# Ordering Guide and System Wattage

| 10 Pack Code | Pallet Code | Description | Input Voltage | Starting Method | Switch Method | Ballast Factor | # Lamps |
|---|---|---|---|---|---|---|---|
| 71497 | 71502 | GE632MAX90-S60 | 120-277 | Instant Start | Bi-Level 100% to 60% | 1.18 - .71 | 6 or 5 |
| 71731 | 71732 | GE632MAX90-V60 | 120-277 | Instant Start | Variable 0-10V 100 to 60% | 1.18 - .71 | 6 or 5 |
| 73229 | | GE432MAX90-S60 | 120-277 | Instant Start | Bi-Level 100% to 60% | 1.18 - .71 | 4 |
| 73230 | | GE432MAX90-V60 | 120-277 | Instant Start | Variable 0-10V 100 to 60% | 1.18 - .71 | 4 |
| 73231 | | GE332MAX90-S60 | 120-277 | Instant Start | Bi-Level 100% to 60% | 1.18 - .71 | 3 |
| 73232 | | GE332MAX90-V60 | 120-277 | Instant Start | Variable 0-10V 100 to 60% | 1.18 - .71 | 3 |
| 73233 | | GE232MAX90-S60 | 120-277 | Instant Start | Bi-Level 100% to 60% | 1.18 - .71 | 2 or 1 |
| 73234 | | GE232MAX90-V60 | 120-277 | Instant Start | Variable 0-10V 100 to 60% | 1.18 - .71 | 2 or 1 |

| | # of Lamps | 2 | 3 | 4 | 6 | |
|---|---|---|---|---|---|---|
| F32T8HL | 3100 | 2H | 3H | 4H | 6H | BF |
| | System Watts | 74 | 110 | 146 | 215 | |
| | System Lumens | 7316 | 10974 | 14632 | 21948 | |
| 100% | Lumens per Watt | 99 | 100 | 100 | 102 | 1.18 |
| | Watts per sq. ft. | 0.7 | 1.1 | 1.5 | 2.2 | |
| | Est Avg Foot Candles | 53 | 79 | 105 | 158 | |
| | System Watts | 59 | 88 | 117 | 172 | |
| | System Lumens | 5828 | 8742 | 11656 | 17484 | |
| 80% | Lumens per Watt | 98 | 99 | 100 | 102 | 0.94 |
| | Watts per sq. ft. | 0.6 | 0.9 | 1.2 | 1.7 | |
| | Est Avg Foot Candles | 42 | 63 | 84 | 126 | |
| | System Watts | 43 | 66 | 88 | 129 | |
| | System Lumens | 4402 | 6603 | 8804 | 13206 | |
| 60% | Lumens per Watt | 102 | 100 | 101 | 102 | 0.71 |
| | Watts per sq. ft. | 0.4 | 0.7 | 0.9 | 1.3 | |
| | Est Avg Foot Candles | 32 | 48 | 63 | 95 | |

| | # of Lamps | 2 | 3 | 4 | 6 | |
|---|---|---|---|---|---|---|
| F28T8 | 2750 | 2H | 3H | 4H | 6H | BF |
| | System Watts | 63 | 93 | 125 | 188 | |
| | System Lumens | 6490 | 9735 | 12980 | 19470 | |
| 100% | Lumens per Watt | 103 | 105 | 104 | 104 | 1.18 |
| | Watts per sq. ft. | 0.6 | 0.9 | 1.3 | 1.9 | |
| | Est Avg Foot Candles | 47 | 70 | 93 | 140 | |
| | System Watts | 50 | 74 | 100 | 150 | |
| | System Lumens | 5170 | 7755 | 10340 | 15510 | |
| 80% | Lumens per Watt | 103 | 104 | 103 | 103 | 0.94 |
| | Watts per sq. ft. | 0.5 | 0.7 | 1.0 | 1.5 | |
| | Est Avg Foot Candles | 37 | 56 | 74 | 112 | |
| | System Watts | 43 | 65 | 78 | 113 | |
| | System Lumens | 4290 | 6353 | 8140 | 11715 | |
| 60% | Lumens per Watt | 100 | 98 | 104 | 104 | 0.71 |
| | Watts per sq. ft. | 0.4 | 0.7 | 0.8 | 1.1 | |
| | Est Avg Foot Candles | 28 | 42 | 56 | 84 | |

