

TCP TruDim Lamps

12,000 Hours average rated life, 120 V

TruDim™

Technology by TCP

Applications:

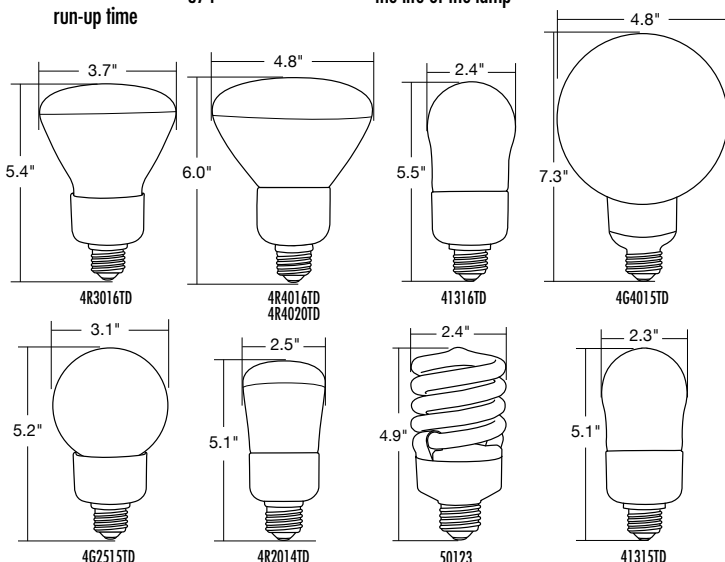
Perfect for most dimmable applications: Use where a standard incandescent is used.

- ✦ Table Lamps
- ✦ Chandeliers
- ✦ Wall Sconces
- ✦ Ceiling Fixtures
- ✦ Recessed Cans



Features and Benefits

- Multi-level adaptive circuitry provides stable linear dimming from 100 to 2%
- Features a dimming curve that closely matches the human eye response of incandescent dimming
- Overdrive technology provides faster run-up time
- Superior circuitry design controls low dim level starting capability
- Zero low end flicker
- Unique NanoTi pre-phosphor coating improves Lumen Maintenance over the life of the lamp



TCP reserves the right to void the warranty for any misapplication of these products.

Catalog Number

Notes

Type



Specifications (at full brightness)

End of Life Protection.....	Yes
Ballast type	Electronic
Starting method.....	Programmed Rapid Start
Voltage	120VAC
Frequency	50/60 HZ
CRI	82
FCC Compliance	47 CFR Part 18
Power Factor	> .70 at full power
Rated Life	12,000 Hours

Special Application Notes

- UL approved for wet location in base up position.
- 2 hour burn-in time at full power recommended.
- Covered and Reflectors UL approved for wet location base up position.
- 50123 approved for open recessed cans and enclosed non-recessed fixtures.

Suggested Dimmer:

Designed specifically for use with standard non-illuminated 600 watt incandescent slide or rotary dimmer. Consult TCP Technical Support or dimmer manufacturer for compatibility with other dimmer types. Can also be used with dimmers designed specifically for CFLs.

Warranties and Certifications:	Item #	Description	Wattage	Incandescent Wattage Comparison	Initial Lumens	M.O.L. (inches)	Diameter (inches)	Input Line Current	Lamp Shape	Energy Star®
24 MONTH WARRANTY cULus	4R3016TD	16 WATT R30 Dimmable	16	65W	650	5.4	3.7	.19A	R30	
	4R2014TD	14 WATT R20 Dimmable	14	50W	410	5.1	2.5	.17A	R20	
	4R4016TD	16 WATT R40 Dimmable	16	65W	750	6.1	4.8	.19A	R40	
	4R4020TD	20 WATT R40 Dimmable	20	85W	950	6.1	4.8	.19A	R40	
	41316TD	16 WATT A-Lamp Dimmable	16	60W	850	5.5	2.4	.19A	A-21	✦
	41315TD	15 WATT A-Lamp Dimmable	15	60W	750	5.1	2.3	.18A	A-19	✦
	4G2515TD	15 WATT G25 Globe Dimmable	15	60W	750	5.2	3.1	.18A	G25	✦
	4G4015TD	15 WATT G40 Globe Dimmable	15	60W	750	7.3	4.8	.18A	G40	✦
	50123	23 WATT Full Spring Dimmable	23	100W	1500	4.9	2.4	.23A	Spring	✦



