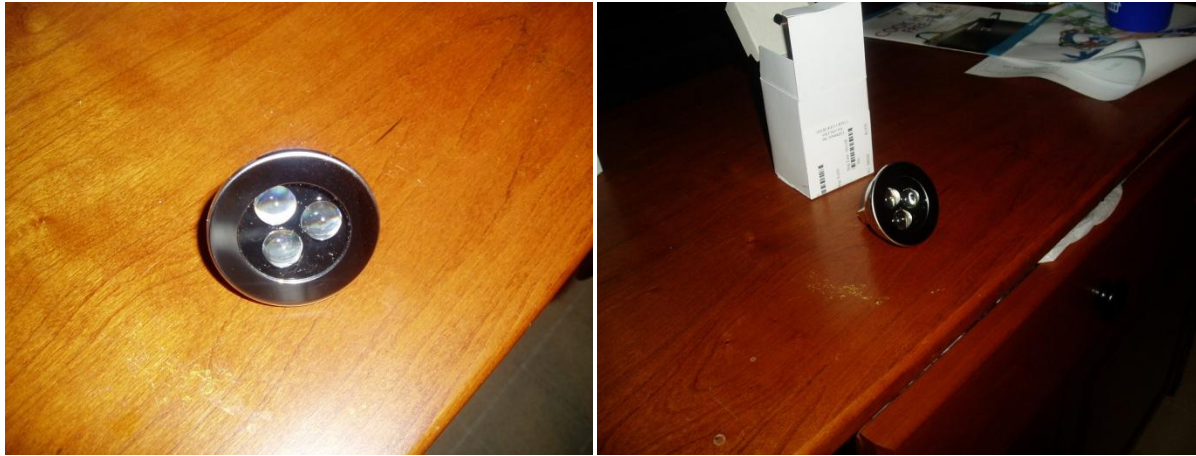


## Optibike LED Lamp Replacement

### Background:

When running with the halogen 2x10W bulbs, I was experiencing power cut back from the motor/battery when running hard, and after about 10 miles. It was acutely noticeable after a long hill. As a result, I replaced the \$4 bulbs with 3W, LED bulbs from Ledtronics. The bulbs are very slick and cool looking, built with good quality. Here are some pictures of the bulb.



I selected 36 degree angles bulbs and the warm-white color, which is rated with less lumens than the whiter style. I was trying to replicate the 10W halogens. The 3W bulb is advertised equivalent to a 20W halogen, so 2 should be equal to 40W.

### On the Bike:

Here is how they look in the day – not real impressive, but they do light up in the dark.





#### Results:

The output on the lights are warm and powerful. They really show up in the dark. The angle seems slightly more narrow than the halogens, but I don't recall how they were exactly, since I have not had many rides in the dark. Craig thought the halogens were 30 something angled bulbs. The beam is more narrow than a car. Lines on the road show up very well. Because these bulbs radiate as a cone, I thought the 60 degree bulb would have more waste and agitate drivers. The control consol does move vertically, and allows for excellent angle adjustment on the fly. The aeros allow enough room for a straight angle beam.

#### Cutback:

I am still testing the system over several commute routes with the lights on 100% of the time. Yesterday, I rode home ALL ELECTRIC, with about 25 miles on the battery, and no loss in power, 24.3mph ave. After 3-4 rides, I have noticed NO severe drop /cutback in power like the halogens did. I have sensed a slight cutback at 19 miles, after a hill, on one ride. I will observe overall averages after several rides.





So far I have been pleased with the performance. Only one good dark morning ride so far, more to come. Power has been steady.

Dan Rowell

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PS. Note the Greenfield kickstand. Why did I wait so long? It really makes life easier. Too bad I have several paint scratches from falling in the garage.

Supplement: High tech bike stand used for lubricating and cleaning chain. Synthetic materials, rare to bike usage, help suspend the bike.

