

NORTH AMERICA NEW & FEATURED PRODUCTS



MEET THE NEW **FULHAM**®

Forward Leaning...
Global in Scale...
Adding Connectivity & Intelligence...
Committed to a Sustainable Planet...



Fulham Factory
Pune, India



Fulham Factory
Beijing, China

Inside you will learn more about what new innovations, technologies and key products are helping transform lighting components and specialty lighting solutions.

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WHAT'S NEW?

NEW

Programmable LED Drivers

- 250 - 1050mA Programmable Current
- 10 - 57V Programmable Voltage
- Hand Held Remote Programmer - USB to PC/ Mini USB to Programmer
- Use to set Current, Voltage, Address, Dimming Curve, Groups, Thermal Temperature Protection and Terminal Resistor Values



Programmable LED Dimming LED Driver: DALI: Most Frequently Ordered

WATTS	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (VDC)	MODEL NUMBER	INPUT VOLTAGE (VAC)	DIMMING TYPE	# OF CH.	IP	DIMENSIONS (LxWxH)	LEAD POSITION
40	250 - 1050	10 - 57	T1A1UNV105P-40E	120 - 277 (50/60)	DALI	1	60	275mm x 31mm x 25mm	Linear w/ End Terminals
60	250 - 1050	10 - 57	T1A1UNV105P-60E	120 - 277 (50/60)	DALI	1	60	237mm x 40.5mm x 30mm	Linear w/End Terminals
Programmer			TPSB-100	5 Volt/Mini USB	Hand Held Programmer to Program Output Current, Voltage, Address, Mode, Dimming Curve, Groups, etc.				

*Drivers require programmer

Programmable LED Dimming LED Drivers: 0 - 10V: Most Frequently Ordered

WATTS	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (VDC)	MODEL NUMBER	INPUT VOLTAGE (VAC)	DIMMING TYPE	# OF CH.	IP	DIMENSIONS (LxWxH)	LEAD POSITION
40	250 - 1050	10 - 57	T1M1UNV105P-40E	120 - 277 (50/60)	0 - 10V	1	IP60	275mm x 31mm x 25mm	Linear Case w/ End Terminals
60	250 - 1050	10 - 57	T1M1UNV105P-60F	120 - 277 (50/60)	0 - 10V	1	IP60	126mm x 76mm x 31mm	Compact Case w/ Terminal
Programmer			TPSB-100	5 Volt/Mini USB	Hand Held Programmer to Program Output Current, Voltage, Address, Mode, Dimming Curve, Groups, etc.				

*Drivers require programmer

NEW

ALL-IN-ONE

LED Driver/Emergency Battery Back-up

- All-In-One Programmable 40 Watt LED Driver / Emergency Battery Back Up Combination Unit
- Programmable from 250mA to 1.4 Amp Output Current both with new hand held programmer (TPSB-100) or with Accessory Wire Harness
- Adjustable to one (1) mA increments with Programmer or 50 mA Increments with Harnesses
- Selectable Constant Power 5 Watt - 180 Minute Run Time or 10 Watt - 90 Minute Run Time Emergency Output
- Comes Standard with Self Diagnostics - User Selectable

All-In-One LED Programmable Driver/Emergency Battery Pack Unit: Most Frequently Ordered

WATTS	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (VDC)	MODEL/ITEM NUMBER	INPUT VOLTAGE (VAC)	DIMMING TYPE	N° OF CH.	IP RATING	DIMENSIONS (LxWxH)	LEAD POSITION
40	250-1450	11-57	FHSAC1UNV40C	120 - 277 (50/60)	0 - 10V	1	IP60	160mm(6.29") X 76mm(3.0") X 28mm(1.10")	Compact w/End Leads
Programmer			TPSB-100	5 Volt/Mini USB	Hand Held Programmer to Program Output Current, Voltage, Address, Mode, Dimming Curve, Groups, etc.				

