

LIGHTMIRROR: architecture of reflective panels

Reflective panels

redirect sunlight into hospitals and care homes, reducing energy costs for lighting and heating.

Solution includes:

- hardware (panels and mounting systems);
- proprietary software for light-retracing and thermal modeling, optimizing panel placement and energy efficiency in healthcare facilities.



Customizable



Reduces electricity consumption; reduces carbon footprint, etc.



Europe, United States



Ukraine, other European countries



Pilot

LightMirror develops reflective panels that bring sunlight into hospitals and care homes, reducing the need for artificial lighting and heating.



HOW IT WORKS

LightMirror develops an innovative system of reflective panels and software to redirect natural sunlight into hospitals and care homes, significantly reducing their energy consumption and improving patient well-being.

Their solution consists of:

- **Hardware:** Specially designed reflective panels installed on building roofs and facades to capture and redirect sunlight. They also have PV reflective panel.
- **Software:** Proprietary light-retracing and thermal modeling tools that optimize panel placement and predict energy savings.

This integrated system increases indoor illumination by 10-30% during autumn and winter, cutting electricity costs for lighting and heating. By bringing more natural light into healthcare facilities, LightMirror creates a more healing environment that can speed up patient recovery and boost staff productivity.

Their technology addresses the critical issue of high energy consumption in hospitals, which in Poland use an average of 611 kWh/m²/year compared to the EU standard of 110 kWh/m² for new healthcare buildings. LightMirror offers a simple, cost-effective solution to this complex problem, helping healthcare facilities reduce their carbon footprint while improving the quality of care they provide.

As company scales, it aims to expand their solution to other building types and integrate with existing energy management systems, revolutionizing how buildings harness and utilize natural light for energy efficiency.

BUSINESS

By installing reflective panels at the edges of roofs, natural light can be redirected into other buildings, making it a controllable asset that cuts costs and improves the overall well-being of patients and residents.

Company specializes in:

- Custom reflective panels for healthcare buildings;
- Proprietary light-retracing software for rapid feasibility studies;
- Integrating natural light solutions with existing infrastructure.

Key points for partners/customers:

- Significant energy savings (lighting and heating);
- Improved patient recovery through increased natural light;
- Minimal disruption during installation;
- Scalable solution with growing interest across Europe;
- Potential for rapid expansion, especially in Ukraine's reconstruction efforts.



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