



Dynamo headlamps

Technical Editor Chris Juden reviews three of the best front lights for dynamo users

The Cyo headlamp I reviewed in March 2009 amazed me with its brilliance. By pointing a state-of-the-art LED backwards into a computer-designed reflector, Busch & Müller raised the bar for dynamo lighting. It didn't take long for others to see what they could do with a Cree XPE-R3 LED.

Most of the resulting products are battery-powered but there are also a couple more dynamo lamps, and like me you might be wondering which is best. To answer this question I made a twin lamp bracket and a handlebar-mounted switch, enabling instant comparison in actual riding conditions.

In their Edelux headlamp, Schmidt Maschinebau have not only the same LED but also the Cyo's reflector, which B&M kindly sell them. Schmidt nevertheless reckon to extract a little more light from the LED, by keeping it cooler on a copper heatsink attached to an alloy lamp body, and to lose a bit less of it through a high-quality glass lens. An efficiency gain of 10% has been estimated, vis-à-vis the mostly plastic Cyo.

Given identical optics, it was

hard for me to see any difference at all between these two lamps. Only at the moment of switchover from Cyo to Edelux was a slight increase in brightness detectable. Had you asked me which light was on at any other time, I honestly could not have said.

The other contender is Supernova's E3-Pro. This has the LED facing forward as usual, but as an alternative to simple point and shoot optics, Supernova have designed a lens that satisfies the anti-glare requirements of German traffic law. As the Cyo and Edelux also have this approval (which is good for the UK too) I tested a version of the E3-Pro with this Terraflux lens.

I was expecting the Supernova beam to be quite different and so it was, with more light close-to and at the sides, whereas the other two concentrate more light around the beam centre and have a sharper anti-glare cut-off. The Supernova Terraflux nevertheless has a central spot, which is small but sufficiently intense to light far enough ahead for fast riding. Meanwhile the Cyo and Edelux put down

quite enough to make near and adjacent surfaces as bright as they need to be, to navigate rough and twisty bikepaths. So whereas with a Supernova in the mix it was easier to tell which light was on, it became even more difficult to say which was better!

They're all really good lights and which to choose will probably depend more upon other factors, such as price, weight, durability, and special features. So here's a brief summary of those.

Busch & Müller's Cyo is the lightest at 70g and the cheapest at £80 for the top model or £75 without the daylight sensor. If all you want is an excellent light, why pay more? **Website: bumm.de**

Schmidt's Edelux weighs 96g and costs £125. The extra weight and money pays for a more robust and higher quality version of the Cyo, anodised silver, red or black. It comes with a tough rubber insulated co-axial cable, ready for connection to one of their market leading 'SON' hub generators – in the matching colour. **Website: nabendynamo.de**

Supernova's E3-Pro-Terraflux weighs 134g and costs £150, and doesn't have a daylight sensor. It seems heavy and expensive, but you might want it for one of Supernova's three unique mounting options, or six colours, or for the brilliant and extremely neat, dedicated rear-lamp. (It'll work only with a Supernova headlamp and could save those extra grams!) Assuming technology progresses, your lamp can even go back to the Supernova factory for an upgraded LED etc.

Website: supernova-lights.com

(Top) Comparing the Edelux (red) and the Cyo. The DIY switch enabled Chris to swap instantly between lamps for comparison

(Below) Supernova on a Multimount bracket. It's heavier but works with a very lightweight Supernova rear lamp