| | F32/WM 2850 | 2H | 3H | 4H | 6H | BF |
|---|---|---|---|---|---|---|
| | System Watts | 68 | 101 | 133 | 202 | |
| | System Lumens | 6726 | 10089 | 13452 | 20178 | |
| 100% | Lumens per Watt | 99 | 100 | 101 | 100 | 1.18 |
| | Watts per sq. ft. | 0.7 | 1.0 | 1.3 | 2.0 | |
| | Est Avg Foot Candles | 48 | 73 | 97 | 145 | |
| | System Watts | 54 | 81 | 106 | 162 | |
| | System Lumens | 5358 | 8037 | 10716 | 16074 | |
| 80% | Lumens per Watt | 98 | 99 | 101 | 99 | 0.94 |
| | Watts per sq. ft. | 0.5 | 0.8 | 1.1 | 1.6 | |
| | Est Avg Foot Candles | 39 | 58 | 77 | 116 | |
| | System Watts | 43 | 62 | 83 | 121 | |
| | System Lumens | 4047 | 6071 | 8094 | 12141 | |
| 60% | Lumens per Watt | 94 | 98 | 98 | 100 | 0.71 |
| | Watts per sq. ft. | 0.4 | 0.6 | 0.8 | 1.2 | |
| | Est Avg Foot Candles | 29 | 44 | 58 | 87 | |

| | F32T8/25' 2400 | 2H | 3H | 4H | 6H | BF |
|---|---|---|---|---|---|---|
| | System Watts | 57 | 89 | 114 | 174 | |
| | System Lumens | 5664 | 8496 | 11328 | 16992 | |
| 100% | Lumens per Watt | 99 | 95 | 99 | 98 | 1.18 |
| | Watts per sq. ft. | 0.6 | 0.9 | 1.1 | 1.7 | |
| | Est Avg Foot Candles | 41 | 61 | 82 | 122 | |
| | System Watts | 46 | 71 | 91 | 139 | |
| | System Lumens | 4512 | 6768 | 9024 | 13536 | |
| 80% | Lumens per Watt | 99 | 95 | 99 | 97 | 0.94 |
| | Watts per sq. ft. | 0.5 | 0.7 | 0.9 | 1.4 | |
| | Est Avg Foot Candles | 32 | 49 | 65 | 97 | |
| | System Watts | 43 | 66 | 75 | 104 | |
| | System Lumens | 3744 | 5760 | 7200 | 10224 | |
| 60% | Lumens per Watt | 87 | 87 | 96 | 98 | 0.71 |
| | Watts per sq. ft. | 0.4 | 0.7 | 0.8 | 1.0 | |
| | Est Avg Foot Candles | 25 | 37 | 49 | 74 | |

**Assumptions:**

| | |
|---|---|
| # of fixtures | 100 |
| Area to be lit (sq ft) | 10000 |
| Coefficient of Utilization | 72% |
| Est. Fixture Spacing (ft) | 10.0 |
| Deep-cell Parabolic Louver | |

**Physical Parameters**

| (2, 3, 4 Lamp Ballasts) | | (6 lamp ballast) | |
|---|---|---|---|
| Mount Length: | 9.50 in. | Mount Length: | 11.14 in. |
| Width: | 1.70 in. | Width: | 1.70 in. |
| Height: | 1.20 in. | Height: | 1.20 in. |
| Weight: | 1.4 lbs. | Weight: | 1.8 lbs. |

The above data are estimates based upon the time of this literature. Data may vary as the products are introduced. The above values are based upon the assumptions listed.

The analysis does not in any way constitute or imply either a warranty of lamp or ballast performance or a guarantee of the actual costs or savings that will be realized or the appropriateness of the solutions suggested.

*Transforming the **POWER** of Light™*

GE National Customer Service Center
1-888-GEBALLAST (432-2552)

For product specifications and application information, please consult GE's Website:
www.gelighting.com

Information provided is subject to change without notice. Please verify all details with GE. All values are design 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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GE Consumer & Industrial
**Lighting**

ecomagination℠

# UltraMax® Dimming

## Bi-Level Dimming & Load Shed 0-10V Dimming Instant Start Ballasts

ULTRAMAX® BI-LEVEL DIMMING T8
*High Efficiency Electronic Ballast*

ULTRAMAX™ LOAD SHED 0-10V DIMMING T8
*High Efficiency Electronic Ballast*

**Breakthrough Technology That Offers the Highest Efficiency Ballast While Providing Dimming Capability for an Additional 40% Energy Savings**

Now Available
UltraMax® Dimming
2H, 3H, 4H
S60 & V60 Ballasts

imagination at work

*Transforming the **POWER** of Light™*

ULTRAMAX® BI-LEVEL DIMMING T8
*High Efficiency Electronic Ballast*

# GE revolutionizes lighting again with the new UltraMax® Dimming

In the GE labs, our engineers have developed ballasts that are the highest efficiency, lowest watts and allow various light levels without sacrificing efficiency during dimming.

