少。充满时红灯全亮。在充电过程中，第一个红灯闪烁，电量约 25%；第二个红灯闪烁，电量约 50%；第三个红灯闪烁，电量约 75%；第四个红灯闪烁，电量约 100%。待多用途灯电池全部充满后，红灯全亮。



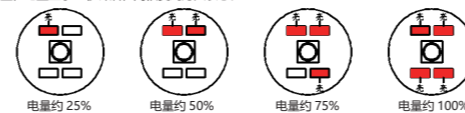
4.3 开、关灯 Switch On/Off

- 在熄灭状态，短按开关按钮，即可点亮主光源，进入高亮档，再按进入中亮档，再按进入低亮档，在按关闭，依次循环。
- 在熄灭状态，长按开关按钮超过 3s，进入红光照明，再按进入红光慢闪，再按关闭。
- 在开启状态，长按开关按钮超过 1s，进入 SOS 功能，再按进入信标功能，再按关闭。



4.4 电量指示 Power Indication

在 EH1 熄灭状态，按下开关按钮超过 1 秒，EH1 进入电量指示状态。红色灯发光，用来显示电池电量，电量显示 3 秒钟后，则恢复到熄灭状态。



注：EH1 的电量指示只是一个大概的指示，仅供参考。

5 故障与检修 Faults And Troubleshooting

故障描述	故障分析	处理方法
按键不能开灯	电池电量耗尽	将多用途灯接到充电器上充电
EH1 放电时间不足 10 小时，EH1S 放电时间不足 5 小时	电池没充满电	充电时确保多用途灯和充电器的良好接触
充满的时间越来越长	充电接触点接触不良	清洁充电点及限位槽内的污垢

6 注意事项

- EH1 出厂前已经充电至半饱，使用前应先充充电器对多用途灯充电至充满。
- 长时间不用时，每隔两个月按照以下步骤进行一次维护：完全充电 → 完全放电 → 2 小时充电的维护操作。
- 电池损坏，失效。不需要更换电池，直接更换新产品。
- 产品使用环境高于污染环境等级 2 类。
- 产品请勿在危险场所充电。充电器输出电压 5V(5V +0.5V max)，开路电压 5V (5V +0.5V max)。
- 在爆炸性环境中不要打开产品。
- 本产品设计所用到的这些与本质安全有关的元件，都能满足安全元件的要求，不会引起热表面引燃和火花点燃。

7 安全警示

- 产品在工作时不能直接对人眼睛照射，否则强光会损伤人的视力。
- 严禁随意拆卸产品的零部件，严禁在危险场所使用缺少零件的产品，否则会影响安全性及可靠性。
- 严禁摔打产品。
- 严禁将产品靠近或投入火源中。
- 报废的产品应集中处理，不得随意丢弃。
- 防爆标志：Ex ib IIB T5 Gb
- 防爆证号：EH1：SHEXC16.0340
EH1S：SHEXC16.0341
- 外壳防护等级：IP54

8 包装规格

EH1 采用纸盒包装，外形尺寸为：120 × 100 × 90 毫米。

9 序列号

序列号采用 12 位表示，YYYYMMDDXXXX，前 8 位表示生产年月日，后 4 位表示流水号。

10 安全须知

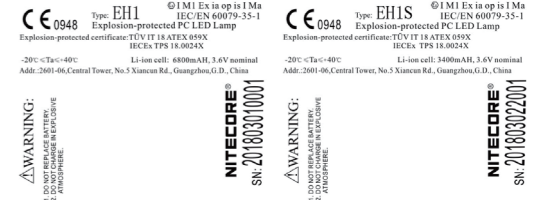
- 产品使用在含有爆炸性气体或蒸汽危险环境中，以及各种室内外作业（电力、冶金、铁路、港口、市政等行业）厂区、场站、场馆及铁路隧道、桥涵等场所作应急照明使用。工作环境温度：-20°C ≤ Ta ≤ +40°C

