

**ADVANCE**

by  Signify

Fluorescent Ballasts



The right fit  
for your dimming  
application



# Dimming solutions for a brighter tomorrow

Across the country today, businesses and institutions are facing a number of challenges when it comes to lighting. In addition to the need for conserving energy in the face of rising utility costs, new legislation is requiring lighting systems to meet increasingly strict performance levels. And regulations at the state and local level are following suit.

As standards such as California's Title 24 and ASHRAE 90.1 are being revised and updated, they are calling for the increased use of controls, such as occupancy sensors and photosensors for daylight harvesting. That means the ballasts in fluorescent lighting systems must be able to work with these controls to achieve the specified performance.

Sustainable<sup>1</sup> energy-efficient lighting solutions such as Advance dimmable fluorescent ballasts can help businesses meet these evolving regulations and significantly reduce their lighting costs while still providing effective illumination

for their employees. Advance dimmable ballasts can also help companies achieve environmental certification through programs like the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) rating system.

And building a reputation for following sustainable business practices that minimize environmental impact can provide a company with a marketable advantage.

In short, sustainable lighting solutions like Advance dimmable fluorescent ballasts deliver the performance businesses demand in today's marketplace.



# Efficiency and versatility

Compared to fixed-output T8 systems, controllable fluorescent technology may reduce lighting operational costs by up to 65%<sup>2</sup> when paired with daylight harvesting and occupancy sensors. Dimming capability also improves the flexibility of the lighting systems to provide task-appropriate illumination in specific situations such as conference rooms, offices and training centers where greater lighting control is needed. See chart below.

This technology is also easy to implement on any scale with the wide array of dimmable solutions available — from building-wide integration with daylight and occupancy sensors for automated control of lighting levels, to a simple ballast and switch replacement.

## Advance dimmable ballast portfolio — the right fit for any application

As a leader in sustainable lighting solutions, we offer a broad portfolio of dimmable fluorescent ballasts that make incorporating the sustainable benefits of this technology easy. Whether the application calls for two-wire dimming, 0–10V control or digital

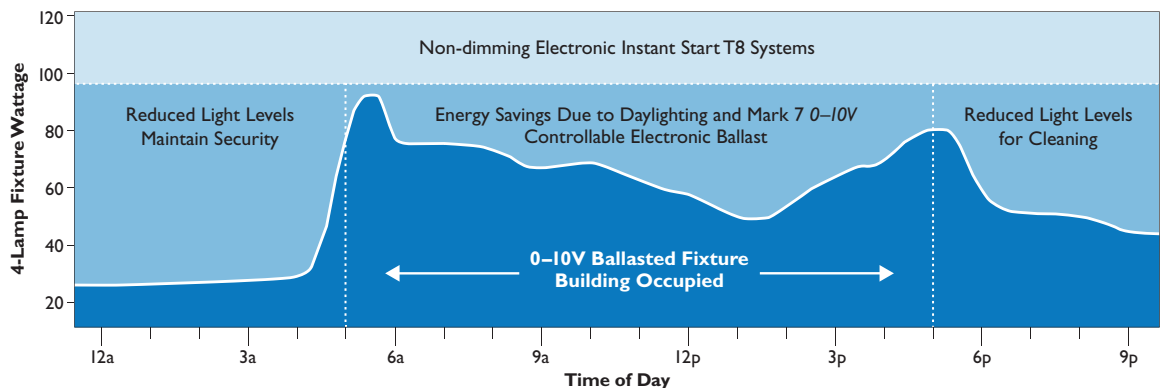
controls, you'll find the right solution to meet your needs today and solutions that can grow with you.

- Optanium step-dim
- Mark 10 *Powerline*
- Mark 7 0–10V
- ROVR (DALI)

These ballasts are compatible with controls from a wide array of manufacturers.

Choosing Advance dimmable fluorescent ballasts means having the confidence in lighting solutions that are backed by years of industry experience and a shared commitment to sustainability.