*Programmer optional

Or... Select Harness from below to select specific current output:

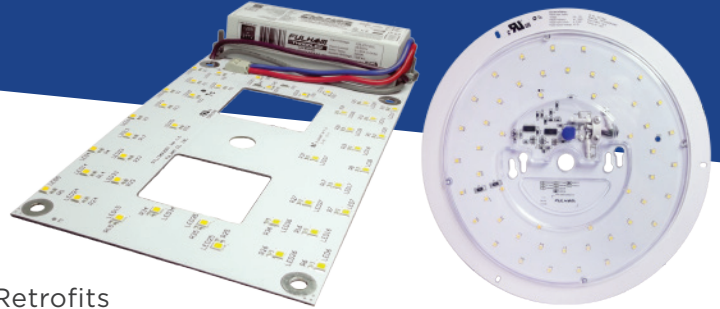
OUTPUT CURRENT (mA)	MODEL/ITEM NUMBER
250	FHS-HARNESS-250
300	FHS-HARNESS-300
350	FHS-HARNESS-350
400	FHS-HARNESS-400
450	FHS-HARNESS-450
500	FHS-HARNESS-500
550	FHS-HARNESS-550
600	FHS-HARNESS-600
650	FHS-HARNESS-650
700	FHS-HARNESS-700



NEW

LED Light Engines

- Round, Half-Round, Rectangle Light Engines
- Perfect for Ceiling and Wall Mounting/Sconce Retrofits
- 2700 - 5000K Color Temperature Available
- LED Retrofit Kits are cULus Classified for field installation. LED modules, drivers and light engines (assembled modules + drivers) are UL Recognized. If standard options do not meet your application requirements, modules and drivers can be purchased separately.



DC LED Light Engines: Round: Most Frequently Ordered

WATTS	LUMEN OUTPUT	DIMMING TYPE	MODEL NUMBER	INPUT VOLTAGE (VAC)	SHAPE	CCT	CRI	DIMENSIONS	CLAS.
13	1,450	TRIAC	TET120013RD3001	120	Round	3000	80	7 Inch Diameter - 1.25" H	cULus
13	1,450	0-10V	TEMUNV013RD3001	UNV	Round	3000	80	7 Inch Diameter - 1.25" H	
21	2,325	TRIAC	TET120021RD3001	120	Round	3000	80	9 Inch Diameter - 1.75" H	
21	2,325	0-10V	TEMUNV021RD3001	UNV	Round	3000	80	9 Inch Diameter - 1.75" H	
25	2,900	TRIAC	TET120025RD3001	120	Round	3000	80	9 Inch Diameter - 1.75" H	
25	2,900	0-10V	TEMUNV025RD3001	UNV	Round	3000	80	9 Inch Diameter - 1.75" H	

DC LED Light Engines: Half-Round: Most Frequently Ordered

13	1,450	TRIAC	TET120013HR3001	120	Half Rd	3000	80	7" L, 3.5" W, 1.25" H	cULus
13	1,450	0-10V	TEMUNV013HR3001	UNV	Half Rd	3000	80	7" L, 3.5" W, 1.25" H	

DC LED Light Engines: Rectangle: Most Frequently Ordered

13	1,450	TRIAC	TET120013RT3006	120	Rectangle	3000	80	7" L, 4.0" W, 1.25" H	cULus
13	1,450	0-10V	TEMUNV013RT3006	UNV	Rectangle	3000	80	7" L, 4.0" W, 1.25" H	

DC LED Light Engines: Round - UL Classified Kits

(Comes With Mounting Hardware Kit) Most Frequently Ordered

13	1,450	0-10V	TKMUNV013RD3001	UNV	Round	3000	80	7 Inch Diameter - 1.25" H	CLASSIFIED cULus
21	2,325	0-10V	TKMUNV021RD3001	UNV	Round	3000	80	9 Inch Diameter - 1.75" H	
25	2,900	0-10V	TKMUNV025RD3001	UNV	Round	3000	80	9 Inch Diameter - 1.75" H	

