

# Philips TuffGuard™ Fluorescent Coated Lamps *featuring ALTO® Lamp Technology*

Outstanding performance and reliability



***Ideal for food processing/services, manufacturing, and hospitals***



## **Look for the Green End-Caps®**

They mean you are using environmentally-responsible lamps that utilize ALTO® Lamp Technology

### ▶ **Philips TuffGuard™ Fluorescent Coated Lamps**

- Keeps broken glass contained
- Coating will not yellow, crack, or flake

### ▶ **Sustainable Lighting Solution**

- Reduces the impact on the environment
- Low mercury
- Energy efficient
- Long life\*

### ▶ **Warranty: Coating Guaranteed to Last the Average Rated Life of the Lamp**

### ▶ **Lighting Required to be Shielded or Otherwise Protected in Food Service and Food Processing Areas**

- FDA Food Code
  - Chapter 6, Section 202.11
- FDA Plant Construction & Design
  - 21CFR110.20
- OSHA
  - 29CFR1910.305(a)(2)(iii)(F) Wiring methods, components, and equipment for general use

\* Lifetime varies depending on lamp type.

# PHILIPS

# Philips TuffGuard™ Fluorescent Coated Lamps—T12

Electrical, Technical and Ordering Data (Subject to change without notice)

Product Number	Ordering Code	Pkg Qty	Color Temperature	Nominal Length (In.)	Rated Average Life (hrs) <sup>1</sup>	Approximate Initial Lumens <sup>2</sup>	CRI	Availability
I6792-4	F14T12/CW/TG	30	4100	15	9,000	710	62	Made to Order
I6687-6	F15T12/CW/TG	30	4100	18	9,000	800	62	Made to Order
I6815-3	F15T12/D/TG	30	6500	18	9,000	650	79	Made to Order
I6919-3	F20T12/D/ALTO TG	30	6500	24	9,000	1,075	79	Made to Order
I6300-6	F20T12/CW/ALTO TG	30	4100	24	9,000	1,200	62	Stocked
I6813-8	F24T12/CW/HO/TG <sup>1</sup>	30	4100	24	9,000	1,650	62	Made to Order
I6729-6	F25T12/CW/TG	30	4100	36	7,500	1,900	62	Made to Order
I6915-1	F25T12/CW/28 TG	30	4100	36	7,500	1,600	62	Made to Order
I6893-0	F30T12/D/RS/ALTO TG	30	6500	36	18,000	1,950	79	Made to Order
I6310-5	F30T12/CW/RS/ALTO TG	30	4100	36	18,000	2,250	62	Stocked
I6888-0	F30T12/SPEC35/RS TG	30	3500	36	18,000	2,350	73	Made to Order
I6032-5	F34/CW/RS/EW/LL/ALTO TG	30	4100	48	24,000	2,650	62	Stocked
I6060-6	F34T12/CW/RS/EW/ALTO TG	30	4100	48	20,000	2,650	62	Stocked
I6315-4	F34W/RS/EW/ALTO TG	30	3000	48	20,000	2,700	53	Stocked
I6759-3	F34T12/835/EW/ALTO TG	30	3500	48	20,000	2,800	82	Made to Order
I6764-3	F34T12/841/EW/ALTO TG	30	4100	48	20,000	2,800	82	Made to Order
I6743-7	F34T12/ADV850/EW/ALTO TG	30	5000	48	24,000	2,950	85	Made to Order
I6693-4	F34T12/DX/RS/EW/ALTO TG	30	6500	48	20,000	2,025	84	Made to Order
I6881-5	F36T12/CW/TG	30	4100	36	7,500	1,850	62	Made to Order
I6736-1	F40T12/830/ALTO TG	30	3000	48	20,000	3,200	82	Made to Order
I6765-0	F40T12/ADV830/ALTO TG	30	3000	48	24,000	3,600	85	Made to Order
I6314-7	F40C50 TG	30	5000	48	20,000	2,200	92	Stocked
I20427-1	F40CW/ALTO TG	30	4100	48	20,000	2,650	62	Stocked
I6299-0	F40DX/ALTO TG	30	6500	48	20,000	2,325	84	Stocked
I6311-3	F40T12/835/ALTO TG	30	3500	48	20,000	3,200	82	Stocked
I6322-0	F40T12/841/ALTO TG	30	4100	48	20,000	3,200	82	Stocked
I6744-5	F40T12/ADV835/ALTO TG	30	3500	48	24,000	3,600	85	Made to Order
I6918-5	F40T12/ADV841/ALTO TG	30	4100	48	24,000	3,600	85	Made to Order
