

## MEGALODON mk2

### Primary light

The primary light Megalodon mk2 is the evolution of the ARTEK®'s flagship. It has been designed to deliver 1280 lumens of light output with higher light penetration during immersion.

The small size of the battery canister is impressive. New features to increase security to this high-end unit.



#### DESIGN PROCESS

This unit was launched in 2013, make a qualitative step forward offering a new form factor for the Tanker (canister). These kinds of lights were big and heavy, and not always reliable. The Tanker was smaller than beverage can, and the spot got 50.000 lux at 1 meter.

The mk2 design has new electronic features, the Tanker is an unibody piece with its cap and a new magnetic switch. There is an improvement in the concentration of the main beam (spot), getting a much more penetrating light.

#### LIGHT POWER AND RUNTIME

This primary light has a power of 1280 lumens in a compact head. The power is constant during the 4 hours of runtime. It features the automatic Battery Saving Mode.

#### WARNING Y BATTERY SAVING MODE

Megalodon mk2 light has a low battery warning device. With a few flashes, it alerts us that the battery is low. Automatically, after flashes, the power drops to the level of Battery Saving Mode. In this way the remaining autonomy increases, and we do not run out of light, allowing us to access our backup light if necessary.

#### C.T.P.

It has a temperature control that offers security. This unit can be used on surface use without any risk, since in the event of an increase in temperature, the power is regulated gently, avoiding dangerous temperatures.

#### OPTICAL SYSTEM

The combination of a specially selected quality LED and the aluminum reflector designed by ARTEK® makes possible to have a beam of more than 90.000 lux at one meter.

#### SIZE-PERFORMANCE RATIO

To be able to deliver 1280 lumens for 4 hours makes it necessary to use a high-capacity lithium battery. Still, we have a very contained size Tanker.

#### MADE IN SPAIN QUALITY

All components of this unit, from the battery to the LED itself, are extremely well cared for. The material used is machined aeronautical grade aluminum anodized according to military specifications and Delrin. The LED is manufactured by CREE®, but it is also carefully selected to have the performance we demand. The reflector is designed to provide a narrow beam with high efficiency. The batteries are lithium batteries, with high capacity and no memory effect.

Like all our flashlights, Megalodon mk2 is designed and manufactured in Spain, from the SMD welding process into the PCB, to the machining and anodizing of the aluminum parts.

In addition, unit has its own unique serial number that identifies it.



Megalodon mk2



**Front view**  
The LED is manufactured by  
CREE

## COMPLETE PRODUCT

ARTEK® offers a usefull product with all the necessary features in a professional lighting system focused on the most advanced diver. The Set includes the carrying case, the complete unit with battery and the charger. Spare o-rings are also included. It is not necessary to purchase any additional component to be able to use this equipment. All included with an interesting price. It is possible to configure your Megalodon according to needs.

The goodman handle included in the Set has a flexible velcro tape to adapt it to the hand.

A hard goodman handle (ref ARGH01) is available, which gives flexibility to the equipment. It can be purchased when buying the Megalodon or as an accessory afterwards. We also have the sidemount version. This option must be requested from the factory, since it is not possible to configure it by the user (ref ARML02 or ARML04).

In the following pages you will see the different options and their names.

It is manufactured with very resistant materials, making it support a continuous use in conditions of maximum demand. The lithium battery has no memory effect, so it can be charged at any time, without having to wait for it to be completely discharged. The self-discharge of the battery is very low, allowing it to be charged several days before use.

## L.E.D.

The main flashlight component. Provided by CREE, the most prestigious worldwide and market leading LED manufacturer. Lifetime up to 70.000 hours. 1280 lumens, CRI more than 70 and 6500K

## LENS

Polycarbonate with anti-scratch treatment. Unbreakable. Two o-rings.

## REFLECTOR

Designed by ARTEK to specifically work with the LED. Reaches high optical efficiency generating a concentrated light beam to improve light penetration.

## ALUMINUM HEAD

Aeronautic grade aluminum AL6082 Hard Anodized according to Mil-STD8625. High durability and resistance. It's possible to switch on the light turning the head.

## CABLE

Underwater use designed. 120 cm long

## SWITCH

Black Derlin, the magnetic system avoids piercing the body. You can turn on the light from the head or from the Tanker.

## LITHIUM BATTERY

Li-ion high capacity pack battery is used. No memory effect. With all security protections to ensure long-life.