TruDim™ Dimmable CFL Specification

Color Temperature	Item #	Description	Wattage	Incandescent Wattage Comparison	Initial Lumens	M.O.L. (inches)	Diameter (inches)	Input Line Current	Lamp Shape	Energy Star®
2700°K	4R3016TD	16 WATT R30 Dimmable	16	65W	650	5.4	3.7	.19A	R30	
	4R2014TD	14 WATT R20 Dimmable	14	50W	410	5.1	2.5	.17A	R20	
	4R4016TD	16 WATT R40 Dimmable	16	65W	750	6.1	4.8	.19A	R40	
	4R4020TD	20 WATT R40 Dimmable	20	85W	950	6.1	4.8	.19A	R40	
	41316TD	16 WATT A-Lamp Dimmable	16	60W	850	5.5	2.4	.19A	A-21	☼
	41315TD	15 WATT A-Lamp Dimmable	15	60W	750	5.1	2.3	.18A	A-19	
	4G2515TD	15 WATT G25 Globe Dimmable	15	60W	750	5.2	3.1	.18A	G25	☼
	4G4015TD	15 WATT G40 Globe Dimmable	15	60W	750	7.3	4.8	.18A	G40	
	50123	23 WATT Full Spring Dimmable	23	100W	1500	4.9	2.4	.23A	Spring	☼
3000°K ordering suffix 30K	4R3016TD30K	16 WATT R30 Dimmable 3000K	16	65W	650	5.4	3.7	.19A	R30	
	4R2014TD30K	14 WATT R20 Dimmable 3000K	14	50W	410	5.1	2.5	.17A	R20	
	4R4016TD30K	16 WATT R40 Dimmable 3000K	16	65W	750	6.1	4.8	.19A	R40	
	4R4020TD30K	20 WATT R40 Dimmable 3000K	20	85W	950	6.1	4.8	.19A	R40	
	41316TD30K	16 WATT A-Lamp Dimmable 3000K	16	60W	850	5.5	2.4	.19A	A-21	
	41315TD30K	15 WATT A-Lamp Dimmable 3000K	15	60W	750	5.1	2.3	.18A	A-19	
	4G2515TD30K	15 WATT G25 Globe Dimmable 3000K	15	60W	750	5.2	3.1	.18A	G25	
	4G4015TD30K	15 WATT G40 Globe Dimmable 3000K	15	60W	750	7.3	4.8	.18A	G40	
	5012330K	23 WATT Full Spring Dimmable 3000K	23	100W	1500	4.9	2.4	.23A	Spring	
3500°K ordering suffix 35K	4R3016TD35K	16 WATT R30 Dimmable 3500K	16	65W	600	5.4	3.7	.19A	R30	☼
	4R2014TD35K	14 WATT R20 Dimmable 3500K	14	50W	380	5.1	2.5	.17A	R20	
	4R4016TD35K	16 WATT R40 Dimmable 3500K	16	65W	700	6.1	4.8	.19A	R40	
	4R4020TD35K	20 WATT R40 Dimmable 3500K	20	85W	900	6.1	4.8	.19A	R40	
	41316TD35K	16 WATT A-Lamp Dimmable 3500K	16	60W	800	5.5	2.4	.19A	A-21	☼
	41315TD35K	15 WATT A-Lamp Dimmable 3500K	15	60W	700	5.1	2.3	.18A	A-19	
	4G2515TD35K	15 WATT G25 Globe Dimmable 3500K	15	60W	700	5.2	3.1	.18A	G25	
	4G4015TD35K	15 WATT G40 Globe Dimmable 3500K	15	60W	700	7.3	4.8	.18A	G40	
	5012335K	23 WATT Full Spring Dimmable 3500K	23	100W	1500	4.9	2.4	.23A	Spring	
