The right fit for your high-output applications

Philips Advance programmed-start Centium ballasts for T5HO lamps are available for a wide variety of applications

No matter what the conditions require, operating at a variety of line voltages between 120V to 480V, whether located in high ambient temperature environments (requiring a 90° C rating) or not, our family of Philips Advance Centium ballasts for T5HO lamps are ideal for a wide variety of applications. Most lamp configurations now available with our industry leading N-can at 9.5" x 1.3" x 1.0" or T-can at 14.17" x 1.18" x 1.06", which provides fixture manufacturers increased versatility in their newer generation fixture designs.

All of these ballasts utilize programmed-start circuitry which provides extended lamp life in frequent switching applications like those associated with the use of occupancy sensors or motion detectors. These ballasts additionally feature IntelliVolt multiple voltage technology, auto-restrike capability, and lamp End-Of-Life (EOL) protection circuitry which safely removes power from the lamp upon failure.

Our ballasts for T5HO lamps are the optimal choice for a broad range of retail, commercial, institutional and industrial applications including; schools, offices, specialty & department stores, warehouses and manufacturing. For additional energy saving opportunities Philips Advance T5HO ballasts are compatible with energy saving lamps. For specific lead lengths visit our e-catalog at www.philips.com/advance.

Helps to extend lamp life in frequent switching applications such as occupancy sensors or daylight harvesting.

- Programmed start operation

Suited for cold temperature applications (54W models only)

- Staring capability at -20° F (-29° C)

One ballast can easily switch from 4-lamp to 2-lamp fixtures

- High-low switching is available on 4-lamp model

PHILIPS

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Centium Ballasts for 24-80W T5HO Linear Fluorescent Lamps — Programmed Start

