

admetec



butterfly evo

Instructions for Use

Unless otherwise noted, this IFU relates for both **butterfly evo** and **butterfly-S evo** models

IM4000007 Rev.B.



Manufacturer:

Admetec Solutions LTD.
18 Yokhanan HaSandlar St
Haifa, Israel.

Thank you for choosing **admetec**

Meet **Butterfly^{evo}**, Admetec's cordless headlight series, featuring two models designed for optimal efficiency.

Butterfly^{evo} is a self-contained headlight system designed to provide illumination during dental or minor surgical procedures. Using a cordless battery gives the user complete portability allowing unrestricted movement.

Butterfly^{evo} Benefits:

- **Cordless:** Freedom of movement increases comfort and efficiency
- **Lightweight:** Optimized weight distribution, ergonomically designed to rest lightly on your loupes
- **User-friendly controls:** Simple operation with tap controls for ON/OFF and light intensity
- **Swift battery replacement:** Enabled by magnetic mount.
- **Compatible:** Can be mounted on most loupes models

Product Overview



Fig. 01 – Butterfly ^{evo} Case

This image is for illustration only. There are some differences in the batteries between Butterfly ^{evo} models

Your Butterfly ^{evo} comes with:

1. Charging Pad
2. Butterfly ^{evo} Batteries
3. Yellow Filter (composite)
4. Light Source
5. Screwdriver
6. USB Type-C Cable
7. Butterfly-EVO Extend (Optional)
8. AC/DC Connector
9. Allen Key

Safety Precautions

Use only parts provided to you by Admetec. Use of any third-party parts might damage the product.

Prevent battery packs from overheating. Avoid direct sunlight or heated surfaces.

Prevent battery packs from potential trauma.

Do not use close to explosive or highly flammable materials like alcohol, methanol, acetone, etc.

Note that any serious incident should be reported to the manufacturer and Competent Authority in which the patient is established.

Do not attempt any repairs or modifications to the product, as this may pose serious hazards. All repairs must be conducted exclusively by Admetec.

Store and transport the **Butterfly evo** device using the designated case.

Troubleshooting

Issue	Troubleshooting
The light does not work steadily due to discharged battery	Replace battery pack. Charge the discharged battery
Battery does not function	Contact local distributor
LED failure	Contact local distributor
Battery overheats or produces fire while charging	Contact local distributor
Battery leakage	Contact local distributor
Battery swelling	Contact local distributor
Touch is not responding	Contact local distributor

Charging Pad

To charge the battery,

1. Connect charging pad to AC/DC USB charger using the provided USB cable.
2. Plug the AC/DC USB charger into a wall outlet.
3. Place the battery pack on the charging pad as shown in Fig. 02. It is possible to charge two battery packs simultaneously.

The charging percentage indicators on the display screen serve as visual real-time charging status of individual batteries.



Fig. 02 – Batteries connected to charging pad.

Average charging time for an empty battery is 1.25 for **Butterfly evo** and 1.5 hours for **Butterfly-S evo**.

Battery packs may remain on the charging pad when not in use.

Battery Pack

Each **Butterfly evo** kit includes 3 battery pack units serving as power source and a charging pad to charge the batteries.

Battery packs control – turning the light source ON and OFF. This function is controlled by touching the area marked in green in Fig. 03

Dimming the light source in two different intensities is controlled by touching the area on the right side of the battery, marked in green on Fig. 04.

When the battery is nearly empty, a beeping sound will indicate 5 minutes of power remain. From that point, a beep will sound every 15 seconds. In the final minute, it will occur every 5 seconds until the battery is completely depleted.



Fig. 03 – Battery pack (aerial view)



Fig. 04 – Battery pack (Dimmer / right side)



Battery pack magnet connector (bottom view)

Notes	The battery pack supports a constant level of light intensity during the whole period of discharging. Once the battery is fully discharged, the light turns off.
--------------	--

Light Source

- Hinge allowing for tilt adjustment of the light direction. [Fig. 09]
- Battery magnets connection pad [Fig. 08]
- Admetec adaptor for mounting the headlight on frames. [Fig. 06]

Getting started:

1. Mount the external yellow filter onto the front part of light source by lessen the external filter ring with the Allan key and pushing the outer ring of the filter onto the front part of the light source as shown in Fig. 05.

*Note: Use the Allen key attached to tighten/lessen the ring.