4100°K ordering suffix 41K	4R3016TD41K	16 WATT R30 Dimmable 4100K	16	65W	600	5.4	3.7	.19A	R30	
	4R2014TD41K	14 WATT R20 Dimmable 4100K	14	50W	380	5.1	2.5	.17A	R20	
	4R4016TD41K	16 WATT R40 Dimmable 4100K	16	65W	700	6.1	4.8	.19A	R40	
	4R4020TD41K	20 WATT R40 Dimmable 4100K	20	85W	900	6.1	4.8	.19A	R40	
	41316TD41K	16 WATT A-Lamp Dimmable 4100K	16	60W	800	5.5	2.4	.19A	A-21	
	41315TD41K	15 WATT A-Lamp Dimmable 4100K	15	60W	700	5.1	2.3	.18A	A-19	
	4G2515TD41K	15 WATT G25 Globe Dimmable 4100K	15	60W	700	5.2	3.1	.18A	G25	
	4G4015TD41K	15 WATT G40 Globe Dimmable 4100K	15	60W	700	7.3	4.8	.18A	G40	
	5012341K	23 WATT Full Spring Dimmable 4100K	23	100W	1450	4.9	2.4	.23A	Spring	
5000°K ordering suffix 50K	4R3016TD50K	16 WATT R30 Dimmable 5000K	16	65W	550	5.4	3.7	.19A	R30	
	4R2014TD50K	14 WATT R20 Dimmable 5000K	14	50W	380	5.1	2.5	.17A	R20	
	4R4016TD50K	16 WATT R40 Dimmable 5000K	16	65W	675	6.1	4.8	.19A	R40	
	4R4020TD50K	20 WATT R40 Dimmable 5000K	20	85W	850	6.1	4.8	.19A	R40	
	41316TD50K	16 WATT A-Lamp Dimmable 5000K	16	60W	775	5.5	2.4	.19A	A-21	☼
	41315TD50K	15 WATT A-Lamp Dimmable 5000K	15	60W	675	5.1	2.3	.18A	A-19	
	4G2515TD50K	15 WATT G25 Globe Dimmable 5000K	15	60W	675	5.2	3.1	.18A	G25	
	4G4015TD50K	15 WATT G40 Globe Dimmable 5000K	15	60W	675	7.3	4.8	.18A	G40	
	5012350K	23 WATT Full Spring Dimmable 5000K	23	100W	1450	4.9	2.4	.23A	Spring	
6500°K ordering suffix 65K	4R3016TD65K	16 WATT R30 Dimmable 6500K	16	65W	550	5.4	3.7	.19A	R30	
	4R2014TD65K	14 WATT R20 Dimmable 6500K	14	50W	380	5.1	2.5	.17A	R20	
	4R4016TD65K	16 WATT R40 Dimmable 6500K	16	65W	675	6.1	4.8	.19A	R40	
	4R4020TD65K	20 WATT R40 Dimmable 6500K	20	85W	850	6.1	4.8	.19A	R40	
	41316TD65K	16 WATT A-Lamp Dimmable 6500K	16	60W	775	5.5	2.4	.19A	A-21	
	41315TD65K	15 WATT A-Lamp Dimmable 6500K	15	60W	675	5.1	2.3	.18A	A-19	
	4G2515TD65K	15 WATT G25 Globe Dimmable 6500K	15	60W	675	5.2	3.1	.18A	G25	
	4G4015TD65K	15 WATT G40 Globe Dimmable 6500K	15	60W	675	7.3	4.8	.18A	G40	
	5012365K	23 WATT Full Spring Dimmable 6500K	23	100W	1400	4.9	2.4	.23A	Spring	

Recommended Dimmers:

Any 600w slide or rotary incandescent dimmer.