No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp. (°F/°C)	Dim.	Wiring Diagram
F24T5/HO (24W)									
1	120-277	ICN-2S24-N	27	1.03	15	0.23-0.10	0/-18	N	73
	120-277	ICN-2S24-T	26	1.02	10	0.22-0.10	0/-18	T	73
	120-277	ICN-2S39-N	30	1.14	20	0.25-0.12	0/-18	N	73
	120-277	ICN-2S39-T	29	1.13	10	0.25-0.11	0/-18	T	73
2	120-277	ICN-2S24-N	54-53	1.04	15	0.45-0.19	0/-18	N	74
	120-277	ICN-2S24-T	52	1.00	10	0.44-0.19	0/-18	T	74
	120-277	ICN-2S39-N	59-58	1.14	10	0.49-0.22	0/-18	N	74
	120-277	ICN-2S39-T	57	1.12	10	0.48-0.21	0/-18	T	74
F39T5/HO (39W)									
1	120-277	ICN-2S24-N	41	0.96	15	0.34-0.15	0/-18	N	73
	120-277	ICN-2S24-T	40	0.90	10	0.33-0.15	0/-18	T	73
	120-277	ICN-2S39-N	43	1.00	15	0.36-0.16	0/-18	N	73
	120-277	ICN-2S39-T	44	1.02	10	0.37-0.16	0/-18	T	73
2	120-277	ICN-2S39-N	85-83	1.00	10	0.71-0.30	0/-18	N	74
	120-277	ICN-2S39-T	86-85	1.00	10	0.72-0.31	0/-18	T	74
F54T5/HO (44W)									
1	120-277	ICN-2S54-N	52	1.07	10	0.44-0.20	5/-15	N	73
	120-277	ICN-2S54-T	50	1.04	10	0.42-0.18	5/-15	T	73
	120-277	ICN-2S54-90C-N	53	1.00	10	0.44-0.20	5/-15	B	73
	120-277	ICN-2S54-90C-T	50	1.04	10	0.42-0.18	5/-15	T	73
	347-480	HCN-2S54-90C-WL	54	1.00	10	0.16-0.12	5/-15	L	73
2	120-277	ICN-2S54-N	101	1.05	10	0.84-0.37	5/-15	N	74
	120-277	ICN-2S54-T	98	1.00	10	0.83-0.36	5/-15	T	74
	120-277	ICN-2S54-90C-N	102-101	1.00	10	0.86-0.37	5/-15	B	74
	120-277	ICN-2S54-90C-T	98	1.00	10	0.83-0.36	5/-15	T	74
	347-480	HCN-2S54-90C-WL	102	1.00	10	0.30-0.22	5/-15	L	74
3	120-277	ICN-4S54-90C-2LS-G	149	1.00	10	1.25-0.54	5/-15	G	75A
	347-480	HCN-4S54-90C-2LS-G	152	1.00	10	0.44-0.32	5/-15	G	75A
4	120-277	ICN-4S54-90C-2LS-G	200-197	1.00	10	1.66-0.71	5/-15	G	75
	347-480	HCN-4S54-90C-2LS-G	200	1.00	10	0.58-0.42	5/-15	G	75
F54T5/HO (49W)									
1	120-277	ICN-2S54-N	60	1.10	15	0.50-0.22	-20/-29	N	73
	120-277	ICN-2S54-T	57	1.04	10	0.48-0.21	-20/-29	T	73
	120-277	ICN-2S54-90C-N	58	1.02	10	0.49-0.21	-20/-29	B	73
	120-277	ICN-2S54-90C-T	57	1.04	10	0.48-0.21	-20/-29	T	73
	347-480	HCN-2S54-90C-WL	58	1.02	10	0.18-0.13	-20/-29	L	73
2	120-277	ICN-2S54-N	110	1.04	10	0.93-0.40	-20/-29	N	74
	120-277	ICN-2S54-T	107-104	1.00	10	0.90-0.38	-20/-29	T	74
	120-277	ICN-2S54-90C-N	112-109	1.00	10	0.93-0.40	-20/-29	B	74
	120-277	ICN-2S54-90C-T	107-104	1.00	10	0.90-0.38	-20/-29	T	74
	347-480	HCN-2S54-90C-WL	112-109	1.00	10	0.35-0.25	-20/-29	L	74
3	120-277	ICN-4S54-90C-2LS-G	168-165	1.00	10	1.52-0.66	-20/-29	G	75A
	347-480	HCN-4S54-90C-2LS-G	175-172	1.00	10	0.54-0.39	-20/-29	G	75A
4	120-277	ICN-4S54-90C-2LS-G	222-216	1.00	10	2.00-0.86	-20/-29	G	75
	347-480	HCN-4S54-90C-2LS-G	223-218	1.00	10	0.69-0.50	-20/-29	G	75

Centium Ballasts for 24-80W T5HO Linear Fluorescent Lamps — Programmed Start

No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp. (°F/°C)	Dim.	Wiring Diagram
F54T5/HO (54W)									
1	120-277	ICN-2S54-N	62	1.02	15	0.52-0.23	-20/-29	N	73
	120-277	ICN-2S54-T	62	1.04	10	0.53-0.23	-20/-29	T	73
	120-277	ICN-2S54-90C-N	62	1.02	10	0.52-0.23	-20/-29	B	73
	120-277	ICN-2S54-90C-T	62	1.04	10	0.53-0.23	-20/-29	T	73
	347-480	HCN-2S54-90C-WL	62	1.02	10	0.18-0.13	-20/-29	L	73
2	120-277	ICN-2S54-N	120-116	1.00	10	1.00-0.43	-20/-29	N	74
	120-277	ICN-2S54-T	118-115	1.00	10	0.98-0.42	-20/-29	T	74
	120-277	ICN-2S54-90C-N	120-117	1.00	10	1.00-0.43	-20/-29	B	74
	120-277	ICN-2S54-90C-T	118-115	1.00	10	0.98-0.42	-20/-29	T	74
	347-480	HCN-2S54-90C-WL	120-119	1.00	10	0.35-0.25	-20/-29	L	74
3	120-277	ICN-4S54-90C-2LS-G	182-179	1.00	10	1.52-0.66	-20/-29	G	75A
	347-480	HCN-4S54-90C-2LS-G	188-186	1.04	10	0.54-0.39	-20/-29	G	75A
4	120-277	ICN-4S54-90C-2LS-G	240-234	1.00	10	2.00-0.86	-20/-29	G	75
	347-480	HCN-4S54-90C-2LS-G	239-237	1.00	10	0.69-0.50	-20/-29	G	75
F80T5/HO (80W)									
1	120-277	ICN-1S80-T	90-88	1.00	10	0.74-0.32	0/-18	T	73

