

Fitting and Operation Instructions

LUMOTEC[®] *oval* and LUMOTEC[®] *oval plus*

LUMOTEC[®] *oval senso* and LUMOTEC[®] *oval senso plus*

Assembly:

"LUMOTEC oval" and "LUMOTEC oval plus" (using a **white LED** for the electronic standlight) are supplied complete with brackets and ready for assembly onto your bicycle. Join the bracket (A) or the short bracket (G) - suitable especially for drum, caliper, hydraulic or V-brakes - to the base of the lamp housing and fasten it with the enclosed screw (C). Important: Adjust the headlight so that the light illuminates the road 5-7 metres in front of the bike. Then tighten the screw (C) using the enclosed allen key (4 mm) for the bracket (A) and a well fitting hexagon spanner for the bracket (G) firmly so that the headlight will not move whilst riding.

Cable connection:

The upper double contact (1) is the plug contact for the current cable, the lower one (2) is for the mass (earth) cable. (The two free plug contacts may be used for connecting the rear light.) If you do not use the enclosed plug on cable but choose to use the existing wiring on your bike, you can connect the lamp in one of the following two ways:

1. Fit the enclosed plug onto the cable and put the insulating tube over it, then you can use the plug contact (1).
2. Turn the switch (4) to the position "AUF", insert the insulated cable into the opening (3). Now turn the switch back to the position "ZU", whilst pressing the lens (D) slightly against the housing (F).

The mass (earth) contact is obtained via the bracket to the bike frame. If however you use a mass (earth) cable, then follow description 1.

above and use the lower plug contacts. Alternatively slightly loosen the mass screw (5) beneath the plug contacts, place a bare end cable under it and then tighten the screw.

Changing the bulb:

Disconnect the lens (D) from the housing (F) by turning the switch (4) to the position "AUF" and remove the bulb. Insert a new halogen bulb (6V/2.4W HS3) ensuring the notch on the bulb is lined up with the corresponding notch in the bulb holder. Reassemble the lens (D) to the housing (F) and turn the switch back to the position "ZU" whilst pressing the lens slightly against the housing. No tools are required for this procedure. With "LUMOTEC oval plus" the procedure is the same, but the lens (D) (including reflector, bulb and white LED) is connected to the housing (F) by two (PVC-free) cables (H) leading from the circuit board with condenser to the white LED. Please be especially careful not to pull these cables too strongly.

Caution:

The integral overvoltage protection protects **for a short time** the halogen bulb in the case of rear light failure. If the headlight bulb fails it must be replaced immediately (do not continue riding with the blown headlight!). Rear light or headlight damage caused by overvoltage is not covered by warranty.

Important information for the owner of a "LUMOTEC oval plus":

"LUMOTEC oval plus" is a special high quality bicycle halogen headlight. It features an integral automatic, electronic standlight that uses a **white LED** and condenser. A small amount of power supplied by the generator is stored in a condenser whilst riding. After approximately 3 minutes at a speed of 20 km/h the condenser is fully charged. At low speeds and when stationary the condenser supplies the white LED. This technology is always operational. It does not require mains charging and operates without batteries or accumulators.

Additional information for the owner of a "LUMOTEC oval senso" or a "LUMOTEC oval senso plus":

You own a bicycle halogen headlight featuring the brand new sensor technology and - with the „plus“-version - the above mentioned standlight function.

If using a **(permanently operating) hub dynamo** the sensor lighting system is automatically activated in case of poor light conditions and darkness (i.e. in a tunnel). The headlight features an interior mounted twin wire cable (K) which is connected with the hub dynamo (black wire = current, Black/white wire = mass). In case of mass circuit via the bicycle frame, please cut the mass wire cleanly off in order to avoid a short circuit. The current cable of the rear light is to be connected to the headlight plug (1), the mass cable - if existing - to plug (2).

Never connect the rear light directly to the hub dynamo. Disregard will destroy light's electronics.

The light/dark sensor (S) is integrated in the headlight housing. The three position switch (L) features the following functions:

- Position „1“:** („1“ is visible with switch pushed downwards.) In this position the bicycle lighting system is electrically connected to the hub dynamo and shines whilst riding - even during daylight, i.e. for foggy conditions.
- Position „0“:** (This 0-position = intermediate position hides half of „1“ and „S“.) The bicycle lighting system is electrically disconnected from the hub dynamo and does not shine - even in the case of darkness.
- Position „S“:** (The switch is pushed upwards, the „S“ is visible below the switch.) Now the lighting system is electrically connected to the hub dynamo; the headlight and the rear light are automatically activated in case of poor light and darkness.

Additional information for the owner of a „LUMOTEC oval N“ or a „LUMOTEC oval N plus“:

These headlights also feature an interior mounted twin wire cable, which is connected to the hub dynamo, but without light/dark sensor. The **ON/OFF switch** features the following functions:

- Position "☒":** (The raised section of the switch is positioned at the sign "☒".) In this position the bicycle lighting system is electrically connected to the hub dynamo and shines whilst riding - even during daylight, i.e. for foggy conditions.
- Position "0":** (The raised section of the switch is positioned at the sign "0".) The bicycle lighting system is electrically disconnected from the hub dynamo and does not shine.

We wish you many years of safe and enjoyable cycling with your new "LUMOTEC oval" headlight.

For extra safety Busch & Müller offer dynamo rear lights featuring electronic standlight technology using LED and condenser. Please ask your specialist bicycle shop for "Secutec", "4D-lite plus", "Toplight plus", "DToplight plus" and "Seculite plus".