11 铭牌标识

- 本产品免维护，直接更换产品
- 在熄灭的状态，轻按开关按钮，就会点亮光源。如果在熄灭的状态下按下 开关按钮超过 1 秒，产品会进入电量指示状态。

11 铭牌标识

附铭牌详图，以及防爆标识解释。



Explanation of marking

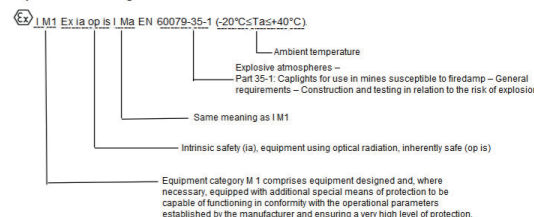


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1 Features Of Product

EH1 is perfectly created with electronic design, software design, production craft design and user-friendly design. It applies the most advanced technology of the LED light source and high-capacity li-ion battery technology to create a brighter and lighter multi-purpose portable explosion-protected lamp. Our product is a kind of ideal lighting equipment for mining using, industry using, also used for outdoor activity, riding lighting and other many other practical purposes.

1.1 100000 Hours Lifespan and Super Stable Brightness

The product applies the most advanced American CREE LED light source and advanced drive PCB, which promises its life span up to 100000 hours in certain condition. The well-designed reflector reduces the light absorption, which greatly improves the brightness.

1.2 Light in Weight

EH1 is designed to be super light and the EH1S is only 149g, which is half weight of the normal lamps.

1.3 Safe, reliable, maintenance-free and antistatic

The Li-ion battery of EH1 is maintenance-free. Moreover, the battery protecting PCB can protect the battery from overcharge, over discharge, over current, and short circuit so that the battery won't explode or burn. Therefore, the safety and reliability of EH1 are well guaranteed. Meanwhile, the enclosure material has a character of antistatic electricity.

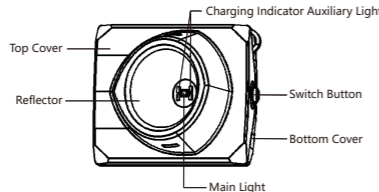
1.4 Impact-resistance

The shell of EH1 is made of bulletproof PC. The optimized mold design not only strengthens the hardness of the shell but also lessens the internal stress, which makes EH1 stronger in impact resistance and more durable in life span.

2 Technical Specifications

Features	Specifications	
Model	EH1	EH1S
Rated Capacity	6.8Ah	3.4Ah
Connection mode of battery and circuit board	Directly connect	
Continuous Working Time	≥10 h	≥5 h
Working Voltage	3.6V	
Working Current	0.4A	0.4A
Power	1.44W	1.44W
Main Light Luminous Flux	260Lm	260Lm
Initial Brightness in 1m	10500Lux	10500Lux
Main Light Life Span	≥100000h	
Short Circuit Protecting Time	<5ms	
Life Span of the Battery (Recharging Cycles)	500 Cycles in Reasonable Working Conditions	
Charging Time	8h	4h
Dimensions	82x70x51mm	
Weight	189g	149g
Ambient temperatures	-20°C ≤ Ta ≤ +40°C	

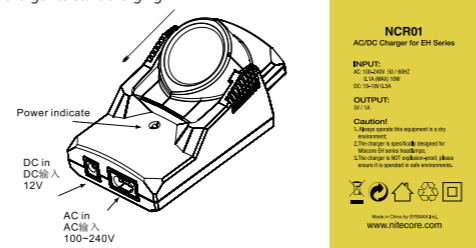
3 Parts Of Product



4 User Guide

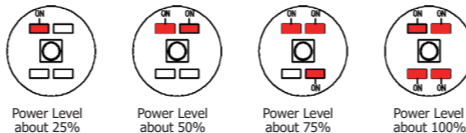
4.1 Charging

Please select the NCR01 charger for EH light series which have accurate output voltage and over current protection. Connect the charger NCR01 with AC 100-240V to AC socket or DC 12V to the DC input socket, and the charger indicator will be turned on. Put the EH1 light into charger to start charging.