Minimum bulbs to use is 1 and the maximum is 300 watts of bulbs.

Any 1000w slide or rotary incandescent dimmer.

Minimum bulbs to use is 3 and the maximum is 500 watts of bulbs.

Any Lutron or Leviton C-L dimmers (CFL-LED)

Lutron C-L dimmers approved for use by Lutron with TCP TruDim

- Diva C-L
- Skylark Contour C-L
- Toggler/Ariadni C-L
- Lumea C-L
- Credenza C-L

Works with most dimming systems like the Lutron Grafik Eye. Check with TCP Technical or consult the Dimmer Manufacturer if any questions.

In general you should always check with TCP Technical or consult the dimming manufacturer if there are any questions of compatibility. Also it's always better to test a few bulbs with the dimmer before doing a major installation.

1Q: Do TCP TruDim Series products dim exactly like an incandescent lamp?

- A: 1) TCP TruDim Series products have slightly different dimming characteristics due to the electronics of a CFL vs. an incandescent filament however they are very close in performance.
- 2) However it is important to note that Electronic components do not respond in the same manner as a heated incandescent filament therefore there will be slight differences in visual operational characteristics.
- 3) Remember this is a Compact Fluorescent Lamp which has a high level of technology engineered into it vs. an incandescent which has zero technology, they are not the same.

2Q: Do TCP's TruDim Series products work on ordinary incandescent dimmers?"

- A: YES! Designed specifically for use with standard non-illuminated 600watt incandescent slide or rotary dimmers that are currently available in the market. They will also work with CFL dimmers that are available in the market. Consult TCP Customer Care or the Dimmer Manufacturer for compatibility with other dimmer types.

3Q: Will TCP's TruDim Series products work on every incandescent dimmer ever made?

- A: NO! Although TCP's TruDim Series product has been approved for use with 600w or 1000w incandescent dimmers, there are certain types of dimmers that have proven to be incompatible due to certain dimmer features or outdated dimmer technology.

4Q: How can I tell if a dimmer is not compatible with a TCP TruDim lamp?

- A: Generally speaking, certain programmable electronic and/or remote control dimmers are not compatible. Illuminated (glow-in-the-dark) dimmers are usually incompatible with dimmable CFLs due to they often have a low-voltage leak thru which is incompatible with a CFL circuit board.

5Q: Can TCP recommend a compatible dimmer?

- A: Although TCP is not at liberty to recommend one manufacturer or brand over another, basic lab testing and real-world experience has shown that 600 Watt, mid-grade, non-illuminated slide and rotary dimmers function well. Also the new CFL-LED dimmers now available also function well. 1000w dimmers will work with a minimum of 3 dimming CFLs on the circuit. Follow these links to obtain more compatibility information about Lutron and Leviton dimmers:
- <http://www.lutron.com.service-support/technical/pages/technicalfaq.aspx>
<http://www.communities.leviton.com.docs/doc-2542>

6Q: Will TCP's TruDim Series products flicker at the low level as other CFL Dimmable product does?

- A: 1) NO! TCP's Dimmable series product dims down to 2% without flicker. However at Zero hours the bulbs may look unstable when first put into use. We recommend to season the bulbs at full power for 2 hours this will stabilize the phosphor and mercury resulting much better dimming and lamp performance.
- 2) It is important to note that because TruDim will dim down to such a low level it is recommended that you Not use the dimming controller, knob or slider for example, as an on/off device. By sliding or turning the device all the way down this does not turn the power off completely to the lamps. Because TruDim has an integrated circuit chip in the circuit board this may read the low power and cause the TruDim lamps to strobe. We recommend to use the controller to adjust light level only and use the on/off switch to control power to the lamps.

7Q: Does the performance of TCP's TruDim Series products rely on the quality of a dimmer?

