

High Efficiency T5

T5 Ballasts for Today's High Efficiency Lighting Fixtures

BallaSTAR[®]

AccuStart[®]
A Triad[®] Brand

- Light-Level Switching Options
- Ballast Factor Choices

Universal's new line of T5 ballasts provides the highest efficiency available for today's new T5 lighting fixtures. With two ballast factors (.95 & 1.15) to choose from and fixed light output and light-level switching models available, lighting design flexibility is maximized.

Universal's new high efficiency AccuStart5 products incorporate all the features from our traditional T5 product line with the advantage of being 8% more efficient, resulting in additional energy savings with T5 systems. AccuStart5 ballasts feature Programmed Rapid Starting for long lamp life, especially when used with occupancy sensors. Universal input voltage and safe end-of-lamp life shutdown circuits make these products ideal for new installations.

The T5 Ballastar models incorporate switching for multi-level lighting control. With standard wall switches, Ballastar ballasts switch between 100% and 50% power levels for maximum energy savings. This keeps even illumination in the fixture instead of the dark spots associated with in-board/outboard switching, and it allows for easy compliance with today's latest energy code requirements for multi-level control.

Highest
Efficiency
Available



Features & Benefits

- **Most Efficient T5 Ballasts Available**
- **8% Improved Efficiency over Standard T5 Ballasts**
 - Lowers lighting operation costs
 - System efficiencies improve even further with new T5 lamp technologies, over 100 Initial Lumens per Watt
 - Ideal for use for compliance with ASHRAE, IECC and Title 24 energy codes
- **Light-Level Switching Options**
 - Simple switching from 100% to 50% power levels
 - Maintains even fixture illumination
 - Meets Energy Code switching requirements
- **Two Ballast Factor options: .95 & 1.15**
 - Offers flexibility for lighting designers
- **Programmed Rapid Start Technology**
 - Maintains lamp life in frequently switched applications
 - Ideal for use with occupancy sensors
- **Low Profile Case**
 - Maximizes fixture design flexibility
- **Universal Input Voltage**
- **THD <10%**
- **Type CC**

 **Universal**[™]
Lighting Technologies

High Efficiency T5 Application and Performance Specifications



Fixed Light Output

Part Number	Input Voltage	Input Power	Input Current	Ballast Factor
B228PUNV95-D	120	58	0.50	0.95
	277	57	0.21	0.95
B228PUNV115-D	120	69	0.59	1.15
	277	68	0.25	1.15



With excellent efficiency and optics, T5 usage is expanding to traditional T8 & T12 applications.



Light-Level Switching

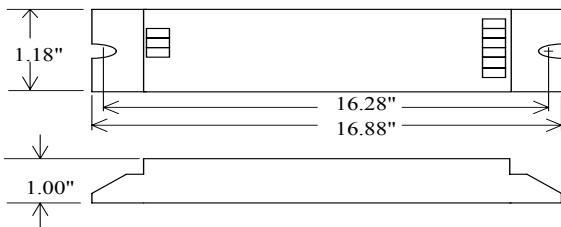
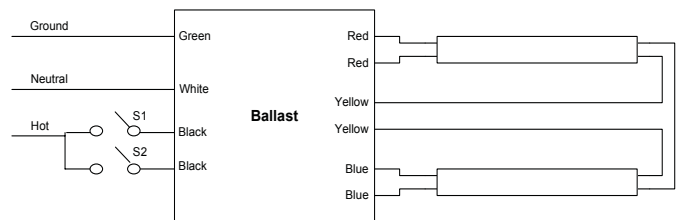
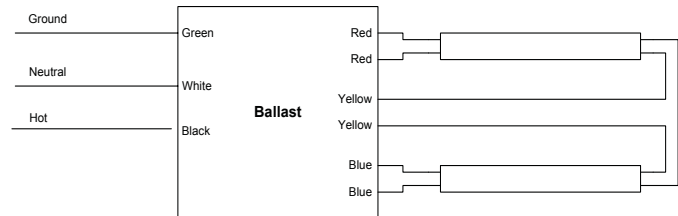
Part Number	Input Voltage	Power Level	Input Power	Input Current	Ballast Factor
B228PU95S50D	120	100%	58	0.50	0.95
	120	50%	28	0.23	0.35
	277	100%	57	0.21	0.95
	277	50%	28	0.10	0.35
B228PU115S50D	120	100%	69	0.59	1.15
	120	50%	34	0.29	0.48
	277	100%	68	0.25	1.15
	277	50%	34	0.12	0.48

*Data for (2) F28T5 Lamps

Additional Specifications

- Minimum Starting:
 - 0°F, -18°C for AccuStart5 Models
 - 50°F, 10°C for Ballastar Models
- THD < 10% at full power
- Power Factor > .98 at full power
- UL & CSA Listed, Type CC
- Series Lamp Operation
- Lamp Current Crest Factor < 1.7
- End-of-Lamp Life Shutdown Circuitry
- Lamp Current Frequency > 40KHz

Wiring Diagrams



Switching Control

S1	S2	Power Level
Open	Open	0%
Open	Close	50%
Close	Open	50%
Close	Close	100%

Note: AC must be connected to the same phase & circuit.