AC LED Light Engines: Most Frequently Ordered

10	850	N/A	TAT120010AC830	120	Round	3000	80	6.5" Diameter - 0.56" H	cULus
15	1,275	N/A	TAT120015AC830	120	Round	3000	80	6.5" Diameter - 0.56" H	
25	2,125	N/A	TAT120025AC830	120	Round	3000	80	9" Diameter - 0.56" H	

NEW

Outdoor LED Drivers

- Harsh / Wet Location Rated Drivers for use in Outdoor Luminaires
- Dimming and Non-Dimming Choices
- cULus Listed
- Universal 120-277VAC Input Voltage



Non-Dimmable Constant Current: Most Frequently Ordered

WATTS	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (VDC)	MODEL/ITEM NUMBER	INPUT VOLTAGE (VAC)	DIMMING TYPE	N° OF CH.	IP RATING	DIMENSIONS (LxWxH)	LEAD POSITION
33	700	26 - 48	T1UNV0700-36C	120 - 277 (50/60)	N/A	1	IP66	95mm(3.74") x 70mm(2.76") x 32mm(1.26")	Compact w/End Leads
105	1000	75 - 105	T1UNV1000-105L	120 - 277 (50/60)	N/A	1	IP65	197mm(7.76") x 65mm(2.56") x 38mm(1.5")	Linear w/End Leads
200	700	114 - 190	T1UNV0700-200L	120 - 277 (50/60)	N/A	1	IP65	225mm(8.86") x 68mm(2.66") x 39mm(1.52")	Linear w/End Leads
200	1050	114 - 190	T1UNV1050-200L	120 - 277 (50/60)	N/A	1	IP65	225mm(8.86") x 68mm(2.66") x 39mm(1.52")	Linear w/End Leads
210	1000	150 - 210	T1UNV1000-210L	120 - 277 (50/60)	N/A	1	IP65	197mm(7.76") x 65mm(2.56") x 38mm(1.5")	Linear w/End Leads

Dimmable Constant Voltage: Most Frequently Ordered

150	N/A	24V	T1M1UNV024V150L	120 - 277 (50/60)	0 - 10V	1	IP67	227mm(8.94") x 43mm(1.69") x 40mm(1.56")	Linear w/End Leads
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Non-Dimmable Constant Voltage: Most Frequently Ordered

60	N/A	12V	T1UNV012V-60L	120 - 277 (50/60)	N/A	1	IP66	241mm(9.49") x 43mm(1.70") x 31mm(1.21")	Linear w/End Leads
60	N/A	12V	T1UNV012V-60LG	120 - 277 (50/60)	N/A	1	IP68	242mm(9.53") x 42mm(1.67") x 34mm(1.34")	Linear IP68
150	N/A	24V	T1UNV024V-150L	120 - 277 (50/60)	N/A	1	IP67	227mm(8.94") x 43mm(1.69") x 40mm(1.56")	Linear w/End Leads

PROGRAMMABLE LED DRIVERS

FULHAM

THOROLED™ NEW

- 250 - 1050mA Programmable Current
- 10 - 57V Programmable Voltage
- Hand Held Remote Programmer - USB to PC/
Mini USB to Programmer
- Use to set Current, Voltage, Address, Dimming
Curve, Groups, Thermal Temperature Protection
and Terminal Resistor Values



