



# LED T8 Tubes

## Product Specifications

### Assembled in USA



TCP's LED T8 Tubes are an excellent solution for replacing 4' fluorescent lamps. Available in both Type A and Type B, these energy-efficient tubes are assembled in the USA.

## Reasons to choose LED T8 Tubes from TCP

- Over 50% energy savings compared to fluorescent alternatives
- Long life: 50,000 hours
- Assembled in USA
- Ballast compatible and bypass application constructions available
- Instant on/off
- Non-flickering
- Bypass construction: single/double ended
- Shunted or non-shunted sockets
- UL rated for enclosed fixtures and damp locations
- No energy loss due to fluorescent ballast
- Replaces 4' T8 Fluorescent lamps

## Ideal Applications

- Offices
- Restaurants
- Retail Stores
- Lobbies
- Schools
- Hospitals

## Specifications:

Base Types.....G13  
 Line Voltage..... 120-277V  
 Minimum Starting Temperature Range:.....-22°F / -30°C  
 Maximum Operating Temperature..... 113°F / 45°C  
 Safety ..... UL Classified and UL Component  
 Environment..... Damp/Dry Locations

Enclosed..... Suitable for enclosed luminaires  
 Rated Life..... L70 50,000+ hours  
 Beam Angle ..... 190°  
 Field Angle ..... 300°



## Specifications:

### Type A Plastic



### Listing



5 YEAR WARRANTY

### Type B All Glass

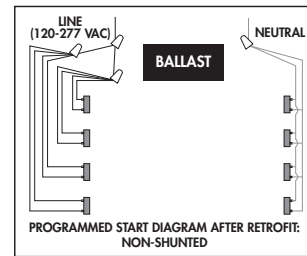
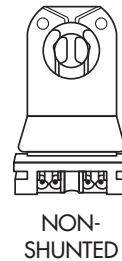
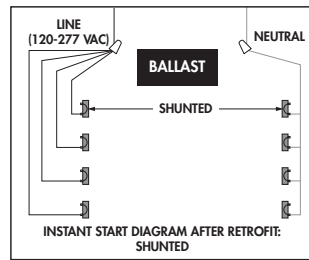
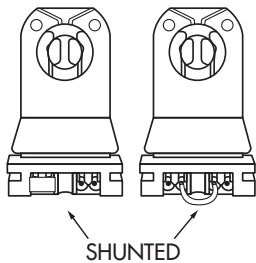


### Warranty

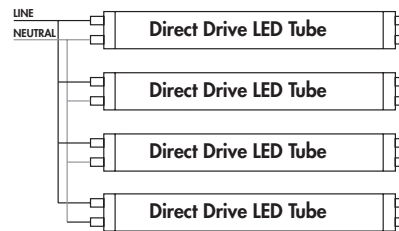
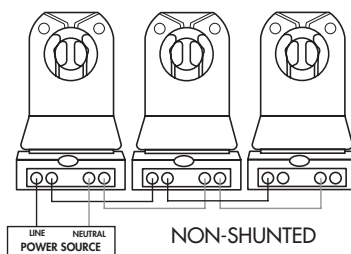
Five years against defects in manufacturing

## Type B Wiring Diagrams:

### Double Ended Wiring



### Single Ended Wiring



Complete instructions [tcp.com](http://tcp.com) / Business Resources / Business Resource Center

| Item#   | Description       | NBF System Wattage | Voltage  | Fluorescent Equivalency | Lumens | LPW | Base | CCT   | CRI | Master Pack |
|---|-------------------|--------------------|----------|-------------------------|--------|-----|------|-------|-----|-------------|
| <b>LED TYPE A TUBES</b>                                 |                   |                    |          |                         |        |     |      |       |     |             |
| <b>LED 15 WATT T8 TYPE A TUBE – 4 FOOT 50,000 HOURS</b> |                   |                    |          |                         |        |     |      |       |     |             |
| LPT815A41KUS  | LED 15W 4' T8 41K | 15                 | 120-277V | 32W                     | 1800   | 120 | G13  | 4100K | 80  | 25          |

See ballast compatibility list next page.  
Call for availability.

