

Using LED fluorescent tubes to promote energy saving.

# LED Tube Lamp Bikei

## Features

- LED tube lamps can be fitted to conventional 20- and 40-W-type fluorescent lighting fixtures, except for those of high-frequency (HF) type, with no modification work.
- LED fluorescent tubes radiate only a little quantity of ultraviolet or infrared rays, and have a life of approximately 40,000 hours (based on a reduction of initial illumination intensity to 70% as life expiration).
- The replacement of 100 conventional 40-W fluorescent tubes with LED tube lamps will reduce CO<sub>2</sub> emissions at the rate of approximately 5.3 tons per year.

## Overview

(Technical principles, actions, etc.)

LED fluorescent tubes have a service life as long as 40,000 hours with an estimated power consumption approximately 42% lower than that of conventional fluorescent tubes (in the case of 40-W tubes), thus contributing to the reduction of CO<sub>2</sub> emissions. LED fluorescent tubes do not use lead or mercury, thus ensuring ease of recycling.

Application examples include the following ones.

- ① The use of LED tube lamps for the passages and emergency staircases of company and office buildings reduces CO<sub>2</sub> emissions while contributing to disaster prevention because LED tube lamps do not break with ease.
- ② The long life of LED tube lamps in tunnels and for building wall advertisements saves a large amount of replacement expenses required for high-place work.
- ③ The use of LED tube lamps for the illumination of apartment common areas reduces common-area charges.
- ④ The quantity of heat radiation of LED tube lamps is less than that of conventional fluorescent tubes, which makes it possible to apply LED tube lamps to refrigerators and freezers.
- ⑤ LED tube lamps radiate only a little quantity of ultraviolet rays, thus not attracting insects, which contributes to the sanitary control of food-related warehouses.
- ⑥ LED tube lamps with good color rendering properties incorporate three-way LED light sources, which is ideal for the illumination of a variety of stores shelves and show-cases.

LED fluorescent tubes have a wide range of applications and contribute to the reduction of CO<sub>2</sub> emissions and cost.



LED fluorescent tube

## Introductory Track Record

- LED tube lamps have been used by government offices, electric power companies, railroad companies, construction companies, universities, hospitals, Self-Defense Forces, and many other companies for the illumination of warehouses, passages, factories, signboards, and plastic greenhouses (in Japan only).

## Effects

- ◎ The power consumption of a 40-W-type LED tube lamp is 23 W (except for the fluorescent ballast), which is 42% lower than that of conventional 40-W fluorescent tubes. The replacement of 100 conventional 40-W fluorescent tubes with LED tube lamps will reduce CO<sub>2</sub> emissions at the rate of approximately 5.8 tons per year. LEDs last 40,000 hours or more, which provides LED tube lamps with the greatest feature. The replacement of fluorescent lamps on expressways and in tunnels causes trouble to users and involves dangerous maintenance services. LED tube lamps have a long life, thus reducing the number of replacement times and bringing a great merit with these problems solved. Furthermore, the elimination of the replacement work that requires large-scale prearrangements saves cost to a great extent.

Applicable field  
Commercially available fluorescent lighting fixtures (except for  
HF-type fixtures) and CO<sub>2</sub> reducing enterprises

Water

Energy saving/Energy recovery

Energy storage/Energy creation

New energy

Waste disposal/  
Recycling/  
Resource saving

Air

Soil

Other

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