**MAX 90**

Multi-Voltage Control | Arc-Guard Protection | Xtreme Efficiency | High Temp Application

The innovative, patented technology in our Platinum UltraMax® electronic ballasts allow more flexibility in lighting design then ever before at an affordable price well below conventional dimming ballasts.

## Multi-Voltage technology means a single UltraMax® model handles voltage from 120 through 277

UltraMax® Ballasts can virtually "read" the incoming voltage and adapt automatically to any voltage from 108V to 305V. The benefits of Multi-Voltage Control (MVC) are obvious.

120 277volts MVC
*Multi-Voltage Control*

## "Tunable" ballast factor (light level)

The most versatile line of ballasts available. With just four ballasts you can design your lighting system to operate one through six of the F32T8 family of lamps including the GE Ultra energy saving lamps, select a light level between ~3400 to 22,000 lumens with a system wattage ranging between 34 to 215 watts without sacrificing system efficiency. Design your lighting system to "tune" the light level to the ambient light or scenes desired while saving up to 40% by dimming!

## GE's UltraMax® line is the only full line of T8 ballasts with a UL Type CC Anti-Arc Rating

UL Type CC Rating is a stringent designation for protection against arcing in electrical devices. GE's Arc-Guard design eliminates the damaging effects arcing can have on lamps, ballasts and sockets.

## High efficiency delivers over 40% energy savings.

NEMA Premium®

All UltraMax® ballasts exceed the NEMA Premium® minimum efficiency requirements. The Platinum UltraMax® 6H ballast establishes a new energy efficiency threshold at 95% ballast efficiency! Systems combining UltraMax® electronic ballasts and T8 energy saving lamps deliver over 40% energy savings over standard T12 systems. Where and when light can be lowered reduce your energy costs by an additional 40% for a possible 80% total reduction over standard T12 systems.

## -20F Minimum Starting Temperature.

Cold temperature starting performance with standard T8 lamps. Ultra Cool™

## UL 55C Ambient Rating.

GE's UltraMax®'s patented high temperature protection circuit ensures ballasts run cool in high temperatures. UltraMax® is one of the only electronic T8 ballasts that pass UL's stringent high temperature testing requirements for safe operation up to 55C ambient environments.

## Anti-Striation Control for better light quality, with no striations.

UltraMax®'s patented Anti-Striation Control circuit eliminates lamp striations, often referred to as spiraling or racoon tailing. This provides a flicker- and worry-free environment.

## A big idea in a small package.

The Platinum UltraMax® 2H, 3H and 4H ballast has a small, low profile 9.5 x 1.7 x 1.2" housing. The 6H makes T8 highbay assembly faster and easier with just one ballast in an amazing 11.14 x 1.7 x 1.2" housing. That means fixture designs can be more compact and streamlined.

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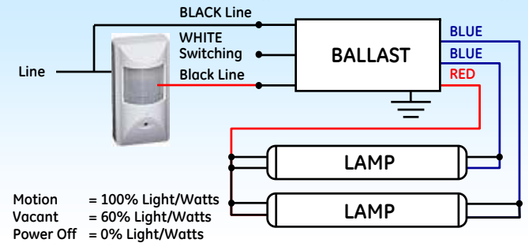
ULTRAMAX® BI-LEVEL DIMMING T8
*High Efficiency Electronic Ballast*

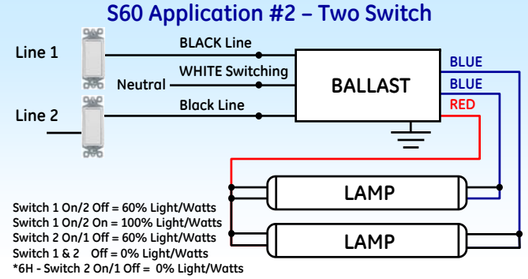
## Line Voltage Dimming

### S60 Application #1 – High Low Sensor Switching



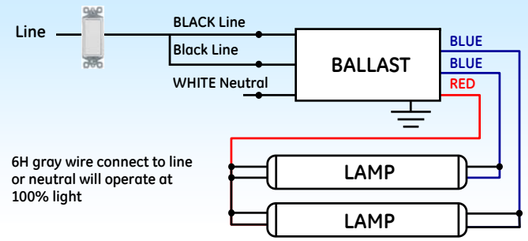

Motion = 100% Light/Watts
Vacant = 60% Light/Watts
Power Off = 0% Light/Watts
*Switch many fixtures with one occupancy sensor

