

# LUCIFER

Z2  
MINI  
MICRO

EN  
USER GUIDE

[WWW.LUCIFERLIGHTS.NET](http://WWW.LUCIFERLIGHTS.NET)

POWERFUL HEADLAMPS MADE IN THE CZECH REPUBLIC

ADVANCED UI

EASY UI

5-10 seconds long button press from off state



- VERY LOW 2 CLICKS
- WHITE BLINKING 3 CLICKS
- SOS 4 CLICKS

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→ long press (to 1s)

→ short click (to 350ms)

BASICS

Headlamp has got 5 lighting modes and 3 special modes (blinking, battery test, sos).

There is no memory for the last mode and headlamp turns on everytime the same. Headlamp can be turned off with a very long press.

Headlamp has got 2 different user interface schemes - easy one and advanced one. You switch between them with 5-10s button press.

On the left side is advanced user interface and is set as default. Modes can be changed with short, long and very long presses. A short click lowers the mode and cycles between low and mid mode. Long press switches to a higher mode.

On the right side is easy user interface - you switch modes only with a short press by cycling modes LOW-MID-HIGH-BOOST-LOW etc.

INTENSITY SETTING

Switch of intensity is done by 10 seconds or longer button press from the off state. The headlamp blinks one or two times. One blink indicates you switched to the lower intensities. Two blinks means you switched to higher intensities.

From the factory higher intensities are set.

RUNTIMES

LOWER INTENSITIES

Mode	Light output [Lumens]	Runtime Z2MINI [h:m]	Runtime Z2MICRO [h:m]
VERYLOW	13	180:00	135:00
LOW	75	30:00	19:00
MID	160	12:00	8:00
HIGH	300	6:00	4:00
BOOST	600	2:30	1:40

RUNTIMES

HIGHER INTENSITIES

Mode	Light output [Lumens]	Runtime Z2MINI [h:m]	Runtime Z2MICRO [h:m]
VERYLOW	13	180:00	135:00
LOW	100	20:00	12:30
MID	200	10:00	6:00
HIGH	400	4:30	3:00
BOOST	850	1:40	1:00

Runtimes are specified as minimum time in given mode when used with our 3450mAh or 2000mAh battery. Runtimes are lowered when battery gets frozen (under 0° Celsius).

### DISCHARGE WARNING

Electronics monitor remaining battery charge and give **3 levels of warning**, alerting the user to levels of battery discharge down to **33%, 10% or completely empty** with 1, 2 or 3 blinks of the beam. **Three flashes** indicates that the batteries are fully discharged and headlamp can be shortly turned off.

This signalization can be slightly inaccurate, especially in highest modes. The most accurate signalization gives **STATE OF CHARGE TEST**.

When batteries are not able to supply enough energy, headlamp switches to lower modes. When its finally switched to the lowest mode, headlamp no longer regulate brightness and light diminishes over a long time and then shuts off completely.

### STATE OF CHARGE TEST

You turns on battery test with **1 second press or longer** when headlamp is turned off. Headlamps use key under this paragraph to tell you the state of charge of inserted battery with a series of flashes.

5 blinks = 80-100%  
 4 blinks = 60-80%  
 3 blinks = 40-60%  
 2 blinks = 20-40%  
 1 blinks = 0-20%

remaining  
charge

### OVERHEATING PROTECTION

Headlamp monitors its temperature and switches to lower mode in case of overheating. Overheating can occur in high and boost mode when the headlamp is not moving. Warning! **Temperature of the headlamp body can reach up to 60°C.**

### CHARGING

Battery should be charged with integrated USB-C charger. Charging of fully depleted battery takes 5-7 hours. Charger lights **red during charge** and **green when completed**.

You can also use any bay charger which is made for charging li-ion cells. Charging end voltage must be set to 4.2V.

### LI-ION TECHNOLOGY

There is no need to cycle Li-Ion batteries. You can charge them anytime, you dont have to discharge them before. Battery gets naturally old from the time it was manufactured, life can be significantly prolonged.

### MAXIMUM PROLONGING OF BATTERY LIFE

Do not fully discharge battery if you dont need to. **Do not store batteries fully charged or fully discharged.**

We recommend 50-60% charge for long time storage.

Do not dispose batteries to temperatures below 0° Celsius. In cold, place them under your clothes or into the pocket.

When batteries get frozen limit use to lower modes to minimalize damage.

Do not charge batteries below freezing point 0°C.

### BASIC SAFETY

DO NOT USE DAMAGED BATTERIES!

KEEP BATTERIES OUT OF HIGH TEMPERATURE (inside car in direct sun, near the fire etc.)

UNSCREW HALF TURN BATTERY CAP FOR TRANSPORT!  
(prevent accidental turn on)

CHARGE BATTERIES WITH APPROPRIATE CHARGER ON SAFE PLACE UNDER YOUR SUPERVISION!

DO NOT CHARGE BATTERIES WITH TEMPERATURE BELOW 5°C.  
Wait until they have room temperature.

THIS LIGHT IS NOT A TOY!  
kids are allowed to use it only if they know how

DO NOT LIGHT INTO EYES!  
can damage your sight.

KEEP THE HEADLAMP TURNED DOWN ON A ROAD!  
do not blind drivers in traffic

HEADLAMP CAN HEAT UP TO 60°C!

## BATTERIES

Only **protected li-ion 18650 or 18500 cells** supposed to be used in Z2MINI/MICRO headlamps.

Be careful when inserting batteries into the headlamp or into the bay charger, not to damage its surface.

Watch out for **correct polarity**. Battery positive pole is inside the headlamp.

When the headlamp is transported or not used for some time, turn the tube cap half a turn counterclockwise so the battery is disconnected from the headlamp and could not turn on accidentally. Also you prevent any battery discharging.

For longer thread life and easy operation, apply vazeline on threads and o-ring seal and clean these surfaces when they are dirty.



Headlamp body	CNC milled, aluminium alloy 6063, anodized
LEDs	1x Cree XP-L2, 4500K, typ. CRI 70, bin W2
Waterproof rating	IP68
Modes	7 modes, all constant regulated
Maximum light output	850 lumens
Maximum runtime	180 hours
Maximum beam distance	130m
Electronics	microprocessor driven synchronous step down converter, efficiency 92-95%
Protection against	overheating, opposite battery polarity
Discharge warning	at 33%, 10% and 0% remaining capacity
Quiscent current	160 uA
Supply voltage	2.5-5.5 V DC
Operation temperature – lighting	-20 – 60°C
Operation temperature – charging	10 – 45°C
Battery configuration	1 protected cell
Battery type	Lithium – Ion, size 18650 or 18500, only Protected
Overall weight (battery included)	143gr. / 116gr.

# LUCIFER

LUCIFERLIGHTS s.r.o  
SLUZSKA 779/30  
PRAGUE 8  
18200  
CZECH REPUBLIC

## OUR MISSION

Lucifer headlamps are made and assembled in Prague, Czech Republic.

We are focused on creating very small, tough and light-weight headlamps designed and constructed to the highest possible standards, with the highest light outputs, longest possible runtimes, excellent ergonomics and ease of use, and with all the accessories and mounts you are likely to need.

## IDEA FOR IMPROVEMENT?

We would like to hear from you and your headlamp use. Write us email and share with us your ideas. We design headlamps for people and their votes are important for us.

## SPREAD A WORD

If you are satisfied with our headlamp and want to support us, please tell your friends about us. That will help us grow and develop new lights and accessories.

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