I6886-4	F40T12/ADV850/ALTO TG	30	5000	48	24,000	3,600	85	Made to Order
I6890-6	F40T12/C75 TG	30	7500	48	20,000	2,000	95	Made to Order
I6677-7	F40T12/CWX/ALTO TG	30	4200	48	20,000	2,200	89	Made to Order
I6309-7	F48T12/CW/ALTO TG	30	4100	48	9,000	2,950	62	Stocked
I6296-6	F48T12/CW/HO/ALTO TG <sup>1</sup>	15	4100	48	12,000	4,050	62	Stocked
I6307-1	F48T12/D/ALTO TG	15	6500	48	9,000	2,500	79	Stocked
I6742-9	F48T12/CW/EW/ALTO TG	15	4100	48	9,000	2,400	62	Made to Order
I6375-8	F48T12/SPEC35 TG	15	3500	48	9,000	3,000	73	Made to Order
I6762-7	F48T12/D/HO/ALTO TG <sup>1</sup>	15	6500	48	12,000	3,400	79	Made to Order
I6745-2	F60T12/CW/TG	15	4100	60	12,000	3,450	62	Made to Order
I6728-8	F60T12/CW/HO/TG <sup>1</sup>	15	4100	60	12,000	5,150	62	Made to Order
I6931-8	F60T12/D/HO/TG <sup>1</sup>	15	6500	60	12,000	4,650	79	Made to Order
I6689-2	F72T12/CW/ALTO TG	15	4100	72	12,000	4,450	62	Made to Order
I6924-3	F72T12/D/ALTO TG	15	6500	72	12,000	3,800	79	Made to Order
I6312-1	F72T12/CW/HO/ALTO TG <sup>1</sup>	15	4100	72	12,000	6,350	62	Stocked
I6304-8	F72T12/SPEC35/HO/ALTO TG	15	3500	72	12,000	4,700	73	Made to Order
I6870-8	F72T12/30U/HO/TG	15	3000	72	12,000	6,800	85	Made to Order
I20440-4	F72T12/35U/HO/TG	15	3500	72	12,000	6,800	85	Made to Order
I20446-1	F72T12/SPEC35/ALTO TG	15	3500	72	12,000	4,700	73	Made to Order
I6817-9	F84T12/CW/HO/TG <sup>1</sup>	15	4100	84	12,000	7,800	62	Made to Order
I6319-6	F96T12/835/ALTO TG	15	3500	96	12,000	6,425	85	Stocked
I6303-0	F96T12/835/HO/ALTO TG <sup>1</sup>	15	3500	96	12,000	9,500	85	Stocked
I6320-4	F96T12/C50/HO/TG <sup>1</sup>	15	5000	96	12,000	6,300	92	Stocked
I6123-2	F96T12/CW/ALTO TG	15	4100	96	12,000	6,100	62	Stocked
I6124-0	F96T12/CW/EW/ALTO TG	15	4100	96	12,000	5,400	62	Stocked
I6216-4	F96T12/CW/HO/EW/ALTO TG <sup>1</sup>	15	4100	96	12,000	8,000	62	Stocked
I6301-4	F96T12/CW/HO-O/ALTO TG <sup>1</sup>	15	4100	96	12,000	8,800	62	Stocked
I6297-4	F96T12/D/ALTO TG	15	6500	96	12,000	4,500	79	Stocked
I6302-2	F96T12/D/HO-O/ALTO TG <sup>1</sup>	15	6500	96	12,000	7,800	79	Stocked
I6324-6	F96T12/DX/EW/ALTO TG	15	6500	96	12,000	4,200	84	Stocked
I6836-9	F96T12/830/EW/ALTO TG	15	3000	96	12,000	5,900	85	Made to Order
I6937-5	F96T12/835/EW/ALTO TG	15	3500	96	12,000	5,900	85	Made to Order
I6777-5	F96T12/841/ALTO TG	15	4100	96	12,000	6,425	85	Made to Order
I6883-1	F96T12/841/EW/ALTO TG	15	4100	96	12,000	5,900	85	Made to Order
I6730-4	F96T12/841/HO/ALTO TG <sup>1</sup>	15	4100	96	12,000	9,500	85	Made to Order
I6725-4	F96T12/841/HO/EW/ALTO TG <sup>1</sup>	15	4100	96	12,000	8,500	85	Made to Order
I6783-3	F96T12/850/ALTO TG	15	5000	96	12,000	6,300	85	Made to Order
I6727-0	F96T12/C50 TG	15	5000	96	12,000	4,650	92	Made to Order
I6582-9	F96T12/CWX/HO/TG <sup>1</sup>	15	4200	96	12,000	6,600	89	Made to Order
I6694-2	F96T12/DX/HO/EW/TG <sup>1</sup>	15	6500	96	12,000	5,850	84	Made to Order
I6855-9	F96T12/WWW/EW/ALTO TG	15	3000	96	12,000	5,500	53	Made to Order
I6873-2	F96T12/WWW/HO/EW/TG <sup>1</sup>	15	3000	96	12,000	8,100	53	Made to Order
I20449-5	F96T12/830/HO/EW/ALTO TG	15	3000	96	12,000	9,500	85	Made to Order
I6974-8	F96T12/CW/EW/LL/ALTO TG	15	4100	96	18,000	5,400	62	Made to Order

