PROGRAMMED START (PS) BALLASTS
FOR T8 FLUORESCENT LAMPS

A New Generation of Ultra-Efficient Programmed Start Ballasts

347v
Now available

Parallel Lamp Operation

60,000 Hours Lamp Life*

5 YEAR Limited Warranty*

ULTRASTART.
For Frequently Switched Applications

*with complete GE SXL lamp and ballast system
UltraStart® Saves Energy

Energy Savings by Turning the Lights Off

Using occupancy sensors in unoccupied spaces or using daylight harvesters in partial daylight areas is one of the most cost-effective, energy savings solutions today. A study performed by the Lighting Research Center and sponsored by the US EPA ENERGY STAR® Buildings Program shows the impact of energy consumption with and without occupancy sensors*. Occupancy sensors showed an average annual energy consumption savings of 12% to 42% depending on the application. GE UltraStart® provides the proper lamp starting and energy savings to take advantage of this technology without sacrificing lamp life or incurring high maintenance costs.

Lamp Replacement and Maintenance Costs

- Increased calendar lamp life and reduced maintenance costs; the less time that lamps are left on increases overall calendar lamp life.
- GE lamps on UltraStart® ballasts last over 100,000 switching cycles on occupancy sensor and other building control system applications before reaching rated lamp life resulting in significant lamp replacement and maintenance cost savings.
- UltraStart® parallel lamp operation also avoids unnecessary lamp replacement costs when only one lamp fails.

Energy Savings When the Lights Are On

- The UltraStart® ballasts saves as much energy as high-efficiency (>90%) T8 instant start ballasts like GE UltraMax® instant start.
- Systems combining UltraStart® electronic ballasts and GE T8 energy savings lamps can deliver over 40% energy savings over standard T12 electromagnetic ballast systems not including the incremental savings from the use of occupancy sensors or daylight harvesters.

Environmental Awareness

- GE UltraStart® is one of GE’s ways to create products that help our customers improve their environmental and operating performance.
- GE UltraStart® are high-efficiency, energy-saving and RoHS-compliant ballasts.
- GE UltraStart® PS and UltraMax® Instant Start ballasts are among the highest energy-efficient ballasts available.
- GE hopes to encourage customer awareness of the importance of reducing hazardous materials and complying with future environmental trends.
- Look for the RoHS compliant mark on all GE UltraStart® and other GE ballasts.

UltraStart® Programmed Start Ballasts

GE UltraStart® is a new generation of T8 and Programmed Start (PS) ballasts that addresses the growing demand for energy-saving strategies incorporating occupancy sensors and other automated light controls to meet strict energy legislation. Switching lights off when an area is unoccupied or filled with daylight makes sense from an energy-savings viewpoint and it is also recommended or required now by several energy regulations.

On standard Instant Start (IS) ballasts, lamp life is significantly affected by frequent starting. Programmed Start (PS) ballasts provide a “soft start” and significantly reduce the cathode degradation occurring from each start.

PS ballasts have been available for some time but have suffered from several drawbacks:
- They are less efficient than IS ballasts.
- They operate lamps in series which means if one lamp goes out the other lamps on that ballast will also go out.
- There is typically a starting delay of 1 to 1.5 seconds between the time the ballast is powered and the time the lamp comes on.

GE UltraStart® PS ballasts overcome all these issues.
- These ballasts use a control circuit to apply very precise cathode heat to ensure that the cathodes have reached an optimum temperature during lamp starting - reducing the amount of cathode degradation associated with each start and increases lamp life.
- The benefit of PS with the energy savings, fast starting and parallel operation convenience of instant start ballasts.
GE Lamp Life Range
Instant Start vs. Programmed Start**

GE lamp life studies have shown that lamp life is up to 20 times longer in rapid cycle testing. Lamp life tests have demonstrated 111,000 to 243,000 starts on F32T8 lamps to rated lamp life with GE UltraStart® ballasts as opposed to only 7,000 to 13,000 starts with standard instant start ballasts. GE lamp warranty may be void if lamp starts exceed 3,000 starts during the warranty time period with instant start ballasts.

UltraStart®™ maximizes lamp life in frequently switched applications and where lamp life is a primary concern. GE UltraStart® ballasts and lamps provide guaranteed performance with the GE Total system Limited Warranty. **GE 2004-2005 lamp testing at industry standard 850 rapid cycle testing.

Lamp and Ballast Combinations - Life Chart

Our UltraStart® and UltraMax® ballasts, in combination with our full line of GE T5, T8 and T12 lamps, provide new ways to meet your lighting goals. Whether your objective is to reduce energy consumption or extend lamp life, we recommend using the rated-life charts as a guide.

GE LFL System Limited Warranties
Lamp Limited Warranties & Ballast System Limited Warranties*

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<th>Lamp Type</th>
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<th>12hrs Lumens</th>
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Programmed start lamp life ratings and warranties

T8 UltraStart®
(120V-277V, 347V)
• F32T8 Fast startup (less than 700ms).
• Greater than 100,000 on/off cycles before reaching rated lamp life.
• High Ballast Efficiency (>90%).
• Ballast factors:
  - Ultra-Low Watts (.60).
  - Low Watts (.71).
  - Normal (.88) and
  - High Light Output (1.15).
• Parallel lamp operation.
• GE Express Services System Warranty.

.60 (XL) Ultra Low Watt and .71 (L) Low Watt Ballast Factor (120V-277V, 347V)
Best used for low light level areas—bathrooms and hallways, partial daylit areas. The Ultra Low XL ballast offers facilities the ability to maximize energy savings with 4’ T8 lamps. Many facilities maintain one lamp in inventory with F32T8 high lumen lamp and change light levels throughout the facility with ballast factor.

.88 (N) Normal Ballast Factor (120V-277V, 347V)
Best used in applications incorporating occupancy sensors, daylight harvesting strategies and other frequently switched applications (>5 on offs per day).
• Application: General office lighting, retail, schools.

1.15 (H) High Light Level Ballast Factor (120V-277V, 347V)
Best used in high light output areas such as high bay fixtures.
• Application: Warehouses, retail, manufacturing.

*GE 2004 – 2005 lamp testing at industry standard 850 rapid cycle testing
GE Edison Award of Merit and Award for Sustainable Design.
## UltraStart® System Information

### Ballast Description

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<tr>
<th>Lamps</th>
<th>PC 10 PK</th>
<th>Input Volts</th>
<th>Input Watts</th>
<th>Ballast Factor</th>
<th>Initial System Lumens</th>
<th>Lumens / Watt</th>
<th>Ballast Efficiency Factor (BEF)</th>
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*Power Factor > 98, THD < 10% (See application data sheet on GElighting.com for PF and THD with specific voltage and lamp applications) All UltraStart® Lamps have N-1 Lamp Rating Electrical Testing completed to ANSI requirements in open fixture at 25°C. GE UltraStart® Ballasts also operate F17T8, F17T8/WM, F25T8, F25T8/WM and F40T8 lamps.

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**Information provided is subject to change without notice. Please verify all details with GE. All values are d sign or typical values when measured under laboratory conditions, and GE makes no warranty or guarantee, express or implied, that such performance will be obtained under end-use conditions.**

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**Transforming the POWER of Light™**

[GE National Customer Service Center: 1-888-GE-BALLAST (432-2552)]

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