Programmable LED Drivers: DALI: Most Frequently Ordered

WATTS	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (VDC)	MODEL NUMBER	INPUT VOLTAGE (VAC)	DIMMING TYPE	# OF CH.	IP	DIMENSIONS (LxWxH)	LEAD POSITION
40	250 - 1050	10 - 57	T1A1UNV105P-40E	120 - 277 (50/60)	DALI	1	60	10.83" x 1.22" x 0.98"	Linear w/ End Terminals
60	250 - 1050	10 - 57	T1A1UNV105P-60E	120 - 277 (50/60)	DALI	1	60	9.33" x 1.6" x 1.18"	Linear w/End Terminals
60	250 - 1050	10 - 57	T1A1UNV105P-60F	120 - 277 (50/60)	DALI	1	60	5.0" x 3.0" x 1.22"	Compact Case w/ End Terminals
60	250 - 1050	10 - 57	T1A1UNV105P-60G	120 - 277 (50/60)	DALI	1	60	5.0" x 3.0" x 1.22"	Compact Case w/ End Terminals+Back Lead
Programmer			TPSB-100	5 Volt/Mini USB	Hand Held Programmer to Program Output Current, Voltage, Address, Mode, Dimming Curve, Groups, etc.				

*Drivers require programmer

Programmable LED Drivers: 0 - 10V: Most Frequently Ordered

WATTS	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (VDC)	MODEL NUMBER	INPUT VOLTAGE (VAC)	DIMMING TYPE	# OF CH.	IP	DIMENSIONS (LxWxH)	LEAD POSITION
40	250 - 1050	10 - 57	T1M1UNV105P-40E	120 - 277 (50/60)	0 - 10V	1	60	10.83" x 1.22" x 0.98"	Linear Case w/ End Terminals
60	250 - 1050	10 - 57	T1M1UNV105P-60E	120 - 277 (50/60)	0 - 10V	1	60	9.33" x 1.6" x 1.18"	Compact Case w/ End Terminals
60	250 - 1050	10 - 57	T1M1UNV105P-60F	120 - 277 (50/60)	0 - 10V	1	60	5.0" x 3.0" x 1.22"	Compact Case w/ Terminal
60	250 - 1050	10 - 57	T1M1UNV105P-60G	120 - 277 (50/60)	0 - 10V	1	60	5.0" x 3.0" x 1.22"	Compact Case w/ End Terminals+Back Lead
Programmer			TPSB-100	5 Volt/Mini USB	Hand Held Programmer to Program Output Current, Voltage, Address, Mode, Dimming Curve, Groups, etc.				

*Drivers require programmer



DIMMING LED DRIVERS



- Smooth Dimming from 100% down to 10%
- Choice of Single Channel or Select Models with Multiple Channels
- Wide range of Wattages and Current Outputs to meet numerous applications
- 347V Available in Select Models below
- Triac dimming models compatible with leading dimmer brands



