Ballast Guide

The following pages include technical information for each standard ballast to help you quickly choose a ballast.

Vode T5 Fluorescent products accommodate many different ballast types, i.e. instant start, programmed-start, dimming, emergency.

New ballasts continually become available to the market. If you want a specific ballast or have specific requirements, please contact Vode or your Vode agent.

Non-dimming Ballasts

Depending on availability of the products listed below, Vode may supply other manufacturers ballast that meet the same or similar specification.

Programmed Start, Non-dimming

Spec Code:	**A**
Dimming Control:	Non-dimming.
Dimming Range:	Non-dimming.
Dimming Type:	Non-dimming.
Lamp Wattage (HE):	14W, 21W, 28W, 35W.
Lamp Wattage (HO):	24W, 39W, 54W, 80W.
Input Voltage:	120V-277V, 50/60 Hz.
Remote Distance:	Up to 18’ (5486mm) from furthest socket.
Type:	High power factor, thermally protected Class P, sound rated A.

Note: This ballast is normally used with integral ballast housing or remote ballast housing. This ballast is not compatible with ballast in Vode jbox (JR & JS). Ballast factor 1.0. Contact Vode for other ballast factors available.

To ensure full-rated lamp life, programmed rapid start design preheats lamp cathodes for approximately 1.2 seconds before applying full arc voltage. Ideal for system designs with occupancy sensor and/or other controls where lamp may cycle more than 15K times over the rated lamp life.

Instant Start, Non-dimming

Spec Code:	**I**
Dimming Control:	Non-dimming.
Dimming Range:	Non-dimming.
Dimming Type:	Non-dimming.
Lamp Wattage (HE):	14W, 21W, 28W, 35W.
Lamp Wattage (HO):	24W, 39W, 54W, 80W.
Input Voltage:	120V-277V, 50/60 Hz.
Remote Distance:	Up to 3’ (914mm)
Type:	High power factor, thermally protected Class P, sound rated A.

Note: This ballast is normally used with ballast in Vode jbox (JR & JS). However, depending on lamp wattage, it can be used with integral ballast housing. Ballast factor 1.0 only.

Instant-start technology applies full-arc voltage instantly, immediately striking lamp. This ballast is not recommended in applications with more than 15K starts over the rated lamp life.

Dimming Ballasts

Depending on availability of the products listed below, Vode may supply other manufacturers ballast that meet the same or similar specification.

Lutron Hi-lume® 3D, 1%

Spec Code:	**H**
Dimming Control:	Hi-Lume, Ecosystem.
Dimming Range:	100% to 1%.
Dimming Type:	Digital and 3-wire control.
Lamp Wattage (HE):	14W, 21W, 28W.
Lamp Wattage (HO):	24W, 39W, 54W.
Input Voltage:	120-277V, 50/60 Hz.
Remote Distance:	Up to 7' (2134mm) from furthest socket.
Type:	High power factor, thermally protected Class P, sound rated A.

Note: This ballast is normally used with integral ballast housing or remote ballast housing. This ballast is not compatible with ballast in Vode jbox (JR & JS). Ballast factor 1.0. Contact Vode for other ballast factors available.

100% compatible with all Lutron 3-wire fluorescent controls (neutral, switched hot, dimmed hot) and EcoSystem digital controls (neutral, constant hot, control E1, control E2) such as EcoSystem® Bus Supply, GRAFIK Eye® QS control unit and Quantum® software. Ballast factor 1.0. Contact Vode for other ballast factors available.

Lutron H-Series®, 1% dimming

Spec Code:	**J**
Dimming Control:	Ecosystem.
Dimming Range:	100% to 1%.
Dimming Type:	Digital.
Lamp Wattage (HE):	14W, 21W, 28W.
Lamp Wattage (HO):	24W, 39W, 54W.
Input Voltage:	120-277V, 50/60 Hz.
Remote Distance:	Up to 7' (2134mm) from furthest socket.
Type:	High power factor, thermally protected Class P, sound rated A.

Note: This ballast is normally used with integral ballast housing or remote ballast housing. This ballast is not compatible with ballast in Vode jbox (JR & JS). Ballast factor 1.0. Contact Vode for other ballast factors available.

100% compatible with EcoSystem digital controls (neutral, constant hot, control E1, control E2) such as Lutron Energi Savr Node(TM) with EcoSystem unit, GRAFIK Eye® QS control unit, PowPak(TM) dimming module with EcoSystem unit, and Quantum® software.

Lutron EcoSystem®, 10% dimming

Spec Code:	**E**
Dimming Control:	3-wire, Ecosystem.
Dimming Range:	100% to 10%.
Dimming Type:	Digital and 3-wire control.
Lamp Wattage (HE):	14W, 21W, 28W, 35W.
Lamp Wattage (HO):	24W, 39W, 54W.
Input Voltage:	120-277V, 50/60 Hz.
Remote Distance:	Up to 7' (2134mm) from furthest socket.
Type:	High power factor, thermally protected Class P, sound rated A.

Note: This ballast is normally used with integral ballast housing or remote ballast housing. This ballast is not compatible with ballast in Vode jbox (JR & JS). Ballast factor 1.0. Contact Vode for other ballast factors available.

100% compatible with all Lutron 3-wire fluorescent controls (neutral, switched hot, dimmed hot) and EcoSystem digital controls (neutral, constant hot, control E1, control E2) such as EcoSystem® Bus Supply, GRAFIK Eye® QS control unit and Quantum® software.

