



The Lumir K | Photo source Lumir

SUPER-EFFICIENT LAMP IS POWERED BY COOKING OIL



AGRICULTURE & ENERGY

The Lumir K uses a small amount of cooking oil to provide light in almost any condition

Spotted: Lumir, the company that developed an LED lamp (the Lumir C) powered by a single candle, has created a new portable light. This one is powered by a small amount of cooking oil. The Lumir K can provide an hour of light using just 5ml of oil, and can use almost any type of cooking oil. This makes the light very useful for people living in developing countries, as it runs on oil that is both cheap and easy to come by and needs no recharging.

“Lumir K uses cooking oil as fuel not kerosene, which is difficult to use due to its uneven quality depending on the region,” Lumir founder Jehwan Park told Springwise. “Through this process, we decided to use cooking oil with little difference in quality depending on the region.”

Like the Lumir C, the Lumir K works using the Seeback Effect, where heat is converted directly into electricity at the junction of two different semi-conductors. Lighting the oil creates a temperature difference at the place where the semi-conductors meet, causing a voltage difference that in turn creates an electrical current. The current is then used to power the lamp’s LED lights. The light gives off almost 100 lumens, making the Lumir K about four times brighter than a standard kerosene lamp.

Lumir also claims that, unlike kerosene lamps, which lose 90 percent of their energy to heat, the Lumir K uses almost all of its fuel energy for lighting, making it more efficient than kerosene. Additionally, unlike solar lights, the Lumir can be used under any weather conditions.

The company has won a [James Dyson Award](#) for the lamp, and has partnered with the Korean [International Cooperation Agency](#). The company seeking backing on [Indiegogo](#) and hopes to raise

\$10,000 (€8,830). Backers also have the option of buying lamps for people in need. The company plans to begin shipping in September 2019.

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Takeaway:

While useful for camping, the main purpose of the Lumir K is to provide safe, effective light for people who do not have regular access to electricity. "Among 1.2 billion who do not have access to electricity, most of them rely on candles or kerosene lamps which is dark, harmful for health and the environment," Park said. Using kerosene lamps indoors has significant negative health effects, causing respiratory ailments, and can be expensive. Springwise continues to spot innovations that bring sustainable power and connectivity to remote locations, including a Belgian energy company that uses [a simple turbine construction to create round-the-clock water-powered electricity](#) for remote communities.