For the most up-to-date specs and warranty information, please visit [www.tcp.com](http://www.tcp.com)

### Instant Start Ballasts Compatible with LED DirecT8™

| Manufacturer         | Model #              | Voltage |
|----------------------|----------------------|---------|
| ESPEN                | VE2P32MVHIPE         | UNV     |
|                      | VE4P32MVHIPE         | UNV     |
| GE                   | GE132MAXL/ULTRA      | UNV     |
|                      | GE132MAXP-N/ULTRA    | UNV     |
|                      | GE232MAX347-N        | 347     |
|                      | GE232MAX-N/ULTRA     | UNV     |
|                      | GE232MAX-G-N         | UNV     |
|                      | GE232MAXP-N/ULTRA    | UNV     |
|                      | GE232MAXH/ULTRA      | UNV     |
|                      | GE232MAXP-H/ULTRA    | UNV     |
|                      | GE232MAXP-L/ULTRA    | UNV     |
|                      | GE332MAXL/ULTRA      | UNV     |
|                      | GE332MAX-N/ULTRA     | UNV     |
|                      | GE332MAXP-N/ULTRA    | UNV     |
|                      | GE332MAX-G-N         | UNV     |
|                      | GE332MAXH/ULTRA      | UNV     |
|                      | GE432MAXP-L/ULTRA    | UNV     |
|                      | GE432MAX-G-N         | UNV     |
|                      | GE432MAX-N/ULTRA     | UNV     |
|                      | GE432MAXH/ULTRA      | UNV     |
| GE432MAXP-H/ULTRA    | UNV                  |         |
| Osram/Sylvania       | QHE2X32T8/UNV ISN-SC | UNV     |
|                      | QHE2X32T8/UNV ISL-SC | UNV     |
|                      | QHE2X32T8/UNV ISH-SC | UNV     |
|                      | QHE2X32T8/347 ISN-SC | 347     |
|                      | QHE4X32T8/UNV ISN-SC | UNV     |
|                      | QHE4X32T8/UNV ISL-SC | UNV     |
|                      | QHE4X32T8/UNV ISH-SC | UNV     |
|                      | QHE4X32T8/UNV ISH    | UNV     |
|                      | QTP2X32T8/UNV ISN-SC | UNV     |
|                      | QTP3X32T8/UNV ISN-SC | UNV     |
|                      | QTP2X32T8/UNV ISL-SC | UNV     |
|                      | QTP3X32T8/UNV ISL-SC | UNV     |
|                      | QTP2X32T8/UNV ISH-SC | UNV     |
|                      | QTP3X32T8/UNV ISH-SC | UNV     |
| QTP4X32T8/UNV ISN-SC | UNV                  |         |
| Philips/Advance      | IOPA-2P32-LW-N       | UNV     |
|                      | IOPA-3P32-LW-N       | UNV     |
|                      | IOPA-4P32-LW-N       | UNV     |
|                      | IOPA-4P32-N          | UNV     |
|                      | IOPA-2P32-HL-N       | UNV     |
|                      | IOPA-3P32-HL-N       | UNV     |
|                      | IOPA-2P32-LW-SC      | UNV     |
|                      | IOPA-4P32-LW-SC      | UNV     |
|                      | IOP-2P32-LW-N        | UNV     |
|                      | IOP-3P32-LW-N        | UNV     |
|                      | IOP-4P32-LW-N        | UNV     |
| IOP-3P32-N           | UNV                  |         |