Centium Ballasts for 24-80W Twin Tube (PL-L) Fluorescent Lamps — Programmed Start

No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp. (°F/°C)	Dim.	Wiring Diagram
FT24W/2G11 - 24/27W (PL-L24W, F27BX/RS, FT24DL)									
1	120-277	ICN-2S24-N	26	0.99	20	0.21-0.10	0/-18	N	73
	120-277	ICN-2S24-T	26	1.02	10	0.22-0.10	0/-18	T	73
	120-277	ICN-2S39-N	29	1.11	15	0.24-0.13	0/-18	N	73
	120-277	ICN-2S39-T	29	1.12	10	0.24-0.12	0/-18	T	73
2	120-277	ICN-2S24-N	51-50	1.01	10	0.43-0.18	0/-18	N	74
	120-277	ICN-2S24-T	51	1.00	10	0.42-0.18	0/-18	T	74
	120-277	ICN-2S39-N	56-55	1.11	10	0.47-0.21	0/-18	N	74
	120-277	ICN-2S39-T	54	1.10	10	0.46-0.20	0/-18	T	74
FT36W/2G11 - 36/39W (PL-L36W, F39BX/RS, FT36DL)									
1	120-277	ICN-2S24-N	31	0.84	15	0.26-0.12	0/-18	N	73
	120-277	ICN-2S24-T	33	0.90	10	0.28-0.12	0/-18	T	73
	120-277	ICN-2S39-N	34-33	0.90	15	0.28-0.15	0/-18	N	73
	120-277	ICN-2S39-T	36	0.96	10	0.30-0.13	0/-18	T	73
	120-277	ICN-2S54-N	46	1.11	20	0.39-0.18	-20/-29	N	73
	120-277	ICN-2S54-T	44	1.20	10	0.37-0.16	-20/-29	T	73
	120-277	ICN-2S54-90C-N	46	1.22	20	0.39-0.18	-20/-29	B	73
	120-277	ICN-2S54-90C-T	44	1.20	10	0.37-0.16	-20/-29	T	73
	347-480	HCN-2S54-90C-WL	46	1.22	15	0.13-0.10	-20/-29	L	73

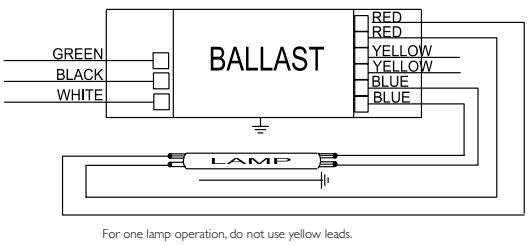
Centium Ballasts for 24-80W Twin Tube (PL-L) Fluorescent Lamps — Programmed Start