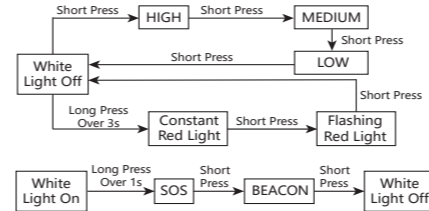
4.2 Charging Indication

EH1 has specialized charging indicators. One of the red charging indicators will flash during the charging process. The number of red lights indicates the current power level. When the EH1 is fully charged, all the red lights will glow constantly. During the charging process, the first flashing red light indicates the power level of about 25%; the second, about 50%; the third, about 75%; while the fourth, about 100%. When fully charged, all the red lights will be turned on constantly.



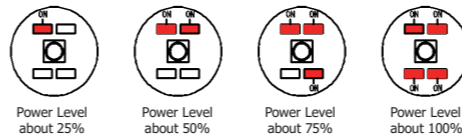
4.3 Switch On/Off

- When the light is off, short press the switch button to turn on the light and access HIGH. Short press the switch button repeatedly to reduce brightness to MEDIUM, LOW and to turn off.
- When the light is off, long press the switch button for over 3s to access Constant Red Light. In this status, short press the switch button to access Flashing Red Light. Then short press the switch button again to turn off the light.
- When the light is on, long press the switch button for over 1s to access SOS. In this status, short press the switch button to access BEACON. Then short press the switch button again to turn off the light.



4.4 Power Indication

When the light is off, long press the switch button for over 1s to access power indication. The red lights will be turned on for 3s to indicate the current power level before going off.



Note: The above status information is for reference only.

5 Faults And Troubleshooting

Faults Description	Faults analysis	Troubleshooting
Light is not on when pressing the button	Battery power is used up	Charge the lamp
Working time is less than 10 hours for EH1 or less than 5 hours for EH1S.	Battery is not fully charged	Make sure the lamp well connected to the charger when charging
Longer charging time	The charging points are loose contact	Clean the charging points and the slot

6 Notes

- EH1 is half charged before delivery, please fully charge it before using.
- If the lamps are not used for a long period, please repeat the following maintenance steps every two months: Fully charged → completely discharged → charged for 2hour.
- When battery damage, function failure. Don't need to replace the battery, direct replacement of new products.
- Products using the environment is higher than the 2 category of pollution.
- Do not charge in the explosive atmospheres. The output voltage of charge is 5V (5V+0.5V max), open circuit voltage is 5V (5V +0.5V max).
- Do not open the product in the explosive environment.
- All the elements in associated with intrinsically safe meet the requirements of safety components and do not cause the hot surface ignition and spark ignition.

7 Warning

- Please don't shine eyes directly while the lamp is working since the strong light will hurt eyes.
- Please don't disassemble the lamp, or it may cause potential troubles.
- Please don't crash and strike the lamp.
- Please keep the lamp away from fire sources.
- Please recycle the discarded lamps together rather than throwing them away without disposing.
- Explosion-protected Mark: ⚠ I M1 Ex ia op Is I Ma IEC/EN 60079-35-1
- Explosion-protected Certificate No: TÜV IT 18 ATEX 059X IECEx TPS 18.0024X
- IP Code: IP54

8 Package

The EH1 is packed by carton package. The size is 120 × 100 × 90 mm.

9 SN

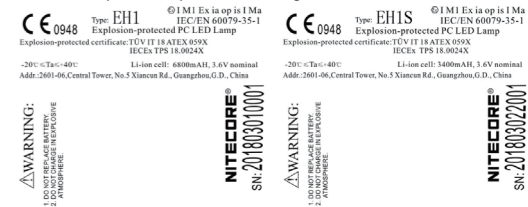
SN are 12 bit representations, YYYYMMDDXXXX. The first 8 digits indicate the production date, the last 4 bits are serial number.

10 Safety Instruction

- Products used in explosive gas or steam dangerous environment, as well as a variety of indoor and outdoor operation (electric power, metallurgy, railway, port, municipal and other industries) factory yard, venue and railway tunnels, Bridges, etc. used for emergency lighting. Ambient temperatures: -20°C ≤ Ta ≤ +40°C
- The product is free maintenance, direct replacement of new products.
- When the light is off, short pressing the switch button will turn on the light or long pressing the button for over 1s will access power indication.

11 Nameplate

Here's the nameplate and explanation of marking.



Explanation of marking