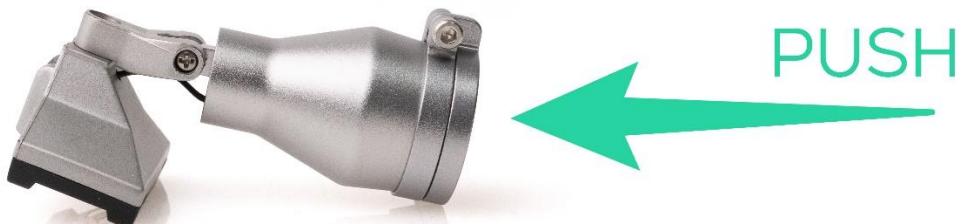


Fig. 05 – Mounting external yellow filter (composite)

2. Attach the light source to the Admetec frame adaptor or on the universal adapter as shown in Fig. 06 and Fig. 07



Fig. 06 – Attaching the headlight on the loupes frame

Fig. 07 – Attaching the headlight on the Universal Adaptor

3. Place the batter pack on the magnet connection pad, ensuring that the Butterfly logo faces forward. The magnets will align the battery electrodes with the connection pad as shown on Fig.08. Once the battery pack is properly positioned, a beeping sound will confirm the connection.

Notes	When attempting to place battery pack in reversed position, the magnets will not allow it to be attached to the connection pad.
--------------	---



Fig. 08 – Butterfly ^{evo} mounted on frame.

4. Adjust angle of the light direction to get light beam visible through the loupes, as shown in Fig.09.



Fig. 09 – Adjusting the Butterfly ^{evo} headlight angle.

Cleaning Instructions

Butterfly evo is designed and manufactured from high quality components. Ensuring proper care and adherence to the cleaning instructions is essential for preserving the product's lifespan.

Before cleaning, ensure that the charging pad is disconnected from the electric outlet and the batteries are detached from the headlight source.

Follow the instructions below to prevent any functional or aesthetic harm to the **Butterfly evo**.

Charging Pad and Batteries:

- Wipe the external surface of the **Butterfly evo** with a soft, dry cloth. When necessary, use Admetec Cleaning Wipes or a soft cloth with alcohol up to 70% to gently wipe down the charging pad and batteries. Squeeze excess fluid out before using. After cleaning, dry with a soft cloth.
- Hold the device securely while cleaning to prevent it from trauma.
- Do not use solvents or other chemicals.
- Avoid wiping with a chemically treated cleaning cloth.
- Under no circumstances, attempt to open the device or insert any object inside the **Butterfly evo**.
- DO NOT directly expose the charging pad and the batteries to running water and DO NOT directly spray it with any solvent and/ or submerge it in any liquid or ultrasonic cleaner.
- DO NOT attempt to clean the following areas:
 - Battery pack magnet connection
 - Battery Charger magnet connection
- Avoid sterilizing in autoclaves or chemiclave, glutaraldehyde, iodophor, or any other sterilization method.

Light Source:

- Wipe the light source surface using:
 - Admetec Cleaning Wipes
 - A mild soap-and-water solution with a soft cloth
 - Soft cloth with alcohol up to 70%.
- Be sure to **squeeze** the cloth to excess fluid out **before** using.
- Gently wipe the lens of the headlight source. Make sure to be gentle when cleaning the headlight source to avoid causing scratches.
- After cleaning, dry with a soft cloth or air dry. If cleaners leave residue on the lens, use a soft, lint-free cloth to remove it.
- DO NOT attempt to clean the light source magnet connection

Don't rinse Headlight source under running water.

Don't submerge in any liquid or ultrasonic cleaner.

Avoid sterilizing in autoclaves or chemiclave, glutaraldehyde, iodophor, or any other sterilization method.

Technical Specifications

Battery parameters

Parameter	Butterfly ^{evo}	Butterfly-S ^{evo}
Internal battery voltage:	3.7 V	3.7 V
Battery capacity:	0.56 Ah	0.85 Ah
Full battery charging time	1.25 hrs	1.5 hrs
Average working time	>2 hrs @ max intensity	>2 hrs @ max intensity
Length:	50 mm	50 mm
Width:	24 mm	24 mm
Height:	9.5 mm	12 mm
Weight:	15 gr	20.5 gr
Working frequency:	0-16 Mhz	0-16 Mhz

Light source

Parameter	Butterfly ^{evo}	Butterfly-S ^{evo}
Luminous intensity	145 LM	220 LM
Illuminance	35,000 LUX	55,000 LUX
Color temperature	5750 °K	5750 °K
Width:	50 mm	50 mm
Diameter	19 mm	19 mm
Weight (w/o battery)	9 gr	9 gr
LED operating resource	50,000 hrs	50,000 hrs
Spot size diameter at 350mm	70mm	70mm
External filter weight:	2 gr	2 gr
Working frequency:	0-16 Mhz	0-16 Mhz