### S60 Application #2 – Two Switch



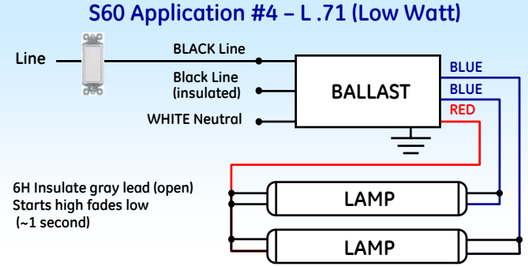

Switch 1 On/2 Off = 60% Light/Watts
Switch 1 On/2 On = 100% Light/Watts
Switch 2 On/1 Off = 60% Light/Watts
Switch 1 & 2 Off = 0% Light/Watts
*6H - Switch 2 On/1 Off = 0% Light/Watts

### S60 Application #3 – H 1.18 (High Light)




6H gray wire connect to line or neutral will operate at 100% light

### S60 Application #4 – L .71 (Low Watt)

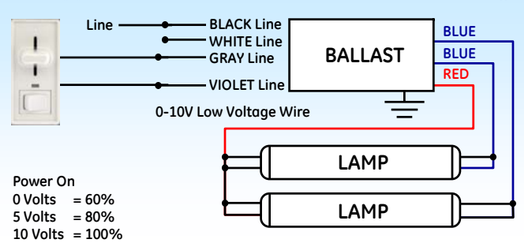



6H Insulate gray lead (open)
Starts high fades low
(~1 second)

ULTRAMAX™ LOAD SHED 0-10V DIMMING T8
*High Efficiency Electronic Ballast*

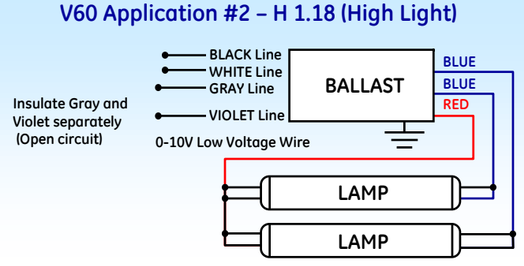
## 0-10V Low Voltage Dimming

### V60 Application #1 – Variable Load Shed Dimming



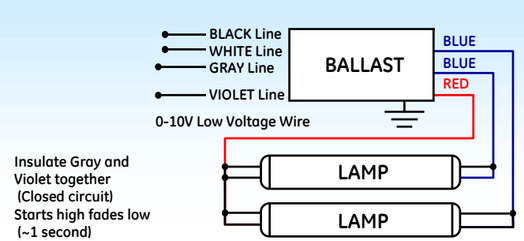

Power On
0 Volts = 60%
5 Volts = 80%
10 Volts = 100%
Variable dimming 60-100%

### V60 Application #2 – H 1.18 (High Light)




Insulate Gray and Violet separately (Open circuit)

### V60 Application #3 – H .71 (Low Watt)




Insulate Gray and Violet together (Closed circuit)
Starts high fades low (~1 second)

### Safety & Performance

- No PCBs
- RoHS Complaint
- FCC Class A
- UL Listed
  - -UL 55C Ambient Rating
  - -Type 1 Outdoor
  - -Type CC
  - -Type HL (Hazardous Location)

### Application Information

- Minimum Starting Temp: -20°F, -18°C
- Anti-Striation Control
- Sound Rated A
- Remote Mounting: -18' maximum length, -18 AWG
- High Frequency Lamp Operation: ~ 68 kHz

UltraMax® Dimming are instant start ballasts and are limited to approximately 5 on/off cycles per day to avoid significantly shortening lamp life. It is not recommended to use sensors to control ballast on/off cycles and doing so may void lamp warranty. However sensors may be used on the high low switching wire and gray/violet input of the ballast with the sensor setting recommended no less than 5 minutes per cycle without sacrificing lamp life.