Constant Current Dimming LED Drivers: 0 - 10V: Most Frequently Ordered

WATTS	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (VDC)	MODEL NUMBER	INPUT VOLTAGE (VAC)	N° OF CH.	IP RATING	DIMENSIONS (LxWxH)	LEAD POSITION
15	350	21 - 42	T1M1UNV0350-15F	120 - 277 (50/60)	1	60	L=3.19", W=2.83", H=0.98"	Compact w/Terminals
15	350	21 - 42	T1M1UNV0350-15L	120 - 277 (50/60)	1	64	L=3.94", W=1.18", H=0.90"	Linear w/Side Leads
28	350	18 - 42	T1M13470350-28C	347V	1	64	L=4.72", W=2.69", H=1.18"	Compact w/Side Leads
28	500	18 - 42	T1M13470500-28C	347V	1	64	L=4.72", W=2.69", H=1.18"	Compact w/Side Leads
28	600	18 - 42	T1M13470600-28C	347V	1	64	L=4.72", W=2.69", H=1.18"	Compact w/Side Leads
28	650	18 - 42	T1M13470650-28C	347V	1	64	L=4.72", W=2.69", H=1.18"	Compact w/Side Leads
28	700	18 - 40	T1M13470700-28C	347V	1	64	L=4.33", W=2.69", H=1.18"	Compact w/Side Leads
28	700	18 - 40	T1M13470700-28V	347V	1	64	L=4.72", W=2.69", H=1.22"	Compact w/Bottom Leads & Mounting Studs
28	700	12 - 40	T1M1UNV0700-28BL	UNV w/12V tap on sec	1	64	L=3.15", W=2.99", H=1.06"	Compact w/Bottom Leads & Mounting Studs
30	700	21 - 42	T1M1UNV0700-30F	120 - 277 (50/60)	1	60	L=2.83", W=2.4", H=0.98"	Compact w/Terminals
30	700	21 - 42	T1M1UNV0700-30L	120 - 277 (50/60)	1	64	L=4.65", W=1.18", H=1.18"	Linear w/Side Leads
40	700	18 - 57	T1M13470700-40C	347V	1	64	L=4.33", W=2.69", H=1.18"	Compact w/Side Leads
40	700	18 - 57	T1M13470700-40V	347V	1	64	L=4.72", W=2.69", H=1.22"	Compact w/Bottom Leads & Mounting Studs
40	700	18 - 58	T1M1UNV0700-40C	UNV w/12V tap on sec	1	64	L=3.74", W=2.76", H=1.19"	Compact w/Side Leads
40	700	18 - 58	T1M1UNV0700-40V	UNV w/12V tap on sec	1	64	L=4.72", W=2.69", H=1.22"	Compact w/Bottom Leads & Mounting Studs
40	820	18 - 48	T1M13470820-40C	347V	1	64	L=4.72", W=2.69", H=1.18"	Compact w/Side Leads
40	850	18 - 47	T1M13470850-40C	347V	1	64	L=4.72", W=2.69", H=1.18"	Compact w/Side Leads
40	950	18 - 42	T1M13470950-40C	347V	1	64	L=4.72", W=2.69", H=1.18"	Compact w/Side Leads
40	1000	18 - 40	T1M13471000-40C	347V	1	64	L=4.72", W=2.69", H=1.18"	Compact w/Side Leads
40	1050	18 - 38	T1M13471050-40C	347V	1	64	L=4.72", W=2.69", H=1.18"	Compact w/Side Leads
40	1050	10 - 57	T1M1UNV105P-40E	120 - 277 (50/60)	1	60	L=10.83", W=1.22", H=0.9"	Linear w/Side Leads
42	1050	12 - 40	T1M1UNV1050-42C	UNV w/12V tap on sec	1	64	L=4.72", W=2.69", H=1.18"	Compact w/Bottom Leads & Mounting Studs
42	1050	12 - 40	T1M1UNV1050-42V	UNV w/12V tap on sec	1	64	L=4.72", W=2.69", H=1.22"	Linear w/Side Leads
60	1050	10 - 57	T1M1UNV105P-60E	120 - 277 (50/60)	1	60	L=9.33", W=1.59", H=1.18"	Compact w/Terminals
60	1050	10 - 57	T1M1UNV105P-60F	120 - 277 (50/60)	1	60	L=4.98", W=3", H=1.26"	Linear w/Side Leads
60	1050	10 - 57	T1M1UNV105P-60G	120 - 277 (50/60)	1	60	L=4.98", W=3", H=1.26"	Linear w/Side Leads
60	1400	18 - 42	T1M1UNV1400-60L	120 - 277 (50/60)	1	damp	L=8.27", W=1.70", H=1.20"	Linear w/Side Leads
100	800	70 - 120	T1M1UNV0800-100A	120 - 277 (50/60)	1	N/A	N/A	

Constant Current Dimming LED Drivers: 0 - 10V Multiple Outputs: Most Frequently Ordered