No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp. (°F/°C)	Dim.	Wiring Diagram
FT36W/2G11 - 36/39W (PL-L36W, F39BX/RS, FT36DL)									
2	120-277	ICN-2S39-N	66-65	0.90	10	0.55-0.24	0/-18	N	74
	120-277	ICN-2S39-T	69	0.94	10	0.59-0.25	0/-18	T	74
	120-277	ICN-2S54-N	90-87	1.11	10	0.75-0.32	-20/-29	N	74
	120-277	ICN-2S54-T	82-81	1.16	10	0.68-0.29	-20/-29	T	74
	120-277	ICN-2S54-90C-N	89-86	1.20	10	0.75-0.32	-20/-29	B	74
	120-277	ICN-2S54-90C-T	82-81	1.16	10	0.68-0.29	-20/-29	T	74
	347-480	HCN-2S54-90C-WL	89	1.20	10	0.26-0.19	-20/-29	L	74
3	120-277	ICN-4S54-90C-2LS-G	133-132	1.20	10	1.11-0.49	-20/-29	G	75A
	347-480	HCN-4S54-90C-2LS-G	137-135	1.20	10	0.40-0.29	-20/-29	G	75A
4	120-277	ICN-4S54-90C-2LS-G	176-173	1.20	10	1.47-0.64	-20/-29	G	75
	347-480	HCN-4S54-90C-2LS-G	182-180	1.20	10	0.53-0.38	-20/-29	G	75
FT40W/2G11/RS - 40W									
1	120-277	ICN-2S24-T	46	1.00	10	0.39-0.17	0/-18	T	73
2	120-277	ICN-2S39-T	50	1.10	10	0.42-0.19	0/-18	T	74
FT50W/2G11/RS - 50W (PL-L50W, F50BX/RS)									
1	120-277	ICN-2S54-N	61	1.14	15	0.51-0.23	-20/-29	N	73
	120-277	ICN-2S54-T	60	1.11	10	0.50-0.22	-20/-29	T	73
	120-277	ICN-2S54-90C-N	61	1.12	15	0.51-0.23	-20/-29	B	73
	120-277	ICN-2S54-90C-T	60	1.11	10	0.50-0.22	-20/-29	T	73
	347-480	HCN-2S54-90C-WL	61	1.12	10	0.18-0.13	-20/-29	L	73
2	120-277	ICN-2S54-N	118-115	1.07	10	0.99-0.43	-20/-29	N	74
	120-277	ICN-2S54-T	111-109	1.03	10	0.92-0.39	-20/-29	T	74
	120-277	ICN-2S54-90C-N	118-115	1.10	10	0.99-0.43	-20/-29	B	74
	120-277	ICN-2S54-90C-T	111-109	1.03	10	0.92-0.39	-20/-29	T	74
	347-480	HCN-2S54-90C-WL	118	1.10	10	0.34-0.25	-20/-29	L	74
3	120-277	ICN-4S54-90C-2LS-G	178-175	1.10	10	1.49-0.65	-20/-29	G	75A
	347-480	HCN-4S54-90C-2LS-G	185-183	1.10	10	0.54-0.39	-20/-29	G	75A
4	120-277	ICN-4S54-90C-2LS-G	235-230	1.10	10	1.96-0.84	-20/-29	G	75
	347-480	HCN-4S54-90C-2LS-G	236-234	1.10	10	0.68-0.49	-20/-29	G	75
FT55W/2G11 - 55W (PL-L55W, F55BX, FT55DL)									
1	120-277	ICN-2S54-N	58	0.98	15	0.49-0.22	-20/-29	N	73
	120-277	ICN-2S54-T	58	0.92	10	0.49-0.21	-20/-29	T	73
	120-277	ICN-2S54-90C-N	58	0.92	15	0.49-0.22	-20/-29	B	73
	120-277	ICN-2S54-90C-T	58	0.92	10	0.49-0.21	-20/-29	T	73
	347-480	HCN-2S54-90C-WL	58	0.92	10	0.17-0.13	-20/-29	L	73
2	120-277	ICN-2S54-N	112-109	0.93	10	0.94-0.41	-20/-29	N	74
	120-277	ICN-2S54-T	108-105	0.90	10	0.90-0.38	-20/-29	T	74
	120-277	ICN-2S54-90C-N	112-109	0.90	10	0.94-0.41	-20/-29	B	74
	120-277	ICN-2S54-90C-T	108-105	0.90	10	0.90-0.38	-20/-29	T	74
	347-480	HCN-2S54-90C-WL	112	0.90	10	0.33-0.24	-20/-29	L	74
3	120-277	ICN-4S54-90C-2LS-G	169-166	0.90	10	1.41-0.61	-20/-29	G	75A
	347-480	HCN-4S54-90C-2LS-G	178-176	0.90	10	0.52-0.37	-20/-29	G	75A
4	120-277	ICN-4S54-90C-2LS-G	222-217	0.90	10	1.86-0.80	-20/-29	G	75
	347-480	HCN-4S54-90C-2LS-G	228-226	0.90	10	0.66-0.47	-20/-29	G	75
FT80W/2G11 - 80W (PL-L80W, FT80DL)									
1	120-277	ICN-1S80-T	90-88	1.00	10	0.74-0.32	0/-18	T	73

