



FAQ ON OVERDRIVE LED T8 TUBE

Q 1. Will the LED T8 Tube work with Fluorescent T8 Tube if used in same fixture & if driven by same ballast?

Answer: Yes the OVERDRIVE LED T8 tube would function, if used together with FTL lamp on the same ballast. The OVERDRIVE LED T8 design has the same effective impedance as that of a 32W fluorescent lamp. The instant ballast supplies the same voltage and current to LED T8 as if T8-32W fluorescent lamp was connected to it. But is it not recommended to operate the two different lamp (LED +FTL) on one ballast.

Q 2. What happens to LED T8 Tube, when the instant start ballast fails to operate? Does the ballast require changing at that point?

Answer: The LED T8 Tube would not light up, as the instant start ballast works as a driver for the OVERDRIVE LED Tube and It would behave the same way as a normal Fluorescent T8 tube. The failed ballast would need to be replaced with Instant Start Electronic ballast.

Q 3. How does the OVERDRIVE LED T8 different then the other type of LED T8 tube available in market & why it does not require rewiring?

Answer: The purpose of designing this unique patented LED T8 was to make changeover easy for the end user and for safety. The OVERDRIVE LED T8 tube design is such that, it has same effective impedance as that of a 32W T8 fluorescent lamp. Instant Ballast supplies the required designed voltage plus current to work as the driver for the LED T8. The passive components of the OVERDRIVE LED T8 design uses the high frequency (45kHz) ballast output voltage and converts it to the required DC voltage to operate the lamp. This provides a simple and true retrofit for Fluorescent T8.



Q 4. How was the life of 50,000 hours on the OVRDERIVE LED T8 tube established?

Answer: The life span of 50,000 hours is determined using certified LM80 data of the LED and the TM-21 calculator. This calculator is based on the Illuminating Engineering Society's TM-21-11: Projecting Long Term Lumen Maintenance of LED Light Sources. It is the industry standard in determining life span of an LED lighting source. The procedure for determining the products L70, or when it reaches 70% of its light output, is to extrapolate the 6,000 hour data obtained in a certified LM80 and using the TM-21 calculator. The calculator uses complex algorithms to estimate the life span of the lighting source. At this time this is the only method available for determining the life time.

Q 5. What is the instant start ballast - ballast factor and does it affect the life of the OVERDRIVE LED Tube?

Answer: Ballast factor is the measured ability of particular ballast to produce light from the lamp it powers. The ballast factor itself is derived by dividing the lumen output of a particular lamp-ballast combination by the lumen output of the same lamp on reference ballast. So it means that ballast factor cannot be considered a factor to affect to LED lamp life. For example, $2800 \text{ lumens} \times 0.77 \text{ BF} = 2156 \text{ total system lumens}$.

Q 6. Is the OVERDRIVE LED T8 tube dimmable?

Answer: The instant Start Electronic Ballast works as the Driver for these OVERDRIVE LED T8 tube. The dimming performance of the LED Tube would depend on the dimming feature of the Instant ballast used. As per our information very few dimmable Instant Start Electronic ballasts are available. The lamp may be dimmed based on the availability of the dimming feature of the instant ballast.

Q 7. Any problems using OVERDRIVE LED T8 tube lamp on photocell circuits?

Answer: This is the function of Instant Start ballast. This lamp would behave the like FTL T8 only as the basic principle of working is that this is made of passive components and its impedance is matched to 32W T8 FTL.

Q 8. Can we use this OVERDRIVE LED T8 Tube on an instant start circuit if only one of the two lamps is changed?

Answer: It would work since the fundamental design concept of keeping the same impedance and electrical parameter for LED T8 tube and FTL T8 tube are quite similar which forms the basis of this innovation, however it is not recommended as lighting pattern and appearance would be not so good.

Q 9. Will the OVERDRIVE LED T8 work on program start or Rapid start ballast?

Answer: It would not work with program start and rapid start ballast. Electronic ballast such as program start or rapid is using low voltage to the electrodes, heating electrodes in 2 or 3 seconds. The LED T8 does not have electrodes (filaments) causing the ballast to not start the lamp.

Q 10. Will the peak high voltage generated by the Instant Start Electronic Ballast not damage the OVERDRIVE LED T8 tube? How is it protected?

Answer: Electronic instant ballast supplies high voltage over 400V(frequency of 20,000 Hz) to start the lamp. OVERDRIVE LED T8 tube uses all passive electronic components and has sufficient capacitive protection built in the electronics to absorb such initial high voltage.



Q 11. Does OVERDRIVE LED T8 tube has Energy Star & is it entitled to utility rebate?

Answer: Overdrive LED T8 tube is not Energy Star approved. At this time Energy Star is reserved for “screw in” products only. Until Energy Star adds additional lamp and fixtures styles to their listing DLC is used. DLC applies the same energy star standards to lighting products other than “screw in” products. Utilities use the DLC information to allow rebates for these products. OVERDRIVE LED T8 tubes are DLC listed and entitled for most of the Utility rebates in US.

Q 12. What is the PF (Power Factor) and THD (Total Harmonic Distortion) of the OVERDRIVE LED T8?

Answer: The PF and THD are same as that rated parameter of the Instant Start ballast. The Instant Start ballast typical PF is above 0.90 with THD of 10%. Since the Instant start ballast works as the driver, the total system PF and THD is same as the rated PF and THD of the Instant Ballast.

Q 13. What if this Overdrive LED T8 tube is used in T12 fixture with either electronic or magnetic ballast?

Answer: The lamp could fail or get damaged. But this does not offer potential fire or safety hazard since the lamp has built in relay fuse which would isolate the LED lamp from the power supply.

PS: Any more questions; please feel free to write to us at info@overdrive-lighting.com. We would do our best to answer them and include in our updated FAQ for use for all.