34	300	15 - 27	TCD4UNV0300-34L	120 - 277 (50/60)	4	damp	L=9.48", W=1.68", H=1.18"	Linear w/Side Leads
36	600	23 - 30	T1M2UNV0600-36L	120 - 277 (50/60)	2	damp	L=11.82", W=1.50", H=1.22"	Linear w/Side Leads
39	350	15 - 27	TCD4UNV0350-39L	120 - 277 (50/60)	4	damp	L=9.48", W=1.68", H=1.18"	Linear w/Side Leads
42	385	15 - 27	TCD4UNV0385-42L	120 - 277 (50/60)	4	damp	L=9.48", W=1.68", H=1.18"	Linear w/Side Leads
49	700	23 - 35	T1M2UNV0700-49L	120 - 277 (50/60)	2	damp	L=10.28", W=1.57", H=1.19"	Linear w/Side Leads
56	350	15 - 40	TCD4UNV0350-56L	120 - 277 (50/60)	4	64	L=9.49", W=1.69", H=1.20"	Linear w/Side Leads

Constant Voltage Dimming LED Drivers: 0 - 10V: Most Frequently Ordered

20	0 - 1660	12V	T1M1UNV012V-20L	120 - 277 (50/60)	1	62	L=6.30", W=1.57", H=0.98"	Linear w/Side Leads
20	0 - 833	24V	T1M1UNV024V-20L	120 - 277 (50/60)	1	62	L=6.30", W=1.57", H=0.98"	Linear w/Side Leads
60	0 - 5000	12V	T1M1UNV012V-60L	120 - 277 (50/60)	1	64	L=8.32", W=1.69", H=1.22"	Linear w/Side Leads
60	0 - 2500	24V	T1M1UNV024V-60L	120 - 277 (50/60)	1	64	L=9.49", W=1.69", H=1.22"	Linear w/Side Leads
75	0 - 6250	12V	T1M1UNV012V-75L	120 - 277 (50/60)	1	64	L=9.49", W=1.69", H=1.22"	Linear w/Side Leads
75	0 - 3125	24V	T1M1UNV024V-75L	120 - 277 (50/60)	1	64	L=9.49", W=1.69", H=1.22"	Linear w/Side Leads
150	0 - 6250	24V	T1M1UNV024V150L	120 - 277 (50/60)	1	67	L=8.94", W=1.692.66", H=1.56"	Linear w/Side Leads

Constant Current Dimming LED Drivers: TRIAC: Most Frequently Ordered

9	650	15	TCD11200650-9C	120V	1	damp	L=3.15", W=1.80", H=1.01"	Compact w/Side Leads
9	700	7 - 13	TCD11200700-9C	120V	1	damp	L=3.15", W=1.80", H=1.01"	Compact w/Side Leads
9	700	7 - 12.8	T1T11200700-9C	120V	1	damp	L=3.20", W=2.83", H=1.00"	Compact w/Side Leads
11	350	12 - 40	TCD11200350-11C	120V	1	damp	L=3.21", W=2.83", H=1.01"	Compact w/Side Leads
15	350	21 - 42	T1T11200350-15L	120V	1	64	L=3.94", W=1.18", H=0.90"	Linear w/Side Leads
17	350	26 - 49	T1T11200350-17CB	120V	1	64	L=2.83", W=3.20", H=1.00"	Compact w/Side Leads
17	650	13 - 26	T1T11200650-17CA	120V	1	64	L=2.83", W=3.20", H=1.00"	Compact w/Side Leads
18	650	17 - 27	TCD11200650-18C	120V	1	damp	L=2.13", W=2.362, H=1.00"	Compact w/Side Leads
18	700	17 - 26	T1T11200700-18C	120V	1	62	L=3.20", W= 2.83", H=1.00"	Compact w/Side Leads
18	700	13 - 26	T1T1120070018CA	120V	1	64	L=2.83", W=3.20", H=1.00"	Compact w/Side Leads
20	1000	11 - 20	T1T11201000-20C	120V	1	62	L=4.18", W=2.20", H=1.14"	Compact w/Side Leads
30	700	21 - 42	T1T11200700-30C	120V	1	64	L=3.35", W=2.56", H=0.75"	Compact w/Side Leads
30	700	21 - 42	T1T11200700-30L	120V	1	64	L=4.65", W=1.18", H=1.16"	Linear w/Side Leads