Centium Ballasts for 22-55W Circline Fluorescent Lamps — Programmed Start

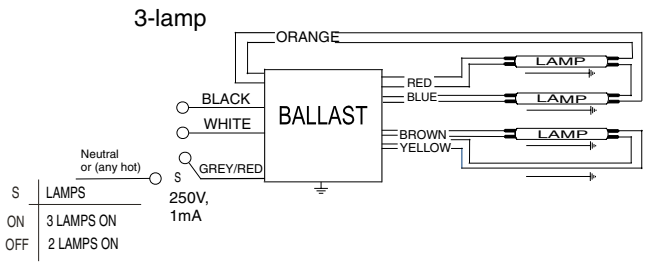
No. of Lamps	Input Volts	Catalog Number	Input Power ANSI (Watts)	Ballast Factor	THD %	Line Current (Amps)	Minimum Starting Temp. (°F/°C)	Dim.	Wiring Diagram
FC9T5 (22W Circline)									
1	120-277	ICN-2S24-N	28	0.98	20	0.22-0.11	0/-18	N	73
	120-277	ICN-2S24-T	26	1.02	10	0.22-0.10	0/-18	T	73
	120-277	ICN-2S39-N	29	1.09	20	0.24-0.11	0/-18	N	73
	120-277	ICN-2S39-T	29	1.12	10	0.24-0.12	0/-18	T	73
2	120-277	ICN-2S24-N	49	0.98	10	0.41-0.18	0/-18	N	74
	120-277	ICN-2S24-T	51	1.00	10	0.42-0.18	0/-18	T	74
	120-277	ICN-2S39-N	54	1.07	15	0.45-0.20	0/-18	N	74
	120-277	ICN-2S39-T	54	1.10	10	0.46-0.20	0/-18	T	74
FC12T5 (40W Circline)									
1	120-277	ICN-2S24-N	39-38	0.84	15	0.32-0.14	0/-18	N	74
	120-277	ICN-2S24-T	40	0.84	10	0.33-0.15	0/-18	T	73
	120-277	ICN-2S39-N	45	1.03	15	0.38-0.17	0/-18	N	73
	120-277	ICN-2S39-T	42	0.92	10	0.35-0.16	0/-18	T	73
2	120-277	ICN-2S39-N	81	0.91	10	0.68-0.30	0/-18	N	74
	120-277	ICN-2S39-T	79	0.90	10	0.66-0.29	0/-18	T	74
(1) FC9T5 & (1) FC12T5 {(1) 22W & (1) 40W Circline}									
1&1	120-277	ICN-2S39-N	66	0.94	10	0.56-0.24	0/-18	N	74
	120-277	ICN-2S39-T	68	1.00	10	0.57-0.25	0/-18	T	74
FC12T5/HO (55W Circline)									
1	120-277	ICN-2S54-T	58	0.92	10	0.49-0.21	0/-18	T	73
	120-277	ICN-2S54-90C-N	55	0.87	15	0.46-0.21	0/-18	B	73
	120-277	ICN-2S54-90C-T	58	0.92	10	0.49-0.21	0/-18	T	73
	347-480	HCN-2S54-90C-WL	55	0.87	10	0.16-0.12	0/-18	L	73
2	120-277	ICN-2S54-T	110-108	0.88	10	0.92-0.39	0/-18	T	74
	120-277	ICN-2S54-90C-N	106-103	0.85	10	0.89-0.38	0/-18	B	74
	120-277	ICN-2S54-90C-T	110-108	0.88	10	0.92-0.39	0/-18	T	74
	347-480	HCN-2S54-90C-WL	106	0.85	10	0.31-0.22	0/-18	L	74

Wiring Diagrams

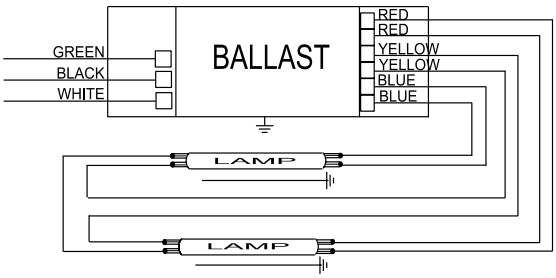


For one lamp operation, do not use yellow leads.