## HEAT-COOLING

Fins designed to dissipate heat generated by LED, allowing to assure long-life for all components.

## ELECTRONICS

Features a microcontroller to drive a constant light output during whole runtime. Includes an automatic Battery Saving Mode to avoid sudden shutdown when battery is almost exhaust. After some light blinks we have available more than an hour with 192 lumens.

## CABLE GLAND

IP 68 for underwater use

## GOODMAN HANDLE

Included. It has a flexible velcro tape to adapt it to the hand. Hard version is available.

## CABLE GLAND

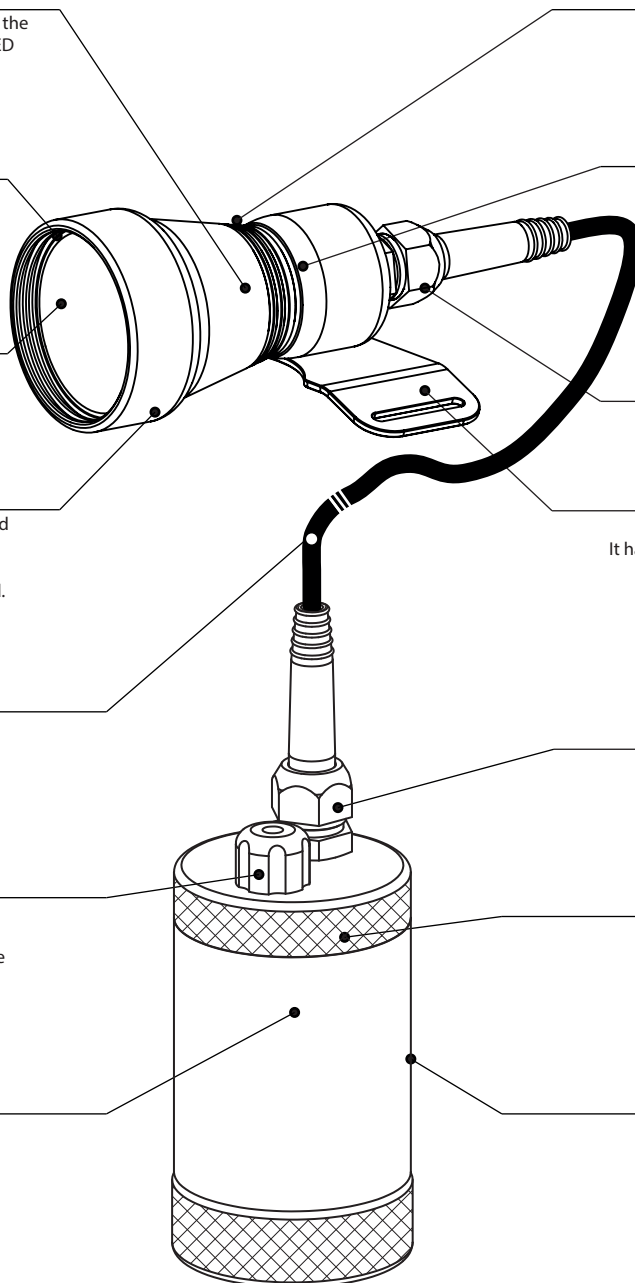
IP 68 for underwater use

## CAP

Removable to charge the battery. The battery can be charged without remove it from the Tanker

## TANKER

Aeronautic grade aluminum AL6082 Hard Anodized according to Mil-STD8625. High durability and resistance. One-piece machined body.



**Charger**

Charge the battery inside the Tanker.  
Ref. ARCH03

**Hard Goodman Handle**

User interchangeable accessory.  
Ref. ARGH01

**Battery**

Spare battery.  
User interchangeable.  
Ref. ARBT03

**Sidemount version**

Not available with magnetic switch.  
Ref. ARML02 - ARML04

## LED AND OPTICAL SYSTEM

LED choice is one of the most critical design points on the flashlight. We select the specific LED focusing not only on electrical efficiency but also considering light-emission pattern, color temperature and chromatic reproduction index. All these parameters combined determine the final quality of whole product.

Reflector oversees directing all light emitted by LED. It's critical to feature a good optical system to ensure the total light output. Power without control is useless.

ARTEK® has always defined clearly all the characteristics of our products. It's as important a good light flux (lumens) as the light intensity delivered on the surface (lux at 1 meter). Redesigning Megalodon we have done an improvement to reach 1280 lumens and the great value of 90.000 lux at 1 meter.

