

## Preserving the beautiful starlit skies in Bisei Town by light pollution control streetlights.

Okayama, Japan



### Developing Japan's first IDA certified light pollution control LED lighting

In January 2020, Panasonic became the first Japanese manufacturer\*<sup>1</sup> to develop a light pollution prevention LED street light and crime prevention light that was certified as being "Dark Sky Friendly" by the International Dark-Sky Association. The IDA is an NPO organization based in the United States that plays a leading role in global initiatives to minimize light pollution, and has over 60 branch offices in 18 countries around the world. The development of light pollution prevention LED lighting equipment started with a request for cooperation from Ibara City, Okayama Prefecture. The Bisei Tourism Association in Ibara is currently preparing to obtain the "International Dark Sky Places certification"\*<sup>2</sup>, which was established by the IDA in 2001, and celebrates outstanding efforts to protect and preserve the dark and beautiful night sky that is unaffected by light pollution. In order to obtain this certification, outdoor lighting equipment that met its criteria was required.



\*1: As an IDA certified equipment of a domestic manufacturer (As of February 20, 2020. According to a survey conducted by the International Dark-Sky Association, Tokyo Chapter)

\*2: There are six categories in the "International Dark Sky Places" certification, and the Bisei Tourism Association is aiming to be certified as a "Dark Sky Community".

## Japan's first light pollution prevention ordinance enacted

In 1989, Bisei enacted Japan's first light pollution prevention ordinance. The ordinance recommended that all outdoor lights be turned off after 10:00 PM, and to prevent light from escaping above the horizontal plane. In 1993, the Bisei Astronomical Observatory was opened. Astronomy-related events began to be implemented, increasing people's interest.

Around that time, many white fluorescent lights were installed around the town as crime prevention lights. Later, with the spread of LEDs, they were sequentially replaced with white LED security lights from 2011, but light was leaked upwards from the approximately 400 white fluorescent lights and white LED security lights, resulting in a state where the standards of the ordinance were not met.

## Preserving the starry skies that are the pride of the town while protecting its safety at night.

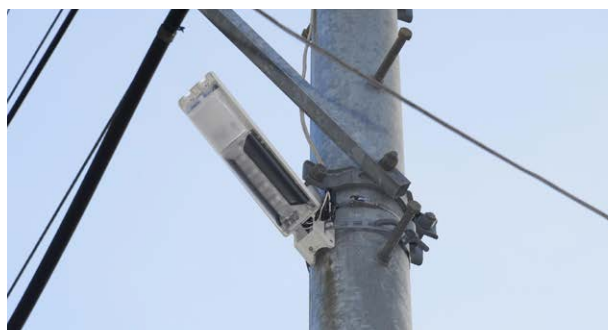
Information regarding the IDA's "International Dark Sky Places® certification program" was brought from the Bisei Astronomical Observatory to Kenji Fujioka of the Ibara Regional Revitalization Division (at the time) in 2016. Mr. Fujioka and others, who believed that "Bisei was suitable as an "International Dark Sky Place®", visited the IDA Tokyo Chapter that year. Since then, they have continued to promote awareness activities by exchanging opinions with President Nobuaki Ochi and through environmental protection events.



## Clearing the strict standard to establish the first certified products as a Japanese manufacturer

In the criteria for the outdoor lighting in "International Dark Sky Places®", it is required to keep glare at a bare minimum, prevent all upward light leakage that obscures the starlit sky and have a color temperature of 3000K or less, which means a light bulb color with little blue light.

First, Panasonic provided model lighting equipment with bulb color LEDs to replace the existing white security lights in Bisei. We installed a portion of them locally and conducted tests, but Mr. Ochi from the IDA pointed out that there was light leakage facing upwards. Therefore, the Bisei Tourism Association once again visited Panasonic to request the development of lighting fixtures that meet the standards.



White LED security lights with cut louvers installed as test equipment

## Looking towards the "International Dark Sky Places" certification

"We will be asking the residents of Bisei to understand that we will be replacing the lighting with security lights that are friendly towards starlit skies, so we will continue to carefully transmit our message while working together with the Bisei Tourism Association," says Shoji Taga, Section Chief of the Settlement Tourism Division, Future Planning Department. On top of that, they are planning on accelerating the initiatives of replacing the security lighting and applying for the "International Dark Sky Places®" certification.

From an age when we didn't realize that excess light was harmful to an age where the coexistence of human life and the starlit skies is expected. Panasonic, which has continued to produce bright lighting, will continue to make further progress on their countermeasures against light pollution. We will use the development of this equipment as an opportunity to make sincere efforts to protect the starlit skies and respond to inquiries from other municipalities.

### Installed Products



IDA certified light pollution control LED lighting



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