

# LED-Headlight *Edelux*

- Evenly distributed illumination across a large area of road surface
- 3 times as much light as the best halogen headlight
- Capacitor standlight and automatic light sensor
- Rugged mechanical and electrical design
- Watertight switch and housing
- heat sink of solid copper makes LED run efficiently and prevents damage by optimal cooling

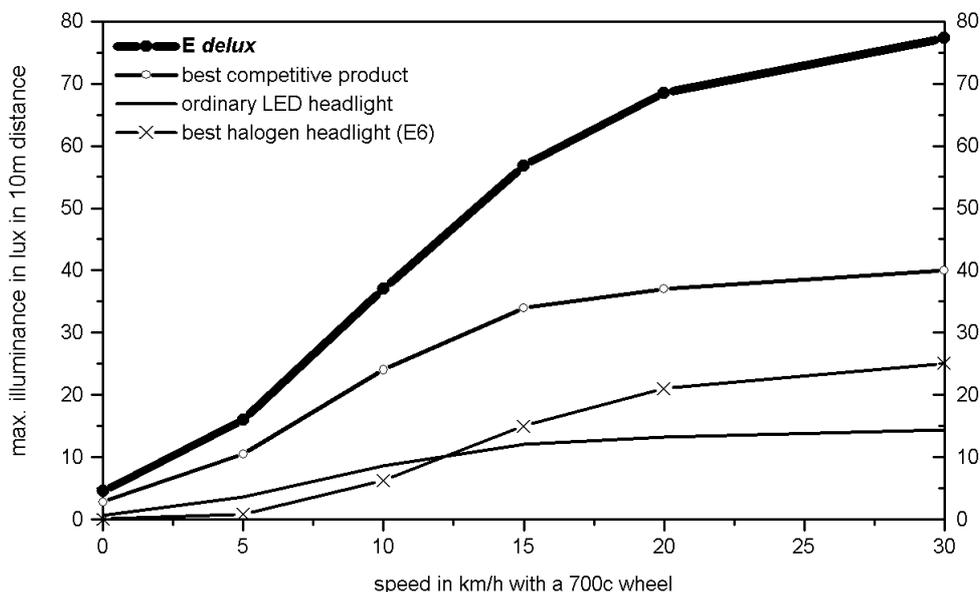


## **Edelux** is the result of consistent optimization.

The basic concept of the approved and favored E6 headlight have been: An efficient and robust construction dedicated to convert all the electrical power of the hub dynamo into useful light on the road. The **Edelux** is a consistent further development of the E6 utilizing the benefits of white high performance LEDs. We have tapped the full potential of LEDs as well as cooling and optical technologies. The **Edelux** is designed following the round shape of the new SON 20 R, but is compatible with any other hub dynamo too.

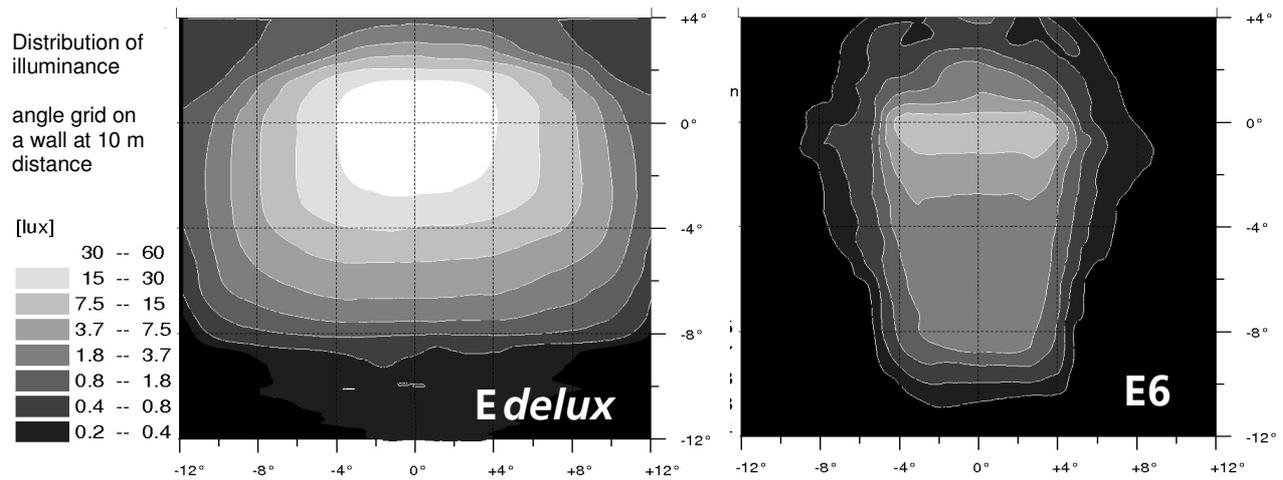
## **Optical system**

In the **Edelux** we use the offset mirror IQ-Tec by Busch & Müller. Unlike conventional optical systems for headlights it catches quite a large part of the emitted light and provides a wide, evenly and brightly lit road surface. Since the front edge of the light field is clearly defined glaring of oncoming cyclists is avoided. Little scattered light diffuses upwards, which means it hardly glares the rider indirectly in foggy weather conditions. The black ring around the mirror protects the rider's night vision against direct blinding. The antireflective front glass is scratch resistant and lets through 6% more light than panes made of plastic would do.



Illuminance of a selection of headlights run with a SON28 hub dynamo, rear light B&M DToplight connected, blower cooling

Light distribution in comparison: wall projection of **Edelux** and halogen headlight E6 at 2.4 Watt



### Heat flow / Mechanics / Electrical system

Efficiency and LED lifetime mainly depend on its cooling. This is why we placed the LED on a massive copper heat sink, which in turn conducts the heat to the aluminum housing. and then to the outside air. At high speed the good cooling allows for an increase of 20% luminous flux compared to usual LED headlights, some of which can reach more than 100° Celsius (210°F).

An O-ring seal protects all interior parts of the headlight (inc. switch contact) against ingress of water and dirt. Electrical contacts are soldered and encapsulated with cast resin. The switching ring contains a magnet in its large nose which operates a well protected reed switch inside the housing. The ring allows „blind“ switching even when wearing thick gloves. In sensor position the light turns on automatically in the beginnings of darkness, uninfluenced by street lamps or car headlights. The robust, low-loss coaxial cable resists even rough treatment.

### Electronics

The switching regulator of the **Edelux** as well as the reflector come from Busch & Müller. The electronics transforms the electrical power of the hub dynamo to the lower voltage of the light-emitting diode. Even at very high speed it works at low loss and does not harm the LED. The voltage at the output connector is restricted to protect the rear light. The rear light is switched together with the head light. When stopped a maintenance-free double layer capacitor provides for up to 4 minutes light.

### Guarantee

We offer a 5 year faultless function guarantee on the **Edelux**.

### Availability

The **Edelux** will be available in June 2008. Recommended retail price 119 €.

## Edelux: Technical data

Light source:	3 Watt high-performance-LED (>100 lm/W)
German mark of conformity:	requested
Feed cable:	coaxial cable, PVC-free, 3 mm diameter, cable length 60 cm, connectors fitted for SON, alternatively, 140 cm with loose connectors
Connection for rear light:	blade connector 2.8 mm and 6 mm eyelet connector (enclosed)
Switch:	switch ring with magnet, Reed-contact
Functions:	automatic light sensor and capacitor standlight
Seal:	O-ring
Housing:	aluminum 6082 T6, polished or black anodized
Weight:	85 g