

# Straight Tube LED Lamps for Rail Cars

LED lamp with built-in power source for rail cars  
curbs power consumption and equipment weight

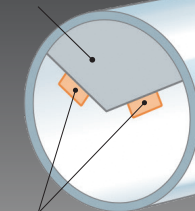
Straight tube LED lamp  
with built-in power source

Compared with fluorescent lamps, including ballast, these lamps cut power consumption by 55% and weigh 75% less. Conversion to LED limits waste since LED lamps are suitable for existing fluorescent lamp fixtures.

Built-in power source

LED chip

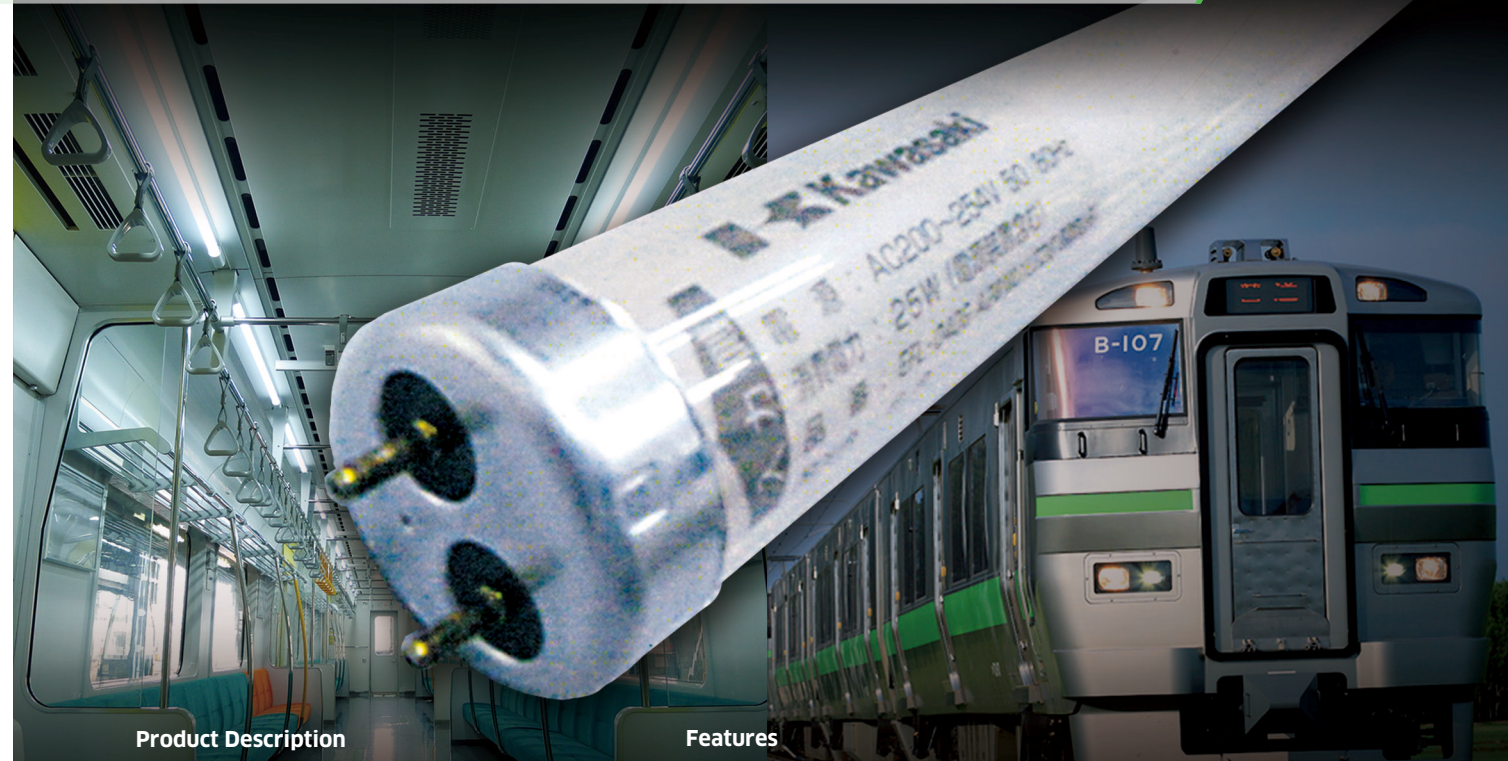
Glass outer-tube



**2021**

**Kawasaki  
Ecological Frontiers  
A class**

Initial registration: 2015  
Modified registration: 2018



## Product Description

Designed specifically for rail cars, these straight LED lamps feature a built-in power source, making it particularly easy to switch from existing rail car fluorescent lamps.

## Features

- Weigh about 49% less, compared with LED lamps that have a separately attached power device
- Switch to LED lamps using existing fluorescent lamp fixtures is possible during remodeling of existing rail cars, and installation of LED lamp will not necessitate removal/disposal of the existing lamp fixtures
- Emergency lamps (DC power source) will go out in a two-stage process (fully illuminated → semi-lit → off), accompanying the voltage drop that occurs when a rail car cannot operate normally (on battery power), and lighting time will be extended

\* Patented