1) Average life under engineering data with lamps turned off and restarted once every 3 operating hours.

2) Approximate initial lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions. Protective coating may reduce initial lumens by 1–2%.

# Philips TuffGuard™ Fluorescent Coated Lamps—T8

Electrical, Technical and Ordering Data (Subject to change without notice)

Product Number	Ordering Code	Pkg Qty	Color Temperature	Nominal Length (In.)	Rated Average Life (hrs) <sup>1</sup>	Approximate Initial Lumens <sup>2</sup>	CRI	Availability
● I6313-9	F15T8/CW/ALTO TG	24	4100	18	10,000	870	62	Stocked
● I6793-2	F15T8/D/ALTO TG	24	6500	18	10,000	750	79	Made to Order
● I6438-4	F17T8/TL741/ALTO TG	25	4100	24	36,000	1,325	78	Stocked
● I6906-0	F17T8/TL730/ALTO TG	25	3000	24	30,000	1,325	78	Made to Order
● I6735-3	F17T8/TL735/ALTO TG	25	3500	24	30,000	1,325	78	Made to Order
● I6734-6	F17T8/TL830/ALTO TG	25	3000	24	30,000	1,400	85	Made to Order
● I6731-2	F17T8/TL835/ALTO TG	25	3500	24	30,000	1,400	85	Made to Order
● I6898-9	F17T8/TL841/ALTO TG	25	4100	24	30,000	1,400	85	Made to Order
● I6316-2	F25T8/TL830/PLUS/ALTO TG	25	3000	36	36,000	2,225	85	Stocked
● I6306-3	F25T8/TL835/PLUS/ALTO TG	25	3500	36	36,000	2,225	85	Stocked
● I6305-5	F25T8/TL841/PLUS/ALTO TG	25	4100	36	36,000	2,225	85	Stocked
● I6679-3	F25T8/TL730/ALTO TG	25	3000	36	30,000	2,125	78	Made to Order
● I6684-3	F25T8/TL735/ALTO TG	25	3500	36	30,000	2,125	78	Made to Order
● I6673-6	F25T8/TL741/ALTO TG	25	4100	36	30,000	2,125	78	Made to Order
● I6675-1	F25T8/TL830/ALTO TG	25	3000	36	30,000	2,225	85	Made to Order
● I6670-2	F25T8/TL835/ALTO TG	25	3500	36	30,000	2,225	85	Made to Order
● I6787-4	F25T8/TL841/ALTO TG	25	4100	36	30,000	2,225	85	Made to Order
● I6752-8	F30T8/CW/ALTO TG	24	4100	36	10,000	2,200	62	Made to Order
● I6927-6	F30T8/D/ALTO TG	24	6500	36	10,000	1,500	79	Made to Order
● I6863-3	F32T8/ADV830/ALTO TG	25	3000	48	30,000	3,150	85	Made to Order
● I6502-7	F32T8/ADV850/ALTO TG	25	5000	48	30,000	3,050	85	Made to Order
● I6682-7	F32T8/ADV850/XEW/ALTO TG	25	5000	48	30,000	2,425	85	Made to Order
● I6894-8	F32T8/TL950 TG	25	5000	48	30,000	2,000	98	Made to Order
● I6508-4	F32T8/TL730/ALTO TG	25	3000	48	30,000	2,800	78	Made to Order
● 20428-9	F32T8/TL735/ALTO TG	25	3500	48	30,000	2,800	78	Stocked
● I6484-8	F32T8/TL741/ALTO TG	25	4100	48	30,000	2,800	78	Stocked
● I6619-9	F32T8/TL750/ALTO TG	25	5000	48	30,000	2,700	78	Made to Order
● I6541-5	F32T8/TL830/ALTO TG	25	3000	48	30,000	2,950	85	Made to Order
● I6488-9	F32T8/TL835/ALTO TG	25	3500	48	30,000	2,950	85	Made to Order
