

ABSTRACT

Innovation of Solar Panel-Based Coffee Table as a Lighting Element in Rooftop Bar and Restaurant Areas

Bella Elvaretta¹⁾, Toufiq Panji Wisesa²⁾, Donna Angelina Sugianto²⁾

¹⁾ *Student of Product Design Study Program, Universitas*

²⁾ *Lecturer of Product Design Study Program, Universitas Pembangunan Jaya*

This research examines the innovation of a coffee table that utilizes solar panels as an energy source for lighting elements in rooftop bar and restaurant areas. The main objective of this study is to create a furniture solution that is not only aesthetic and functional but also environmentally friendly and energy-efficient. The developed coffee table is designed with the integration of solar panels on its surface, which can absorb solar energy during the day and use it to provide ambient lighting at night. Additionally, the coffee table is equipped with a waiter call feature and wireless charging, facilitating the ordering process and offering additional convenience for visitors to charge their devices. This research involves the design process, prototype creation, and performance testing of the coffee table under various usage conditions. The results indicate that the solar panel-based coffee table can enhance the aesthetics and atmosphere of outdoor spaces, contribute to the reduction of electrical energy consumption, and improve service efficiency and user comfort. Thus, this innovation is expected to be an effective and sustainable solution for the hospitality and restaurant industry that prioritizes environmentally friendly aspects in its operations.

Keywords : *Coffee Table, Solar Panel, Lighting, Rooftop, Sustainable Design, Renewable Energy*

Library : 16

Publication Year : 2000 - 2024