

September 26, 2019

KANEKA CORPORATION

**Kaneka Provides High-Performance Solar Panels to Seven-Eleven Japan Co., Ltd.
A Verification Test for Store Operation Using 100% Renewable Energy**

Kaneka Corporation (Headquarters: Tokyo, President: Mamoru Kadokura) will provide solar panels with significantly improved power generation efficiency for a verification test to operate a Seven-Eleven Japan Co., Ltd. store with 100% renewable energy. This verification test will be carried out as an initiative based on the “Agreement on Cooperation and Collaboration in Promoting SDGs”^{*1} between Seven-Eleven Japan Co., Ltd. and Kanagawa Prefecture, as well as the “Environmental Declaration” of Seven & i Holdings Co., Ltd.

Our solar cells used in this verification test have excellent power generation efficiency and temperature characteristics^{*2} through the use of our hetero-junction technology^{*3}. Furthermore, the cells’ bi-facial light receiving structure^{*4} also enables power generation on the rear side, resulting in high power generation. Through this verification test, we will contribute to reducing CO₂ emissions with Seven-Eleven Japan Co., Ltd.

Based on our mission of “Kaneka thinks Wellness First”, we provide value globally as a solution provider for the 3 social crises of energy and environment, nutrition, and health. Already as part of efforts for Seven & i Holdings’ Environmental Declaration: “GREEN CHALLENGE 2050”, various products are being developed that use our 100% plant-derived “Kaneka Biodegradable Polymer PHBH™”, which is biodegradable in a wide range of environments. As the first step of this initiative, straws for Seven Cafe have been introduced on a trial basis at Seven-Eleven stores in Kochi Prefecture since August.

Kaneka will continuously contribute to solving the energy and environment problem by developing new materials and technologies in order to pass on our beautiful environment to future generations.

*1. An agreement signed by Seven & i Holdings and Kanagawa Prefecture with the aim of contributing to further revitalization in each region of Kanagawa Prefecture by working together to achieve SDGs (Sustainable Development Goals).

*2. A characteristic that represents the degree of fluctuation in the amount of power generated with respect to changes in the temperature of solar cells. It is known that the heterojunction type exhibits excellent temperature characteristics among the most widely used crystalline silicon solar cells.

*3. A technology for bonding semiconductor materials with different physical properties. The solar cells used in this verification test can achieve good power generation efficiency and temperature characteristics by using

heterojunction technology, which uses high-quality amorphous silicon developed by us, to suppress defects on the silicon substrate surface that degrade power generation characteristics.

*4. Power is generated on both sides of the solar panel. Power is generated not only from the surface of the solar panel that is directly irradiated with sunlight, but also from sunlight entering the rear of the panel, increasing the amount of power generated.



Seven-Eleven Verification Test Store