Comparison of fixed and dimmable fluorescent lighting





## Optanium step-dim ballasts

### Easy-to-install step-dim capability

Advance Optanium ballasts with step-dim capability for T5 and T8 fluorescent lamps represent an affordable, energy-efficient and versatile lighting solution designed to meet California's Title 24 requirements to reduce power by 50% in stairwells, aisles and corridors, among other areas. They also support occupancy sensors with auto-on to 50% power capabilities, as required by ASHRAE 90.1-2013.

Operating from any line voltage switching device, the ballast's programmed start circuitry provides extended lamp life in frequent switching applications — like those associated with the use of occupancy sensors or motion detectors — making this product the sustainable choice for many commercial applications.

In addition, Optanium step-dim ballasts feature auto restart, ballast shutdown mode, Type CC protection and T5 lamp End-of-Life (EOL) protection circuitry, which safely removes power from the lamp upon failure to minimize maintenance concerns.

Offering the flexibility of step-dimming with the high efficiency of Optanium electronic ballast technology, our ballast represents an optimal lighting solution for a wide variety of professional applications.

### Reduces input power by 50% to meet energy codes

- 50% control step

### Dims all the lamps together, providing equal burn hours on all lamps and reducing the uneven lifetimes experienced with on-off switching systems

- Light levels are adjustable — 100% power, 50% power and off

### Ensures ease of use and system compatibility across a broad range of applications

- Operation from any line voltage switching device, such as standard toggle switches and occupancy sensors





## Mark 10 *Powerline* ballasts

As easy as 1, 2, 3...

Advance Mark 10 *Powerline* dimmable ballasts make converting your existing fixtures easy.

For companies looking to make their fixed-output linear T8, 4-pin CFL and T5HO fluorescent systems more cost-effective and sustainable, Mark 10 *Powerline* ballasts provide an easy solution without the need for additional control leads. Simply replace the ballast, replace the switch and dim the lights.<sup>3</sup>

It's that easy to bring the convenience and flexibility of fluorescent dimming to conference rooms, private offices, auditoriums, architectural cove lighting — anywhere dimming is required.

The flexibility provided by Mark 10 *Powerline* ballasts includes the freedom to choose controls from a wide variety of manufacturers. For a complete list of compatible controls, contact your sales representative.

Programmed start design not only optimizes lamp life in frequent starting conditions, it also optimizes dimming performance by monitoring system performance and making continuous adjustments. The ballast will start lamps at the minimum dimming level without ramping up to full light output first.

**Compatible with controls from numerous manufacturers without using separate control leads**

- *Powerline* dimming interface

**Provides task-appropriate comfort only where necessary to increase potential energy savings while supporting LEED performance standards**

- Full-range continuous dimming (100% light output down to 5%; T5HO to 1%)

**Ideal for frequent switching applications such as occupancy sensors and daylight harvesting**

- Programmed start operation





## Mark 7 0-10V ballasts

### Maximum dimming versatility

Advance Mark 7 0-10V dimming ballasts provide maximum versatility with low-voltage dimming.

The Mark 7 0-10V series of dimmable ballasts offers maximum versatility by incorporating separate control leads for use with a wide array of controllers, including occupancy sensors, daylight harvesting controls and building management systems from more than 40 manufacturers.

When paired with linear fluorescent and 4-pin compact fluorescent lamps, these ballasts optimize the benefits of such popular lighting techniques as daylight harvesting, occupancy sensing and load shedding to satisfy the need for an affordable, flexible and versatile controllable lighting solution. Newer CFL models provide operation for up to five lamp types from any line voltage. This flexibility is achieved through design breakthroughs such as lamp recognition — the ability to “sense” and operate the lamp at optimal performance.

These ballasts are ideal for conference rooms, auditoriums, educational facilities, hotels, restaurants and department stores, as well as other new construction or retrofit installations where dimming is desired.

The 0-10V DC control of the ballast reduces the number of controllers required and allows for a single controller to operate across multiple branch circuits. For a complete list of compatible controls, contact your sales representative.