| Manufacturer               | Model #           | Voltage |
|----------------------------|-------------------|---------|
| Philips/Advance<br>(cont.) | ICN-1P32-N        | UNV     |
|                            | ICN-2P32-N        | UNV     |
|                            | ICN-3P32-N        | UNV     |
|                            | ICN-2P32-SC       | UNV     |
|                            | ICN-4P32-N        | UNV     |
|                            | GOPA-2P32-SC      | 347     |
|                            | GOPA-4P32-SC      | 347     |
|                            | REL-2P32-SC       | UNV     |
|                            | REL-2P32-RH-TP    | UNV     |
|                            | VEL-2P32-SC       | UNV     |
|                            | VEL-4P32-SC       | UNV     |
|                            | IOP-3P32HL-90L-SC | UNV     |
|                            | VOP-2P32-LW       | 277     |
|                            | GEL-2P32-SC       | 347     |
|                            | GEL-3P32-SC       | 347     |
|                            | IOPA-3P32-N       | UNV     |
|                            | IOPA-2P32-N       | UNV     |
|                            | ICN-3P32-SC       | UNV     |
|                            | GEL-3P32-RH-TP    | UNV     |
|                            | GOPA-2P32-N       | 347     |
| Standard                   | E432T8IS120/N/AS  | UNV     |
|                            | E232T8IS120/N/AS  | UNV     |
|                            | E432PI347G0/347   | 347     |
|                            | E232T8IS347/H/90C | 347     |
|                            | E432T8IS347/H/90C | 347     |
| TCP                        | E2P32ISUNVE       | UNV     |
|                            | E2P32ISUNVHE      | UNV     |
|                            | E2P32ISUNVLE      | UNV     |
|                            | E3P32ISUNVE       | UNV     |
|                            | E3P32ISUNVHE      | UNV     |
|                            | E3P32ISUNVLE      | UNV     |
|                            | E4P32ISUNVE       | UNV     |
|                            | E4P32ISUNVHE      | UNV     |
|                            | E4P32ISUNVLE      | UNV     |
|                            | E2P32IS120RES     | UNV     |
| Universal                  | B132IUNVHP-N      | UNV     |
|                            | B232IUNVHP-N      | UNV     |
|                            | B232IUNVELA rev D | UNV     |
|                            | B232I277RHA       | 277     |
|                            | B232IUNVHP-N      | UNV     |
|                            | B332IUNVHP-A      | UNV     |
|                            | B432I277RHA       | 277     |
|                            | B432I120RHA       | UNV     |
|                            | B232I120RHA*      | UNV     |
|                            | B432IUNVHP-A      | UNV     |
| B23IUNVHP-N01OC            | UNV               |         |
| B232IUNVELA                | UNV               |         |
| Keystone                   | KTEB-232-UVIS-NP  | UNV     |

\*Requires 5 minutes of warm up time

Instant Start Ballasts Not Recommended for use with LED DirecT8 include:  
Philips/Advance: IOP-3P32-LW-SC, IOP-2P32-LW-SC

Ballast compatibility tests are performed under a controlled lab environment. Field conditions may vary from this type of environment. Ballasts may differ by age and could have undergone revisions under the same item number affecting compatibility. Compatibility may also extend beyond this list. TCP recommends trying a few ballast-lamp combinations in an on-site test to ensure compatibility and performance before a major installation.

For the most up-to-date specs and warranty information, please visit [www.tcp.com](http://www.tcp.com)



# TECHNOLOGY CAST IN A BEAUTIFUL LIGHT

For over 20 years, TCP has been designing, developing and delivering energy-efficient lighting into the market. Thanks to our cutting-edge technology and manufacturing expertise, we have shipped billions of high quality lighting products. With TCP, you can count on a lighting product that is designed to meet the needs of the market - that transforms your surroundings and envelopes you in warmth - lighting that generates beauty with every flip of the switch.

Sales:

Date:

Model:

Project:

Rep:

Catalog Number:

Type:

Notes:



For more information on the quality and care TCP can deliver, call us at **800.324.1496** or visit [tcp.com](http://tcp.com)

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