● I6487-1	F32T8/TL841/ALTO TG	25	4100	48	30,000	2,950	85	Made to Order
● I6503-5	F32T8/TL850/ALTO TG	25	5000	48	30,000	2,850	85	Made to Order
● I6791-6	F32T8/TL865 PLUS/ALTO TG	25	6500	48	36,000	2,750	85	Made to Order
● I6975-5	F32T8/ADV841/XLL/ALTO TG 25W	25	4100	48	40,000	2,400	85	Made to Order
● I6294-1	F32T8/ADV835/XEW/ALTO TG 25W	25	3500	48	30,000	2,500	85	Stocked
● I6308-9	F32T8/ADV841/ALTO TG	25	4100	48	30,000	3,150	85	Stocked
● I6293-3	F32T8/ADV841/XEW/ALTO TG 25W	25	4100	48	30,000	2,500	85	Stocked
● I6246-1	F32T8/TL730/PLUS/ALTO TG	25	3000	48	36,000	2,800	78	Stocked
● I6239-6	F32T8/TL735/PLUS/ALTO TG	25	3500	48	36,000	2,800	78	Stocked
● I6078-8	F32T8/TL741/PLUS/ALTO TG	25	4100	48	36,000	2,800	78	Stocked
● I6318-8	F32T8/TL750/PLUS/ALTO TG	25	5000	48	36,000	2,700	78	Stocked
● I6275-0	F32T8/TL830/PLUS/ALTO TG	25	3000	48	36,000	2,950	85	Stocked
● I6238-8	F32T8/TL835/PLUS/ALTO TG	25	3500	48	36,000	2,950	85	Stocked
● I6295-8	F32T8/TL841/XLL/ALTO TG	25	4100	48	40,000	2,950	85	Stocked
● I6274-3	F32T8/TL841/PLUS/ALTO TG	25	4100	48	36,000	2,950	85	Stocked
● I6292-5	F32T8/TL850/PLUS/ALTO TG	25	5000	48	36,000	2,850	85	Stocked
● I6323-8	F40T8/TL835/ALTO TG	25	3500	60	24,000	3,775	85	Stocked
● I6439-2	F40T8/TL841/ALTO TG	25	4100	60	24,000	3,775	85	Stocked
● I6770-0	F40T8/TL735/ALTO TG	25	3500	60	24,000	3,600	78	Made to Order
● I6695-9	F40T8/TL741/ALTO TG	25	4100	60	24,000	3,600	78	Made to Order
● I6778-3	F40T8/TL830/ALTO TG	25	3500	60	24,000	3,775	85	Made to Order
● I6784-1	F48T8/TL835/HO/ALTO TG <sup>†</sup>	24	3500	48	24,000	4,000	85	Made to Order
● I6772-6	F48T8/TL841/HO/ALTO TG <sup>†</sup>	24	4100	48	24,000	4,000	85	Made to Order
● I6685-0	F96T8/TL735/PLUS/ALTO TG	24	3500	96	30,000	5,700	78	Made to Order
● I6676-9	F96T8/TL741/PLUS/ALTO TG	24	4100	96	30,000	5,700	78	Made to Order
● I6671-0	F96T8/TL741/HO/PLUS/ALTO TG <sup>†</sup>	24	4100	96	30,000	7,900	78	Made to Order
● I6800-5	F96T8/TL830/HO/PLUS/ALTO TG <sup>†</sup>	24	3000	96	30,000	8,200	85	Made to Order
● I6909-4	F96T8/TL835/PLUS/ALTO TG	24	3500	96	30,000	5,900	85	Made to Order
● I6681-9	F96T8/TL835/HO/PLUS/ALTO TG <sup>†</sup>	24	3500	96	30,000	8,200	85	Made to Order
● I6878-1	F96T8/TL841/PLUS/ALTO TG	24	4100	96	30,000	5,900	85	Made to Order
● I6683-5	F96T8/TL841/HO/PLUS/ALTO TG	24	4100	96	30,000	8,200	85	Made to Order
● I6796-5	F96T8/TL850/PLUS/ALTO TG	24	5000	96	30,000	5,780	85	Made to Order

1) Average life under engineering data with lamps turned off and restarted once every 12 operating hours.