Once light value is reached we need to provide good quality of it. We use a 6500K color temperature LED and 70 CRI which warrants the more fidelity of colors lightened by this flashlight.

## LITHIUM BATTERY

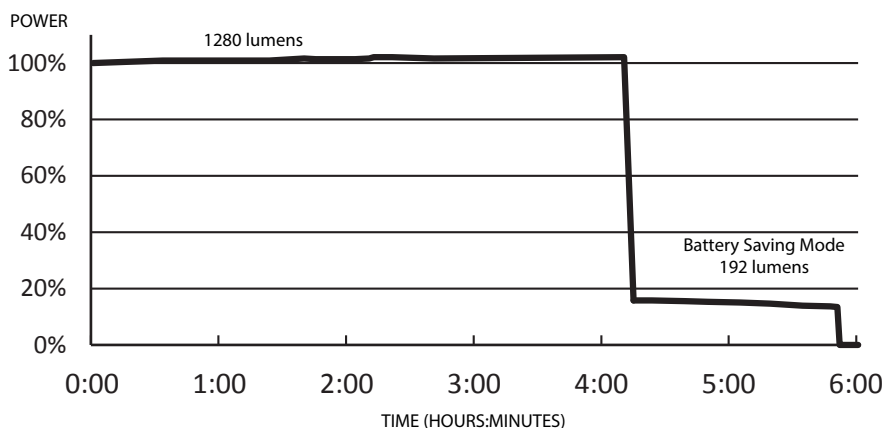
Battery proposed for Megalodon is a battery pack of six 18650 Li-ion cell with a high capacity. Due to this we can provide 4 hours and 10 minutes of constant light output (plus extra battery saving mode). Li-ion batteries have the characteristic of avoid memory effect, so it's no necessary to exhaust it before charging it again, in fact, is recommended to charge it every time is used, even if it's not discharged entirely.

## ELECTRONIC DRIVER

Megalodon is very easy to use by turning the head clockwise until it lights up and turning the switch in the Tanker. We recommend turning on the light before immersion and to turn it off with quarter turn counter-clockwise. Electronic driver oversees regulating the electrical current developed to LED. You will have the same light power at the first minute as four hours later.

## BATTERY WARNING AND BATTERY SAVING MODE

Thanks to the microcontroller from Microchip that features this model, we have control of the battery state in every moment. Before the battery reach its limit, this flashlight gives us some blinks, to warn us about the low battery state. Automatically the flashlight goes to battery saving mode, delivering 15% of full power output, offering 192 lumens during two additional hours. This mode allows to finish the activities we desire without sudden light shutdown.



## REFERENCES

Set Megalodon (primary light, battery, charger, goodman, hard case)	Ref. ARML01
Set Megalodon Sidemount version	Ref. ARML02
Set Megalodon Hard Goodman Handle version	Ref. ARML03
Set Megalodon Sidemount + Hard Goodman Handle version	Ref. ARML04
Battery	Ref. ARBT03
Charger	Ref. ARCH03
Hard Goodman Handle	Ref. ARGH01

## TECHNICAL INFORMATION

## DIMENSIONS

<b>Head</b>		
Diameter		59 mm
Length		95 mm
<b>Tanker</b>		
Diameter		64 - 65 mm
Length		110 mm
Weight with battery		1150 gramos
Weight only head		320 gramos

## LIGHTING

Luminous flux	1280 lumens (192 in battery saving mode)
Illuminance	90.000 luxes @ 1 metro
Emitter	L.E.D. marca Cree.
Color rendering index CRI	70 mínimo
Color temperature	6500 K
Beam profile	Spot ±2° Spill ±32°

## ELECTRICAL FEATURES

Driver	Constant current Polarity, short circuit and overdischarge protections Progressive temperature control (PTC)
Switch	Clockwise turning head and Tanker magnetic switch
Runtime	4 hours + battery saving mode Battery Saving Mode: 2 extra hours at 15%
Battery	6 cell 18650 Samsung Litio ion 7,4V 7800 mAh Protected
Charger	Input: 100 - 264 VAC 50/60 Hz Output: 8,4 VDC 2A

## MATERIALS

Head, Tanker's head	Aluminum alloy AL6082. Aeronautic grade Hard anodized. Mil-STD 8625
Head's cap	POM
Lents	Polycarbonate Anti-scratch
Reflector	Aluminum

## QUALITY

CE	YES
IP	IP 68 120 meters