Provides power for and responds to one occupancy sensor, one photo sensor, and one personal control input (infrared receiver or wallstation). Integral sensor connection provides power and signal input for one occupancy sensor, one photo sensor, and one personal control (infrared receiver or wallstation). Communicates status and sensor inputs over the EcoSystem digital link.

DALI, 1% dimming

Spec Code:	**D**
Dimming Control:	Digital Addressable Lighting Interface (DALI).
Dimming Range:	100% to 1%.
Dimming Type:	Digital.
Lamp Wattage (HE):	14W, 28W, 35W.
Lamp Wattage (HO):	54W.
Input Voltage:	120-277V, 50/60Hz (347V not available).
Remote Distance:	This ballast is available only with integral ballast with 1.25" (32mm) arm.
Type:	High power factor, thermally protected Class P, sound rated A.

Note: This ballast is only used with integral ballast housing with 1.25" arm. This ballast is not compatible with ballast in Vode jbox (JR & JS). Compatible with most DALI control systems. Always check with Vode and controls manufacturer to ensure compatibility with this ballast.

Dimming Ballasts (cont.)

Depending on availability of the products listed below, Vode may supply other manufacturers ballast that meet the same or similar specification.

0-10V, 1% Dimming (for HE lamps)

Spec Code:	**F**
Dimming Control:	0-10V.
Dimming Range:	100% to 3%.
Dimming Type:	Analog.
Lamp Wattage:	14W, 21W, 28W, 35W.
Input Voltage:	120-277V, 50/60Hz.
Remote Distance:	Up to 6' (1829mm) from furthest socket.
Type:	High power factor, thermally protected Class P, sound rated A.

Note: This ballast is normally used with integral ballast housing or remote ballast housing. This ballast is not compatible with ballast in Vode jbox (JR & JS). Compatible with most 0-10v DC control systems. Always check with Vode and controls manufacturer to ensure compatibility with this ballast.

0-10V, 1% Dimming (for HO lamps)

Spec Code:	**F**
Dimming Control:	0-10V.
Dimming Range:	100% to 1%.
Dimming Type:	Analog.
Lamp Wattage (HO):	54W.
Input Voltage:	120-277V, 50/60Hz.
Remote Distance:	This ballast is available only with integral ballast with 1.25" (32mm) arm.
Type:	High power factor, thermally protected Class P, sound rated A.

Note: This ballast is only used with integral ballast housing with 1.25" arm. This ballast is not compatible with ballast in Vode jbox (JR & JS). Compatible with most 0-10v DC control systems. Always check with Vode and controls manufacturer to ensure compatibility with this ballast.

Additional Information

Warranty

Ballasts and other auxiliary equipment are not covered under Vode warranty but may be covered by separate OEM warranty.
See full Vode warranty description here.

Electrical *90° C Wire required for supply connection to ballast or Vode power harness. Check local codes for maximum load allowed per circuit. All ballasts are provided with NEC compliant luminaire disconnect.*

Lamp Life *Lamp life of fluorescent lamps is defined as the time for which the lamp can operate within its performance specification, i.e. produce the specified light output and strike within specification. Dimming fluorescent lamps without seasoning can reduce performance and lamp lifetime.*

Lamp Seasoning *Some fluorescent lamp manufacturers recommend that new fluorescent lamps be operated at full output ("seasoned") before they can be dimmed. Please contact your lamp manu¬facturer for seasoning requirements.*

Prewiring *Multi-rail, integral ballast systems delivered with factory-installed wiring harnesses and quick-connects. Vode wiring harnesses are supplied with #12 AWG type THHN wire for branch circuits. For luminaires to accommodate special circuits such as emergency, daylight sensors, etc. in-field wiring is required.*

Voltage *Specify voltage required. Most ballasts are universal voltage 120-277v. 347v is available for Canada. If voltage is not specified, 120v or 120-277v ballast will be supplied. Europe, Middle-East and Asia compatible voltages available. Contact factory or your local Vode agent.*

Emergency Ballast *Emergency Ballasts allow fixtures to operate in battery mode during a power outage. Standard Vode Emergency ballasts provide reduced lumen output to one lamp for a minimum of 90 minutes and operates at 120V to 277V.*

Emergency Ballast Initial Lumen Output

High Output (HO) Lamps	*High Efficiency (HE) Lamps*
*2' 24W T5 - 700**	*2' 14W T5 - 700**
*3' 39W T5 - 1100**	*3' 21W T5 - 850**
4' 54W T5 - 1300	*4' 28W T5 - 1200*
5' 80W T5 - n/a	*5' 35W T5 - 1300*

**Available with remote ballast housing only.*

Why keep the lamps at full intensity before dimming?

New fluorescent lamps can have impurities in them that lamp manufacturers cannot eliminate completely. Properly seasoning lamps prior to dimming will render lamp impurities inert, ensuring proper dimming performance and average rated lamp life.

Ways to Obtain Seasoned Lamps:
- *Operate new lamps continuously for time period recommended by the lamp manufacturer.*
- *Remove lamps with over 100 hours of use from another (non-dimmed) area; re-install in dimming area.*
- *Many contractors and facilities personnel use a lamp burn-in station to build an inventory of properly seasoned lamps.*

Contact the lamp manufacturer for their recommendations on lamp seasoning. As a general guideline, NEMA recommends 12 hours of operation at full intensity before dimming. See NEMA LSD 23-2010 "Recommended Practice - Lamp Seasoning for Fluorescent Dimming Systems."