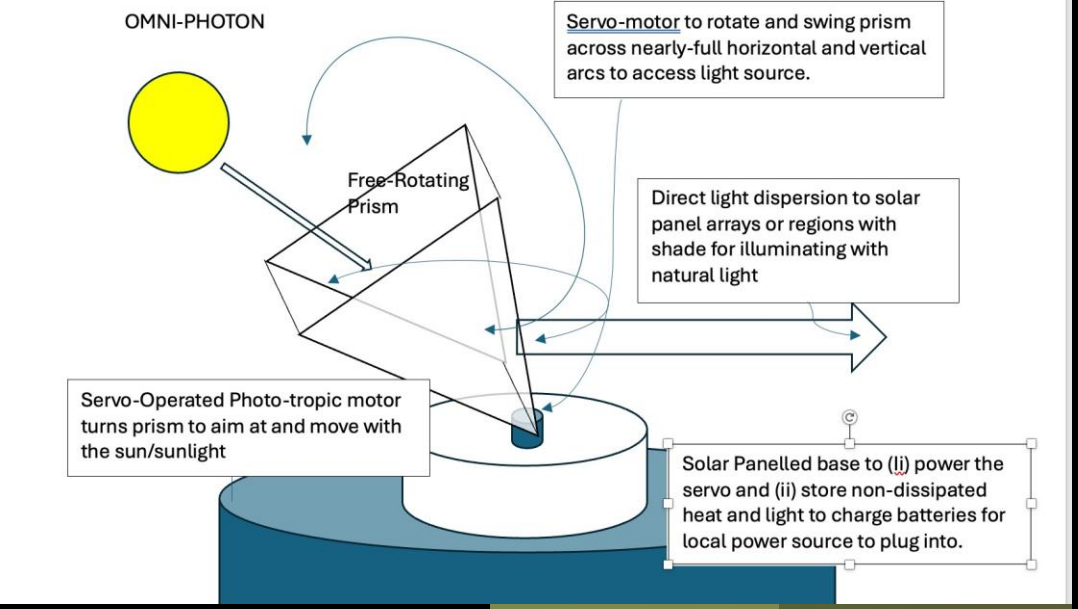

Servo-Operated Dynamic Prismatic Solar Tracker

Solar Tracking, Solar Dissipation, Servo, Dynamic, Self-Sustaining

Dr. Pratim Datta

The OMNI-PHOTON Servo-Operated Prismatic Solar Tracker is an innovative device that dynamically adjusts the orientation of a prism using servo motors to concentrate sunlight onto solar panels or shaded areas.

This solution leverages advanced photo sensors and solar-powered servo motors to optimize the distribution of sunlight.

Difficult to move large solar panels but prisms can move easily.

OMNI-PHOTON offers

Dynamic Sunlight Tracking: The device uses an array of photo sensors to continuously monitor the intensity and angle of incoming sunlight. This data is processed by a microcontroller, which calculates the optimal orientation for the prism.

Precision Sunlight Concentration: High-precision servo motors, powered by integrated solar panels, adjust the prism's position in real-time. This ensures that sunlight is concentrated on solar panels that are partially shaded or directed to shaded areas needing natural lighting.

Self-Sustaining Power: The device operates autonomously, with its servo motors and control system powered by solar panels. Excess energy can be stored in batteries or used to power other devices, making it an eco-friendly solution.

Versatility: The OMNI-PHOTON can be placed on the ground or suspended, making it suitable for a variety of environments, including urban gardens, parks, patios, and remote locations.

Enhanced Energy Output: By concentrating sunlight on shaded solar panels, the device significantly increases their efficiency and energy output, ensuring optimal performance even in challenging lighting conditions.

Natural Lighting for Aesthetic Appeal: Redirecting sunlight to shaded areas transforms dull spaces into vibrant environments, reducing the need for artificial lighting and enhancing the ambiance.