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## Battery Care

The following steps should be taken to conserve the life of your battery.

- Always store your battery in a cool dry location
- Prior to storage, ensure your battery is charged to appx 70% (not full)
- You can charge and discharge your battery as often as you like
- Keep your battery away from direct heat sources
- Only charge using a smart charger, an addition to the batteries protective circuit, this will prevent overcharging
- A battery should be able to complete 500 cycles prior to losing capacity.
- Part charges and discharges are not equal to a full cycle. Several part cycles are better for the battery that 1 'full' cycle.

For more information on your battery go to [www.batteryuniversity.com](http://www.batteryuniversity.com)

**POOR BATTERY CARE WILL VOID WARRANTY**

## Battery Indication Introduction

All Gloworm Lights and/or batteries use indication LEDs to illustrate the state of charge of the battery.

X-Series Lights use batteries that feature a fuel gauge (with the exception of the Alpha) plus show state of charge through button illumination on the light. Fuel gauge indication is active during charging and when in use.

On CX Lights, the button indicates state of charge, which is indicated during both charging and when in use.

The Alpha battery indicates charge only during the charging process.

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## Button Indication Key

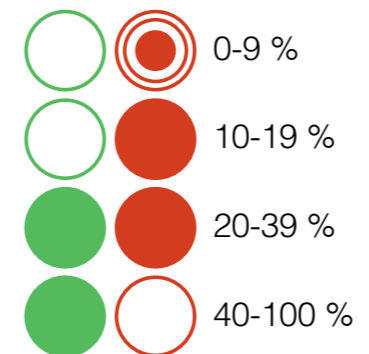
State of charge indication is achieved through a combination of red and green LEDs that illuminate the button on the light. Indicator LEDs will either flash or remain on to indicate how much charge is remaining in the battery.

For all lights, Indication will show when the light is in use. Only the CX shows indication when being charged.

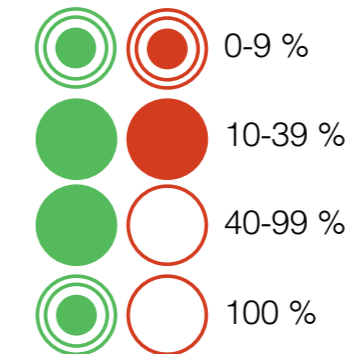
The CX also indicates it's state of charge when being used as a power bank.

KEY:  LED OFF  LED ON  LED FLASHING

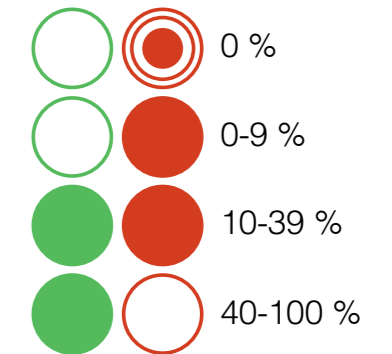
Light In Use - All Lights



Charging - CX Only



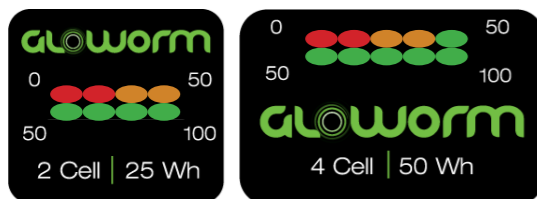
Power Bank - CX Only



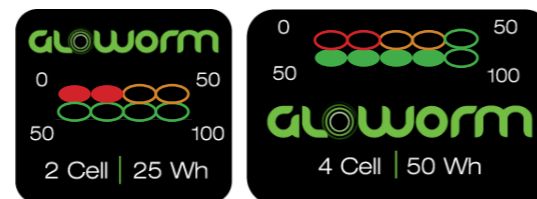
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## X-Series Fuel Gauge Indication Key

Layout



Examples



2 cell and 4 cell batteries feature 2 lines of indicating LEDs. At any time only one line of LEDs will illuminate to indicate charge. During charging LEDs will be animated and flash. During use LEDs will be steady and not flash.

2 Cell Example  
**25% Charge**

4 Cell Example  
**80% Charge**

## Alpha Battery Indication Key



The Alpha battery indicates only when charging. During use, the state of charge will be indicated by the button on the Alpha.

The Alpha battery will indicate whilst charging. The indication flashes **RED** until charge reaches 95%. It then changes to flashing **GREEN**. At full charge the **GREEN** LED will cease flashing and stay lit. If left the indicator will eventually turn off.

When not in use or charging, the battery will emit a very quick green flash every ~5 sec. This indicates that the battery is at least 80% charged (this indication will not significantly drain the battery).

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## CX Battery Removal and Power Bank Option

**Battery Removal** The CX battery can be replaced by removing the back plate of the light. Once the back plate has been removed, simply slide the battery from the light.

**Power Bank Option** The CX has the ability to act as a Power Bank to charge other devices utilising it's OTG capability. This is not a primary function and is not designed to fully charge another device but to provide power in a situation where no other power source is available and charging is necessary.

To use OTG, attach the OTG Cable to your device charge cable then connect to the CX via the USB port. Charging will commence after 2-3 seconds.

If the light is 'OFF', the OTG will provide 5V at 1A. If the light is 'ON', the OTG will provide 5V at 0.5A. As every device is different, charging times will vary.



## Battery Charging

The X2 is supplied with a Li-Ion Smart Charger. Simply plug the charger into the wall socket (power off) and then connect the battery to the charger. Turn the power on at the wall socket and the battery indication will show the current state of charge.

The CX battery is charged utilising the included micro USB cable. It can be charged via a USB port on a computer or via a wall charger (not included). Charge time can vary from 5 - 17 hrs depending on charging device.

The battery and charger are configured to protect against overcharging and overdischarging.