

Product Differentiator T8 Ballast-Compatible Tube Lamps

Differentiator	Pure Bright Lighting	Benefit
UL Rating	UL Listed	The "UL Listed" certification is the highest rating for Underwriters Laboratory (UL) with respect to safety and performance. This rating means that that T8 lamps can be field-replaced in a fixture without affecting the overall UL rating of the fixture. Also, electricians are not needed for replacement. By comparison, a lamp with a "UL Classified" rating requires electricians to perform the replacements anywhere existing ballasts are not included on UL-approved installation instructions list. The UL Listed rating can be verified by accessing the Online Certifications Directory on the UL website (www.ul.com).
UL Fire Rating	UL 94 V-0	The UL 94 rating assures that products meet fire code standards for safety of flammability of building materials. This standard specifies hourly fire resistance, flame spread and smoke development ratings that are intended to optimize an occupant's ability to safely evacuate a building under emergency conditions. There are only 3 suppliers in the world that offer plastic and fire retardant components that can meet the rating. PBL uses plastics supplied by Trinseo (www.trinseo.com) due to its superior optical quality. A manufacturer's compliance to the standard can be confirmed by contacting one of the three suppliers to determine whether approved materials have been purchased by a manufacturer.
DLC Qualification	DLC Qualified	The DLC qualification process requires submitted products to meet stringent technical requirements verified by approved test labs to better ensure high-performing, energy-efficient commercial lighting solutions.
Light Output	1,925 Lumens	Light output should be comparable to that of typical fluorescent lamps being replaced. The design of the LED arrays and plastics used ensure an even light distribution where the LED point-sources of light are indistinguisable, as it not always the case with all manufactuer lamp designs.
Light Distribution	Illuminaton Angle - 320° Down Flux - 78.30% Up Flux - 21.71%	Provides a uniform light distribution that closely compares to that of linear fluorescent lamps. Some manufacturers have limited light distribution patterns which tend to focus more light directly under the lamp, thus potentially not meeting the original design intent for illuminated building spaces.
Color Temperature	3000K (Warm White) 4000K (Neutral White) 5000K (Daylight)	A wide selection of color temperatures offer lighting quality solutions for nearly every indoor and outdoor commercial project application.
Temperature Rise	44°F	UL allows maximum temperature rise of 54°F. Lower temperature operation results in less stress on components increasing reliability, provides greater optical design flexibility through smaller heat sinks, and minimizes lighting heat gain in building spaces making HVAC system cooling process more efficient.
Input Voltage	100 to 347VAC	The full range of voltage ratings is suitable for installations in the United States, Canada, European Union and Middle Eastern Counties.
Input Power	16.6W @ 1.00BF 14.6W @ 0.88BF 13.0W @ 0.78BF (4-Ft Lamps Rated for 32W)	Lower wattage usage provides greater energy efficiency. Be sure that replacement lamps are fully-rated to replace existing lamp wattage. For example, replacing 4-Foot 32W fluorescent lamps with 4-Foot 25W rated LED lamps can cause potential occupant safety risk.
Efficacy	115.85 LPW @ Fixture Level	Higher Efficacy (i.e, light output per power required to operate) offers better energy efficiency and greater flexibility in meeting minimum energy code requirements.
Ballast Compatibility	Instant Start Rapid Start Program Start (Over 850 Ballasts Tested)	Greater number of tested and compatable ballasts offer a wider scope of retrofit opportunities and reduce in- field installation issues caused by products accepting fewer compatable ballasts.
Dimming Compatibility	Triac 0-10 VDC Pulse Width Modulation	Compatability with various dimming protocols allow foir maximum flexibility in employing control-friendly strategies, such as daylight harversting, occupancy-sensing, etc.
Lamp Life	50,000+ Hours	Extended lamp life reduces maintenenace costs associated with replacement of burned out lamps and ballasts.
Product Testing	5+ years of testing in harsh conditions without failure (BP Oil Tankers)	The harshness and longevity of testing better ensure product reliability.
Location Rating	Dry Damp	The dual location rating allows for use in all indoor and many outdoor locations.
TAA Compliant Manufacturing	Manufacturered at the Fujitzu Factory in Taiwan	The Trade Agreements Act (TAA) designated countries listing ensures that compliant products are manufactured in trade-friendly countries and with potentially higher standards of quality than countries not on the list.
Patents	Multiple United States and European Patents (Generations Ahead)	Patent content and generation help distinguish the technologically-advanced manufacturers with respect to design, quality and performance from other manufacturers in the marketplace.
Warranty	5 years (No Operational Restrictions)	Warranties help demonstate manufacturer commitment to their products. Be sure warranties do not contain operational restrictions.