

## Saule Showed a New Perovskite Product

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Saule Technologies introduces the world's first electronic price and advertising labels PESL, powered by perovskite photovoltaic cells. The device is to enable wireless change of messages displayed on it, and its service life is to reach 10 years.

PESL (Perovskite Electronic Shelf Label) labels are the second [Saule Technologies](#) product using perovskite cells. After the large-scale cells intended for building facades, the time has come for another solution. This time it is a product from the IoT category – an intelligent system for handling electronic labels, powered not by a battery – as in the case of traditional ESL labels – but by a perovskite cell.

As Saule Technologies assures, electronic labels with their own, virtually inexhaustible power source, not requiring costly and time-consuming battery replacement, are not only cheaper and more convenient to use than ESL labels.

PESL labels using perovskite photovoltaic cells are to be a breakthrough solution also thanks to the unique possibilities of communicating with customers of retail outlets. They significantly reduce the handling time of product labeling – and most importantly – allow you to verify prices in real time.

Saule assures that perovskite cells are much more efficient than those used, for example, in calculators, of amorphous silicon cells, and also maintain high efficiency in artificial light. The cells are to work efficiently even when the rays of light – e.g. from ceiling lamps – fall on them at a large angle, so they can also supply product labels on the lower shelves. Moreover, unlike silicon cells, they are very thin, light and flexible.

Thanks to these advantages, perovskite cells do not take up much space on the PESL label,

and yet they are to be efficient enough to power the electronic devices that support it, including the display and wireless communication module. This will allow the operator to remotely change the message displayed on the label even several times a day, which will enable, among others, more effective sale of products with expiry date.

Saule Technologies is to offer not only PESL labels, but also complete, integrated IT and hardware systems, using data relays that support PESL labels and cloud computing and analytical capabilities. Price changes are to be carried out centrally and synchronously in all retail outlets of a given chain.

- The possibilities of this solution are stunning. With one click, you will be able to change prices in thousands of stores, on millions of shelves. There is no equally attractive offer on the electronic price label market today. This allows us to believe that Saule Technologies will play a key role in the growth of the electronic price tag market in the coming years - says Artur Kupczunas, CEO of Saule Technologies.

CEO Saule cites the calculations of the authors of the Reportlinker report, according to which this market is expected to grow from USD 1.8 billion in 2020 to USD 7.1 billion in 2026.

- It's a lot, but we are counting on even more. This report was prepared before the market debut of our technology, and the PESL labels are a breakthrough in every respect - says Artur Kupczunas, CEO of Saule Technologies.

PESL labels from Saule Technologies are equipped with an e-ink display (two- or three-color), a wireless communication module and a perovskite photovoltaic cell as a power source. Saule Technologies offers PESL labels in a variety of shapes, colors and sizes (from 1.54 " to 12.5 ").

In addition to the price, PESL labels can display additional text and graphics, so the display can be an effective platform for additional messages: advertisements or announcements about promotions. When changing the display content up to 15 times a day remotely, the

lifetime of the evaluation label is approximately 10 years.

The first tests of the PESL technology will be carried out in cooperation with the Google Cloud Platform. The Wrocław-based company also gained the support of the Maspex Group, which will introduce PESL labels to selected stores in order to be able to measure the impact of this type of solutions on sales efficiency and business profitability. In addition, Saule is to cooperate with PKN Orlen in the area of labels.

Read the [original article](#) on SparkChronicles.