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# FOR IMMEDIATE RELEASE

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# Mitsubishi Electric's New Lighting System Mimics Blue Skies, Sunrises and Sunsets

Will enhance indoor lighting with sky-like depth and colors adjusted to time of day to make indoor spaces feel larger and more open

**TOKYO, September 27, 2018** – <u>Mitsubishi Electric Corporation</u> (TOKYO: 6503) announced today that it has developed an indoor lighting technology that mimics the daily change of natural light from sunrise to blue sky to sunset. The system, which consists of a thin panel and frame measuring less than 100mm, incorporates a proprietary edge-lit method that emits LED light from the side of the light panel to achieve highly natural light with the depth and color of the sky. Mitsubishi Electric will exhibit its new technology during CEATEC JAPAN 2018 at the Makuhari Messe exhibition complex in Chiba, Japan from October 16 to 19. The timing of the envisioned commercial release will be announced later.



Prototype simulating blue sky



Sample application as skylights

Basic structure of prototype



Sample application as skylights and windows

Modern workplaces are being upgraded to create comfortable environments that stimulate and motivate employees. This includes the enhancement of lighting in offices that have darkened or covered windows or no windows altogether. Mitsubishi Electric's new system, unlike conventional LED lighting system, produces highly natural light, including colors similar to those of sunrises and sunsets as well as blue skies, and creates a sense of depth to make indoor spaces feel larger and more open.

#### Main Features

#### 1) Thin package produces light with depth and colors similar to real sky

- Edge-lit panel emits LED light from the side to mimic the sky's Rayleigh scattering effect, which
  occurs when sunlight strikes atmospheric air molecules in the daytime and scatterings shortwavelength blue light more strongly than long-wavelength red light, making the sky appear blue when
  viewed from below.
- Panel and frame thickness measure less than 100mm combined, comparable to an ordinary lighting fixture, for wide-ranging applications in offices and public facilities. Also, panels can be tiled to cover large ceilings.

# 2) Replicates colors of blue sky and both sunrises and sunsets

- LED light source colors are controlled automatically throughout the day to replicate daily transitions of natural light from sunrise to midday sunlight to sunset.

# **Future Developments**

Going forward, Mitsubishi Electric will develop applications that provide pleasing natural-like light in offices, public facilities and other environment where natural light is limited or unavailable.

#### Patents 1 -

The patents for the developed technology in this press release number five in Japan and one abroad.

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#### About Mitsubishi Electric Corporation

With nearly 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,444.4 billion yen (in accordance with IFRS; US\$ 41.9 billion\*) in the fiscal year ended March 31, 2018. For more information visit: www.MitsubishiElectric.com

\*At an exchange rate of 106 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2018