### Provides task-appropriate comfort only where necessary to increase potential energy savings while supporting LEED performance standards

- Full-range continuous dimming (100% light output down to 3%; T5HO to 1%)

### Helps reduce maintenance costs as more lamps remain on when lamps reach end-of-life, minimizing wasteful re-lamping

- Independent light operation (4-lamp)

### Ideal for frequent switching applications such as occupancy sensors and daylight harvesting

- Programmed start operation



## ROVR ballasts

### Intelligent control

Advance ROVR ballasts provide intelligent control through the DALI protocol.

Advance ROVR ballasts reflect the latest approach to controlling fluorescent lighting. Rather than simply responding to instructions from control components, ROVR ballasts enable two-way communication and have the ability to dim and switch individual ballasts through the control signal. These features allow for virtually unlimited design flexibility while creating sustainable lighting systems.

This two-way communication is made possible through the industry-standard digital communication protocol known as DALI (Digital Addressable Lighting Interface).

This protocol allows ROVR ballasts to provide users with operational data while controlling the output of individual luminaires. This fully supports sustainable design principles such as daylight harvesting and occupancy sensors while enabling a proactive response to maintenance concerns.

Users can adapt their lighting configurations to meet changing operational or occupant needs, making them ideal for training centers, auditoriums, educational facilities or entertainment venues. ROVR digital

ballasts are ideal for applications such as downlighting, indirect and direct pendants, recessed linear fluorescents and sconces.

#### Ideal for a variety of applications

- Available in linear fluorescent and 4-pin compact fluorescent models

#### Provides task-appropriate comfort only where necessary to increase potential energy savings while supporting LEED performance standards

- Full-range continuous dimming (100% light output down to 3%; T5HO to 1%)

#### Ideal for frequent switching applications such as occupancy sensors and daylight harvesting

- Programmed start operation



### The ABCs of DALI

For more information on DALI, visit [http://www.usa.lighting.philips.com/connect/tools\\_literature/fluorescent.wpd](http://www.usa.lighting.philips.com/connect/tools_literature/fluorescent.wpd). "The ABCs of DALI" brochure can be found in the Commercial Literature – Dimmable section.

Dimmable  
Fluorescent  
Ballasts

Lighting System	Optanium Step-Dim	Mark 10 Powerline	Mark 7 0-10V	ROVR
T4 CFL	N/A	18W-70W	13W-70W	13W-70W
FT5 Twin Tube	N/A	24W-55W	36W-80W	55W
T5HE Linear	14W-35W	14-28W	14W-28W	14W-28W
T5HO Linear	54W	24W-54W	24W-80W	49W-54W
T8 Linear	17-32W	17W-32W	17W-32W	17W-32W

Contact your Advance Lighting representative for complete lamp/ballast compatibility information and to learn more about our new products.



## Delivering the flexibility and performance today's marketplace demands

From rising energy costs to increasingly strict efficiency standards and the need to reduce their impact on the environment, businesses are looking for sustainable and economical solutions to their lighting needs. Not surprisingly, dimmable fluorescent systems are playing an increasing role in meeting those needs.

The broad range of Advance dimmable ballasts delivers all the benefits of the latest dimming ballast technology to help meet new energy regulations while maintaining appropriate light levels. And they may qualify for utility rebates (check with your local utility provider for more information). These ballasts also provide the freedom to choose controls from Advance Lighting or more than 40 other manufacturers.

Contact your Advance Lighting representative today to learn more about our industry-leading dimming-capable ballasts or visit [www.philips.com/oemna](http://www.philips.com/oemna) for more information.





### Footnotes

1. "Sustainable" refers to the lower energy consumption needed when a dimmable ballast is operating at reduced light output levels, which can lead to lower carbon emissions as compared to a similar fixed output ballast.
2. Source: Galasiu, A.D. "Energy saving lighting control systems for open-plan offices: field study," National Research Council Canada, v4 no1, July 2007 pg. 15–16.
3. Rapid Start sockets required.

