

INABA Review

vol. **6**
2024

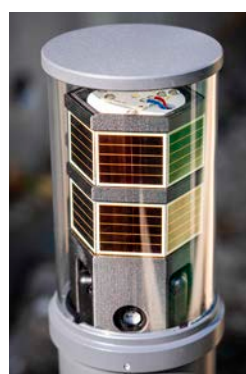


Inaba Electric Work Co., Ltd.
<https://www.inaba.com>

New Product Introduction

A Demonstration Experiment of Perovskite Solar Cells With Ricoh Co., Ltd., Ricoh Japan Corporation

Perovskite solar cells are lightweight components because they are made from organic materials. They can generate power even in areas with low illumination or in vertical installations, and they are attracting attention as a power generation technology that provides an alternative to conventional silicon solar cells. However, their durability in exterior installations remains in question. We therefore collaborated with Ricoh Co., Ltd., Ricoh Japan Corporation, and four other related companies in a demonstration project to study perovskite solar cells installed to power outdoor garden lights. As part of this project, we monitored the amount of power generated by these solar cells and the durability of the batteries. Magome 3rd Elementary School has also committed to participating in this initiative, which includes extracurricular classes intended to increase student interest in energy technologies and next-generation solar cells.



Garden light installation



Illuminated garden lights



Children learning about perovskite solar cells

Demonstration locations and schedule

- Magome 3rd Elementary School, Ota City, Tokyo: January 31, 2024 to January 30, 2025
- Main Building, Atsugi City Hall, Atsugi, Kanagawa Prefecture: March 1, 2024 to February 28, 2025

Details of collaboration in the demonstration project

Companies	Roles
Ricoh Co., Ltd.	• Management of demonstration project • Development and production of perovskite solar cells
Ricoh Japan Corporation	• General customer contact point • Planning and coordination
Inaba Electric Work Co., Ltd.	• Development and manufacture of street lighting products and outdoor enclosures • Manufacturing and assembly of demonstration units
Takenaka Seisakusho Co., Ltd.	• Development of control circuit boards for street lighting
Tachibana Electronic Solutions Co., Ltd.	• Sales contact point for hardware and software related to LoRa® sensor boards
Osaka NDS Co., Ltd.	• Development of firmware for LoRa® sensor boards • Development of cloud applications for obtaining sensing data • Development of cloud infrastructure



Ceremony for launch of the demonstration project

Electric Division: Product Introduction



Extending the Life of Outdoor Enclosures, Reducing the Environmental Load, and Contributing to Sustainability

Highly Corrosion-resistant Panel

Attractive appearance is suitable for exterior installations.

Compared to a typical hot-dipped galvanized surface, this painted panel presents an attractively smooth appearance.

Scratch-resistant surface minimizes the formation of rust.

Protected by two layers of paint and a highly corrosion-resistant plating, this scratch-resistant surface resists the type of damage that would typically contribute to the formation of rust.

Features ZEXEED®, a highly corrosion-resistant plated steel product from Nippon Steel Corporation.

ZEXEED is a metal that offers excellent corrosion resistance. It is more economical than stainless steel and provides excellent resistance to rust — 10 times that of hot-dip galvanized plating and about twice that of ZAM® general-purpose zinc-plated steel sheet. It resists the damaging effects of salt and humidity and maintains its high resistance to corrosion for years.

*ZEXEED and ZAM are registered trademarks of Nippon Steel Corporation.

Combined Cycle Testing* (Neutral Salt Spray Combined Cycle Testing)

These highly corrosion-resistant panels demonstrate excellent resistance to rust because corrosion of the plating layer occurs very slowly and the protective film on the plating layer maintains its barrier effect, ensuring a long service life.

	Initial stage	20 cycles	40 cycles	60 cycles
Highly corrosion-resistant panel				
Hot-dip galvanizing				
Bonded steel panel				

*Combined cycle testing involves repeatedly subjecting the test material to cyclic exposure to salt spray, drying, moisture, and humidity.

Technical Topics

Sigfox R503-ZCT Leakage Current Measuring Device



This device makes it possible to visualize ghost leakage currents from a smartphone or computer at any time and from any location. The integrated battery ensures the capture of data that reveals trends throughout the year.

By installing the Sigfox R503-ZCT Leakage Current Measuring Device at any branch point you want to isolate, you can easily narrow down the location of a fault and limit the scope of your investigation.

In addition to reducing labor and manpower requirements, this innovative device reveals faults quickly, contributing to enhanced safety and security.

Our Sandblasting Facility



Designed for reduced labor requirements and an improved work environment

Our Gunma Plant has introduced a sandblasting facility that prepares the surfaces of poles for painting. Compared to conventional manual cleaning processes, this method reduces work time, minimizes dust for an improved work environment, and contributes to significant improvements in paint adhesion.



Company Outline

Company name Inaba Electric Work Co., Ltd.

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Establishment May 10, 1962

Employees 263 (as of September 30, 2024)

Capital stock 130 million yen

Sales offices Osaka, Tokyo, Sapporo, Yamagata

Plants Habikino Plant, Enmyo Plant, Nara Plant, Gunma Plant