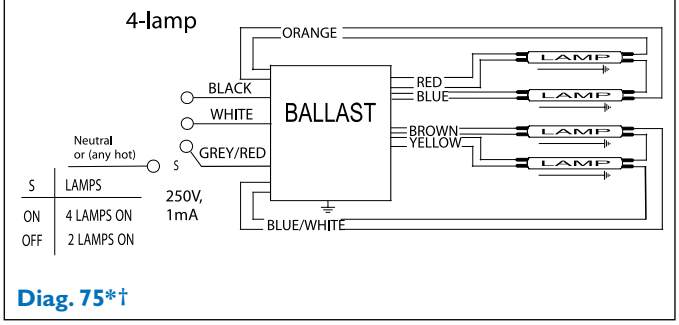
Diag. 73*



Diag. 75A*†



Diag. 74*



Diag. 75*†

* For all HCN ballasts hot leads are black with orange and black with white

† Grey/red wire must be connected to the neutrals or any hot

Dimensions

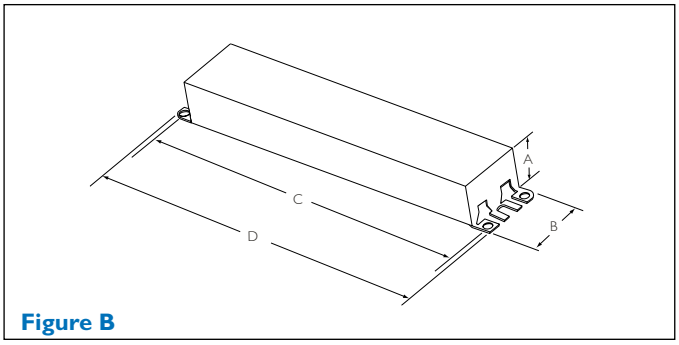


Figure B

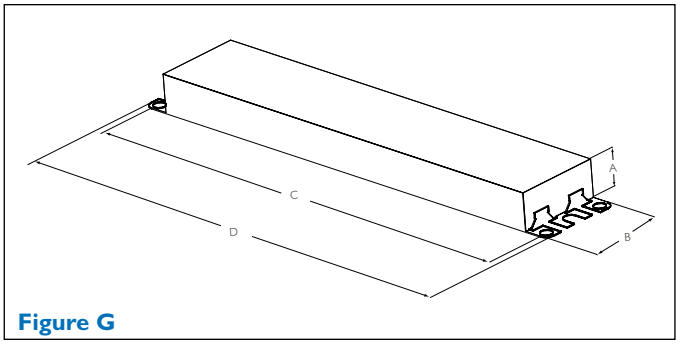


Figure G

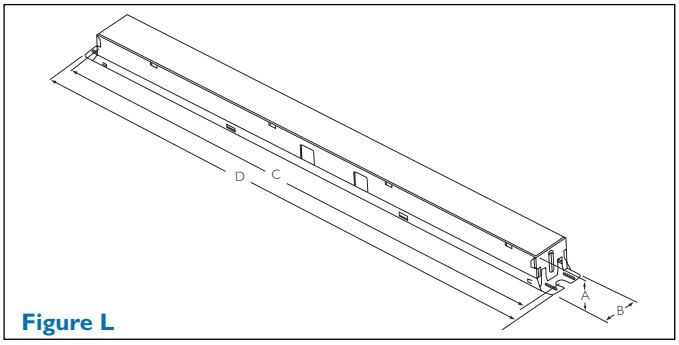


Figure L

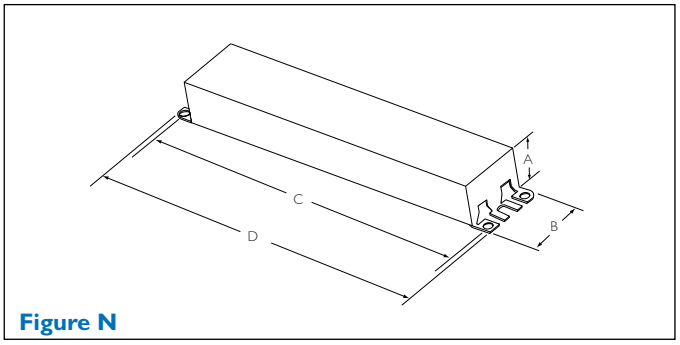


Figure N

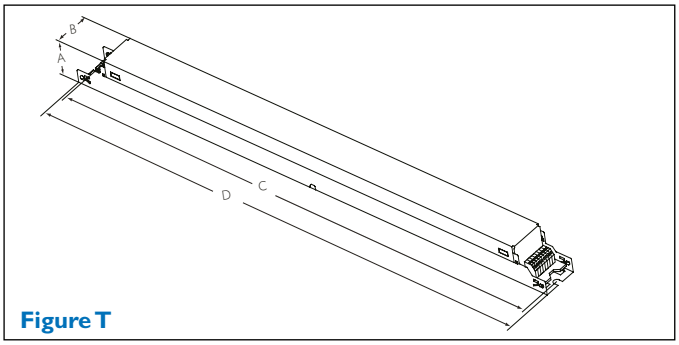


Figure T

Figure	A	B	C	D
B	1.18"	1.70"	8.90"	9.50"
G	1.18"	1.70"	16.34"	16.70"
L	1.00"	1.18"	16.34"	16.70"
N	1.00"	1.30"	8.90"	9.50"
T	1.06"	1.18"	13.78"	14.17"

Ballast Specification

Section I - Physical Characteristics

1.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.

1.2 Ballast shall be provided with color-coded integral leads or connectors per ANSI C82.11.

Section II - Performance Requirements

2.1 Ballast shall be Programmed Start.

2.2 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.

2.3 Ballast shall operate from 50/60 Hz input source of 120V through 277V or 347V through 480V with sustained variations of +/- 10% (voltage and frequency) with no damage to the ballast.

2.4 Ballast shall be high frequency electronic type and operate lamps at a frequency between 42 kHz and 52kHz to avoid interference with infrared devices, eliminate visible flicker and avoid Article Surveillance Systems, such as anti-theft devices.

2.5 Ballast shall have a Power Factor greater than 0.98 for primary lamp.

2.6 Ballast shall have a minimum ballast factor of 1.0 for primary lamps.

