

Overview: LED lights

Look good while you're seeing and being seen with newest LED lights

Smaller, brighter, smarter: No wonder LED lights are — dare we say it? — such a bright spot for cycling.



Light & Motion Vis360

Lighting brands like to brag about how their products can be seen from wide angles. **Light & Motion** and **Guee** have taken this to the logical conclusion with lights that offer 360 degrees of visibility.

Light & Motion, A7-402 an American specialist in high performance lights, calls its system the Vis 360 helmet light. The system comes in 120 and 250 lumen versions.

Taiwan's **Guee A1-110** calls its 360-degree system the Inox Mini-R. It's a light that mounts in the rear and has two beams. One projects light backward and the second projects downward, creating a lit circle on the ground beneath the rider.

Both L&M and Guee also want to appeal to road riders who desire small, lightweight yet powerful lights but want to mount them on an aero post. L&M has aero seatpost adapters for its vis180 taillight, while Guee goes a step further with the Aero X. It mounts on an aero post and features a sensor that makes the rear light shine extra brightly when the cyclist decelerates quickly. In essence, it's

a bicycle brake light.

The Nano Duo brake light from **Ilumenox A3-604** takes a different approach: It's actuated by the brake instead of a sensor. Peiwen Fun of Ilumenox said the Nano Duo is most



Guee Inox Mini-R

suitable for caliper or cantilever brakes, but can be installed on just about any bike with cable-actuated brakes.

LED lights become more powerful every year, but the new Volt6000 from **Cateye A1-201** appears to have won the arms race, for this year at least. The light packs a whopping 6,000 lumens of power in its top power setting, and Cateye calls it "the most powerful light on the market."

Lezyne, A1-303 tweaked its lights to be more powerful and energy efficient.

"Since we do our own development work our lights have always featured state-of-the-art electronics and technology. However, our new models are more powerful than ever before and due to more efficient power management have longer run times," the company's Alex Mai said.

Lezyne's most powerful light, the Deca Drive 1500XXL, packs 1,500 lumens



Cateye Volt6000

The Volt6000 uses "COB," or "Chip On Board" technology, where multiple small LEDs are packed together to act as a single unit. It's operated with a wireless switch and has a separate frame-mounted battery. The light is so powerful it even has a built-in cooling fan. At a retail price of €800 (\$890), the Volt6000 is clearly intended for serious off-road night riders, not casual commuters.

of output into a unit weighing 247g. Depending on which of four lighting modes are used, run times range from 1 hour, 40 minutes to 9 hours.

Downhill pioneer **Azonic B4-205** expands its LED range with the Laramy model, with up to 850 lumens of light and an external battery pack that can be mounted on the frame or carried in a backpack.

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M99 PRO front light

The world's first LED Matrix front light for fast E-bikes sets new safety standards, with its powerful low beam, a real automotive high beam and dazzling daytime running light. The M99 PRO's LED Matrix consisting of up to 9 exactly positioned high-power LEDs is perfectly cooled in the aluminium housing. Each LED can be controlled individually to illuminate the 99 precisely manufactured mirrors of the reflector to achieve a perfect beam for highest comfort and security in all situations.

www.supernova-lights.com

A2-106



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M99 Tail Light

The M99 Tail light is the only LED rear light for fast e-bikes available that integrates all three functions of rear light, brake light and licence plate illumination in such a compact housing. 5 highly efficient LEDs with Supernova's proprietary dual beam technology make the e-bike visible from afar, even from the sides. The brake light lights up with 5-times the normal brightness and keeps the rider safe. The homogeneous licence plate illumination is integrated into the underside of the elegant housing and nearly invisible.

www.supernova-lights.com

A2-106





Lezyne Deca Drive 1500XXL

City cyclists, who don't need the extra weights and shorter run times of these ultra high-power lights, also have plenty of new options to choose from.

Known for combining funky design with practicality, **Knog B1-504** premieres 21 lights in three ranges, including the new Pop range, and three variations of its popular Blinder lights. (See related story on Knog, page 18.)

The eye-catching, 80-lumen Blinder Mob range has a stronger silicone mounting and new LED output options, including a power-saving single LED setting suitable for unlit areas.

The higher performance Blinder Road and Arc ranges have new LEDs and new batteries. The Arc ups its performance to 640 lumens. For more budget-conscious cyclists, Knog offers the Pop range of front and rear lights, powered by AA batteries. Power output ranges from 35 to 60 lumens.

For more city light options, check out the Central front and rear light from **Blackburn B2-504**. The alloy-cased combo with silicone strap mounts offers mini-USB recharging and several flash

modes. The highest puts out 100 lumens.

Light & Motion's Urban range provides a step up in power and includes other impressive features. The line is waterproof to a depth of 1 meter (3 feet) and has a range of 350 to 850 lumens. They recharge through a micro-USB port, mount on a handlebar or helmet, and come in a range of funky colors.

The **Skully A3-604** Tick Tock offers a different take on safety and rear lights. Skully, a sister brand of the more sophisticated Ilumenox range, offers these 35-lumen lights with a 160-degree field. The company says a cyclist can be seen from up to 500m away. The unusual design is based on a clock face.

For riders who want to shine their lights even when they are off the bike, some brands now offer "wearable" LEDs.