Charging pad

Parameter	Butterfly ^{evo}	Butterfly-S ^{evo}
Length:	60 mm	60 mm
Width:	80 mm	80 mm
Height:	13 mm	13 mm
Working frequency:	0-16 Mhz	0-16 Mhz
USB Connector	USB Type-C	USB Type-C

AC/DC Adapter

Parameter	UK Adapter	US Adapter	Australia Adapter	Europe Adapter
Model	EP-TA20UWE	KA12C-0502000US	EP-TA20HWE	KA12C-0502000EU
Input	100-240V~ 50-60Hz 0.5A	100-240V~ 50/60Hz 0.35A Max	100-240V~ 50-60Hz 0.5A	100-240V~ 50/60Hz 0.35A Max
Output	5V 2000mA	5V 2000mA	5V 2000mA	5V 2000mA

Storage and Transportation

Parameter	Storage & Transportation	Operational
Temperature	-40°C (-40°F)- 50°C (122°F)	10°C (50°F)- 30°C (86°F)
Pressure	500hPa-1600hPa	700hPa-1600hPa
Humidity	10%-90%, non-condensing	30%-75%, non-condensing

Warranty

Admetec's warranty obligations for the **Butterfly evo** are limited to the terms set forth below:

Admetec warrants the **Butterfly evo** product against defects in materials and workmanship for a period of two (2) years for the headlight and one (1) year for all other supplied parts from the date of original purchase ("Warranty Period").

If a defect arises and a valid claim is received by Admetec within the Warranty Period, Admetec will (1) repair the product at no charge, using new or refurbished replacement parts, (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product.

If a defect arises and a valid claim is received by Admetec after the first ninety (90) days of the Warranty Period, a shipping and handling charge will apply to any repair or exchange of the product undertaken by Admetec.

When a product or part thereof is exchanged, any replacement item becomes your property, and the replaced item becomes Admetec's property.

Exclusions and Limitations

This warranty does not apply: (a) to damage caused by accident, abuse, misuse, misapplication, or non-Admetec products; (b) to damage caused by service performed by anyone other than Admetec; (c) to a product or a part that has been modified without the written permission of Admetec; or (d) if any Admetec warranty label has been removed or defaced.

Declaration – Electromagnetic Emissions

Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The Butterfly evo and Butterfly-S evo use RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
Harmonic emissions IEC 61000-3-2	Class A	The Butterfly evo and Butterfly-S evo are suitable for use in all establishments other than domestic and may be used in domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes, provided the following warning is heeded: Warning: This equipment/system is intended for use by healthcare professionals only. This equipment/ system may cause radio interference or may disrupt the operation of nearby equipment. It may be necessary to take mitigation measures, such as re-orienting or relocating the Butterfly evo and Butterfly-S evo or shielding the location.
Voltage Fluctuations And Flicker IEC 61000-3-3:2013	Complies	

Declaration – Electromagnetic Immunity

IMMUNITY test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	8 kV contact 8, 15kV air	8 kV contact 8, 15kV air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 (A/m)	30 (A/m)	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Test specifications for ENCLOSURE PORT IMMUNITY to proximity magnetic fields

Test frequency	Modulation	Immunity Test Level (A/m)
30 kHz	CW	8
134,2 kHz	Pulse modulation 2.1 kHz	65
13,56 MHz	Pulse modulation 50 kHz	7.5

 For submission only	CE Mark indicating that the device complies with Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices
	Manufacturer: Admetec Solutions Ltd. 18 Yokhanan HaSandlar St. Haifa, 3296218, Israel S
	Authorized Representative: Obelis S.A. Bd Général Wahis, 53, Brussels, B-1030 Belgium
	Medical Device
	Caution! Consult accompanying documents
	Batch number
	Catalog number
	Refer to Instructions Manual



If you have purchased Admetec-branded electrical or electronic products in the EU and are intending to discard these products at the end of their useful life, please do not dispose of them with your other household or municipal waste. Admetec has labeled its branded electronic products with the WEEE Symbol to alert our customers those products bearing this label should not be disposed of in a landfill or with municipal or household waste in the EU.

Instead, contact the local e-waste recycling center.

Do you need customer service?

Please contact your local distributor.

admetec



Manufacturer:
Admetec Solutions LTD.
18 Yokhanan HaSandlar St
Haifa, Israel.



Authorised representative:
Obelis S.A
Bd Général Wahis, 53,
Brussels, B-1030 Belgium.