2.7 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less in accordance with lamp manufacturer recommendations.

2.8 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at normal line voltage with full load primary lamps.

2.9 Ballast shall have a Class A sound rating.

2.10 Ballast shall have a minimum starting temperature of -18°C (0°F) or -29°C (-20°F) for primary lamp.

2.11 Ballast shall provide Lamp EOL Protection.

2.12 Ballast shall tolerate sustained open circuit and short circuit output conditions without damage.

Section III - Regulatory Requirements

3.1 Ballast shall not contain any Polychlorinated Biphenyl (PCB).

3.2 Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.

3.3 Ballast shall comply with ANSI C62.41 Category A for transient protection.

3.4 Ballast shall comply with ANSI C82.11 where applicable.

3.5 Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).

3.6 Ballast shall comply with UL Type CC rating.

Section IV - Other

4.1 Ballast shall be manufactured in a factory certified to ISO 9002 Quality System Standards.

4.2 Ballast shall carry a _____ limited warranty from date of manufacture against defects in material or workmanship. (Go to our web site for up-to-date warranty information: www.philips.com/advancewarranty).

4.3 Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.

Form No. EL-2070-G

Philips Lighting Electronics N.A.
10275 West Higgins Road
Rosemont, IL 60018
Tel: 800-322-2086 Fax: 888-423-1882
Customer Support/Technical Service: 800-372-3331
OEM Support: 866-915-5886
www.philips.com/advance