Favour Light

A new taillight from **Favour Light A3-817** has already picked up an iF Product Design Award. It mounts just about anywhere on the rear of the bike frame and has a 270-degree light field. With an optional mounting strap, it fits onto the rider's arm when off the bike.

Hiplok A2-504 is known for its lock and antitheft products. Its 2016 Hiplock FLX combines a café-style cable lock with a rear LED safety light.

Meanwhile, if you've ever wanted to stay visible while keeping your feet warm, **Sealskinz B5-604** has the Halo

overshoes, with a built-in LED on the heel. The Halo comes in a choice of nylon or neoprene, and Sealskinz says the LED will run for 240 hours.

Filming your ride with an action camera? L&M and Knog offer lights that attach to a GoPro or other brand of action cameras.

The L&M Sidekick and Sidekick Duo has spot and floodlighting of up to 600 lumens. They fit neatly alongside a GoPro camera so there's plenty of light for nighttime action footage wherever the camera is mounted.

Knog calls its line Qudos. It's waterproof to 40m and attaches to GoPros or other action cams with GoPro conversion mounts. Light modes range from an ultra-wide angle Ambient mode to a wide angle action sports mode with 400 lumens of output.

A number of companies are developing LEDs specifically for e-bikes.

The Lumotec IQ Cyo Premium E from **Busch & Müller A4-401** is a retrofit option for e-bikes, and accepts all DC power sources from 6V to 42V.

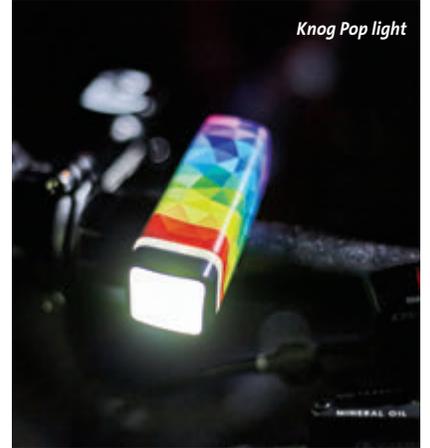
New from the company, which is known for its dynamo-powered lights, are the IQ-X, a powerful 100 lux LED for dynamos, and the IQ-Eyro, a battery-powered LED headlight that can be mounted to the front fork. It is rated at 30 lux and charges via a USA socket.

For fans of lightweight dynamo lights, B&M offers the Lumotec IQ OneFive for smaller 1.5W dynamos.

Spanninga B4-206 makes its Nomad



Skully Tick Tock



Knog Pop light

front light for the touring market. It can be powered by a dynamo or e-bike battery, and includes a charging port so riders can keep their other electronic gizmos topped up.

Dynamo users may also like the **AXA A7-502** BlueLine series that includes an e-bike powered option.

Finally, a note about speed pedelecs, where something of a lighting revolution is taking place.

New European regulations expected to go into effect in 2018 will require more power lights on s-pedelecs. **Supernova A2-105** says its M99 Pro light already meets the standard.

"To my knowledge, we are the only manufacturer complying with the 2018 regulation in advance," Supernova's Gregor Arndt said.

The M99 Pro packs enough power for a motorcycle. Arndt said it is "not only a super powerful light but a road legal light for fast e-bikes."

The M99 taillight for s-pedelecs integrates a rear light, brake light and illumination for a license plate. Supernova offers the system as an aftermarket option starting at €295 for the front light and €65 for the rear. Supernova will offer higher spec versions featuring more powerful lights and CAN-BUS integration. ■ **RICHARD PEACE**

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Azonic Laramy

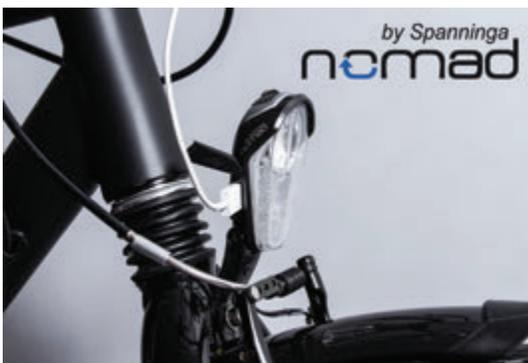
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Spanninga Nomad

Designed for travellers and urban adventurers, the NOMAD headlamp is a powerful and multi-talented device securing and assisting your bicycle trips day and night.

With a light output over 40 Lux (conform to StVZO), the NOMAD will secure your night expeditions by bike... but also your days since it features an extra LED integrated in the reflector which provides Daytime Running Light function DRL© for improved visibility. The ultimate function of the NOMAD is its integrated USB port to load mobile devices while riding (mobile phones, navigation, cameras, iPods, etc.). Available in versions



for dynamo and e-bikes, the NOMAD streamlined design with aluminum back cover will be the final touch on any stylish bike.

B4-206

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Raptor X4E Super Compact E-Bike Lights

The innovative design features in Raptor X series deliver unparalleled performance for "on" and "off" road riders. This super compact range achieves panoramic 200 degree light spread maintaining constant clear side and ultra-wide forward vision. The power input range from DC 6V to DC 90V which covers most of e-bike batteries on the market. The X4E models deliver very bright output up to 400 lumens/50 Lux, and compliant to German regulation. The streamline and super-compact Raptor X design weights 72 grams which stands out from other available lighting systems.

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www.roxim.net