- A: YES! Consideration must be given to the age and quality of a dimmer if it is to be used with a TCP TruDim Series product. Because of the recent push to save energy, newer dimmers are more likely to be CFL compatible. Older dimmers are not as capable of withstanding voltage spikes, which, if used, would ultimately damage the circuitry in the TCP TruDim Series product.

8Q: Can 1000 watt commercial grade dimmers be used with TCP's TruDim Series products?

A: YES! Most commercial grade dimmers are manufactured to be used with incandescent lamps which have a large resistive load when energized. Since TCP TruDim products are electronic, they do not have the same resistive load as an incandescent, and as such, you will need to use a minimum of 3 dimming CFLs or the dimmer will not be able to maintain the proper power balance needed to perform as intended.

9Q: How do you properly use TCP's TruDim Series products?

A: TCP recommends a burn-in period of 2 hours at full power to stabilize the lamp before dimming. If lamps have been idle for an extended period of time burn at full power for 30 minutes before dimming. When dimming to the off position lamps may pulse at the low end briefly then turn off. This is a safe mode for the lamps and will not hurt the lamp or dimmer.

10Q: Will it damage the lamps if they are turned on at too low a level and they don't come on?

A: NO! TCP TruDim lamps are designed to be turned off and on at a low level with an on/off switch located on the dimmer. If the lamps do not turn on simply move the dimming level up till the lamps turn on then dim down to desired level.

11Q: What is the warranty and average life of TCP's TruDim Series products?

A: TCP's TruDim Series product is warranted for 24 months. Using accepted industry standards, the average life is rated at 12,000 hours.

12Q: Can TCP TruDim be used in 3-way lamp sockets?

A: NO! TCP's TruDim Series product will not perform like a 3way bulb in a 3way socket they will only have 1 light level at full power.

13Q: Will frequent dimming significantly shorten the life of a TCP TruDim Series products?

A: 1) NO! Frequent dimming will not significantly reduce the life of the TCP TruDim Series product.

14Q: Can the TCP TruDim be used with a touch lamp?

A: NO! Touch lamps are actually controlled by a 3-way switch, so the same rules as the 3-way switch apply in this case.

15Q: How many TCP TruDim lamps can be used on the same dimmer?

A: 1) To compensate for "inrush current" (timed in milliseconds, the initial flow of electrical current that is needed to start the CFL), TCP recommends dividing the dimmer's rated wattage in half and then using that wattage number to outfit the fixture. For example:
 600Watt Dimmer $\div 2 = 300\text{Watts}$
 TCP's 14W Dimmable CFL: $300 \div 14 = 21$ lamps
 TCP's 16W Dimmable CFL: $300 \div 16 = 18$ lamps

For a 1000w dimmer TCP recommends using 500 watts.

NOTE: Since every dimmer is manufactured differently there may be some variance in these numbers. The above examples are a rough estimate only.

16Q: Will TruDim product all turn off simultaneously when dimmed down to 2% or below?

A: NO! If you have a series of TruDim product on a circuit as you dim down to 2% or below the lamps will turn off at different times. Eventually all will turn off but you may have a situation (extremely small range on your dimmer control) with a portion of the lamps still on and the rest off.

17Q: Why do some of the lamps strobe at the very low end before turning off?

A: 1) This is due to the low dim level turn-on capability. When the lamps are dimmed to below 2% some of the lamps may pulse or strobe 4-6 times then turn off. This does not affect the life or performance of the lamps.

2) Also at the bottom of the dimming trail on a dimmer the power is never actually turned off so the TruDim lamps may still be reading power causing the strobe. It is our recommendation to not use the dimming knob or slider as an on/off device, use it for light level control and use the on/off switch to turn bulbs on and off. If the lamps continue to strobe move the knob or slider up until the lamps turn back on at a low level. Then use the on/off switch to turn lamps on/off.

18Q: Can TruDim lamps be used with other dimming CFLs or lamps?

A: NO! It is recommended to use 100% TruDim lamps on a circuit do not use any other Dimming CFL lamps in combination with TruDim. This may affect the performance of the lamps during dimming mode.