2) Approximate initial lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions. Protective coating may reduce initial lumens by 1–2%.

● This product utilizes ALTO® Lamp Technology.

† All HO lamps recommended for use only in open fixtures.

#### WARNING:

Coating will not yellow, crack or otherwise fail, subject to the following conditions:

- The lamps must be installed and operating in ambient temperatures below 120°F.
- The lamps cannot be used in fixtures employing defective ballasts, ballasts that have been used longer than their rated life or ballasts that are improperly wired.

- The lamps cannot be used in fixtures where poor pin contact occurs.
- Lamp types and ballast types must be compatible (Rapid start lamps with rapid start ballast, etc.)
- Lamps are recommended for open fixtures.

**Made-to-order requires 3 week lead time  
(No product returns on made-to-order lamps)**

## Philips TuffGuard™ Fluorescent Coated Lamps—T5

Electrical, Technical and Ordering Data (Subject to change without notice)

Product Number	Ordering Code	Pkg Qty	Color Temperature	Nominal Length (In.)	Rated Average Life (hrs) <sup>1</sup>	Approximate Initial Lumens <sup>2</sup>	CRI	Availability
I6691-8	F8T5/CW PHTG	25	4100	12	7,500	400	62	Made to Order
I6757-7	F13T5/CW PHTG	25	4100	21	7,500	820	62	Made to Order
● I6690-0	F14T5/830/ALTO TG	40	3000	22	20,000	1,350	85	Made to Order
● I6726-2	F14T5/841/ALTO TG	40	4100	22	20,000	1,350	85	Made to Order
● I6455-8	F21T5/830/ALTO TG	40	3000	34	20,000	2,100	85	Stocked
● I6856-7	F21T5/835/ALTO TG	40	3500	34	20,000	2,100	85	Made to Order
● I6669-4	F21T5/841/ALTO TG	40	4100	34	20,000	2,100	85	Made to Order
I6913-6	F24T5/835/HO TG <sup>†</sup>	40	3500	22	20,000	2,000	85	Made to Order
● I6417-8	F28T5/835/ALTO TG	40	3000	46	20,000	2,900	85	Stocked
● I6775-9	F28T5/830/ALTO TG	40	3000	46	20,000	2,900	85	Made to Order
● I6674-4	F28T5/841/ALTO TG	40	4100	46	20,000	2,900	85	Made to Order
● I6776-7	F35T5/830/ALTO TG	40	3000	58	20,000	3,650	85	Made to Order
● I6733-8	F35T5/841/ALTO TG	40	4100	58	20,000	3,650	85	Made to Order
● I6298-2	F54T5/841/HO/ALTO TG <sup>†</sup>	40	4000	46	25,000	5,000	85	Stocked
● I6861-7	F54T5/830/HO/ALTO TG <sup>†</sup>	40	3000	46	25,000	5,000	85	Made to Order
● I6672-8	F54T5/835/HO/ALTO TG <sup>†</sup>	40	3500	46	25,000	5,000	85	Made to Order
● I6686-8	F54T5/850/HO/ALTO TG <sup>†</sup>	40	5000	46	25,000	4,850	85	Made to Order

1) Average life under engineering data with lamps turned off and restarted once every 3 operating hours.

2) Approximate initial lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions. Protective coating may reduce initial lumens by 1–2%.

● This product utilizes ALTO® Lamp Technology.

† All HO lamps recommended for use only in open fixtures.

**Made-to-order requires 3 week lead time**  
 (No product returns on made-to-order lamps)

### WARNINGS:

Coating will not yellow, crack or otherwise fail, subject to the following conditions:

- The lamps must be installed and operating in ambient temperatures below 120°F.
- The lamps cannot be used in fixtures employing defective ballasts, ballasts that have been used longer than their rated life or ballasts that are improperly wired.

- The lamps cannot be used in fixtures where poor pin contact occurs.
- Lamp types and ballast types must be compatible (Rapid start lamps with rapid start ballast, etc.)
- Lamps are recommended for open fixtures.



† This lamp is better for the environment because of its reduced mercury content. All Philips ALTO® lamps give you end-of-life options which can simplify and reduce your lamp disposal costs depending on your state and local regulations.