STANDARD CONSTANT CURRENT LED DRIVERS



- Optimized High Efficiency Performance
- Single and Multiple Channel Products Offered
- Compact and Linear Case Size Variations to fit Numerous Luminaire Applications
- Ideal for Interior Luminaire Applications

Standard Constant Current: Single Output - Non-Dimming Drivers: Most Frequently Ordered

WATTS	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (VDC)	MODEL/ITEM NUMBER	INPUT VOLTAGE (VAC)	N° OF CH.	IP RATING	DIMENSIONS (LxWxH)	LEAD POSITION
6	350	3 - 20	TC11200350-6C	120V	1	62	L=2.57", W=1.77", H=0.98"	Compact w/Side Leads
15	350	20 - 46	TC11200350-15C	120V	1	62	L=2.57", W=1.77", H=0.98"	Compact w/Side Leads
18	700	10 - 26	TC11200700-18C	120V	1	62	L=2.13", W=2.36", H=1.00"	Compact w/Side Leads
28	700	12 - 40	T1UNV0700-28BL	120 - 277 (50/60)	1	62	L=3.15", W=3.15", H=1.02"	Compact w/Side Leads
33	700	26 - 48	T1UNV0700-36C	120 - 277 (50/60)	1	66	L=3.74", W=2.76", H=1.26"	Compact w/Side Leads
40	700	18 - 58	T1UNV0700-40C	120 - 277 (50/60)	1	64	L=3.74", W=2.76", H=1.19"	Compact w/Side Leads
42	1050	12 - 40	T1UNV1050-42C	120 - 277 (50/60)	1	64	L=3.74", W=2.76", H=1.19"	Compact w/Side Leads
60	350	80 - 180	T1UNV0350-60L	120 - 277 (50/60)	1	64	L=7.72", W=1.69", H=1.18"	Linear w/Side Leads
60	1400	20 - 43	T1UNV1400-60L	120 - 277 (50/60)	1	64	L=7.72", W=1.69", H=1.18"	Linear w/Side Leads

Standard Constant Current: Multiple Output - Non-Dimming Drivers: Most Frequently Ordered

50	350	18 - 56	TC3MLT0350-50L	120/240 (50/60)	3	62	L=18.00", W=1.72", H=1.00"	Linear w/Side Leads
50	350	18 - 48	TCD3MLT0350-50L	120/240 (50/60)	3	62	L=14.39", W=1.72", H=1.00"	Linear w/Side Leads
55	350	18 - 56	TCD3MLT0350-55L	120/240 (50/60)	3	62	L=14.39", W=1.72", H=1.00"	Linear w/Side Leads
75	500	15 - 49	TC31200500-75LA	120V	3	62	L=12.00", W=1.34", H=1.00"	Linear w/Side Leads
80	500	18 - 56	TC3MLT0500-80L	120/240 (50/60)	3	62	L=18.00", W=1.72", H=1.00"	Linear w/Side Leads



STANDARD CONSTANT VOLTAGE LED DRIVERS



- Optimized High Efficiency Performance
- Constant Voltage - 12V and 24V Models (48V in 150 Watt)
- cULus Listed
- Low Temperature Performance



Standard Constant Voltage: Single Output - Non-Dimming Drivers: Most Frequently Ordered

WATTS	OUTPUT VOLTAGE (VDC)	MODEL/ITEM NUMBER	INPUT VOLTAGE (VAC)	N° OF CH.	IP RATING	DIMENSIONS (LxWxH)	LEAD POSITION
20	12V	T1UNV012V-20L	120 - 277 (50/60)	1	62	L=6.30", W=1.57", H=0.98"	Linear w/End Leads
20	24V	T1UNV024V-20L	120 - 277 (50/60)	1	62	L=6.30", W=1.57", H=0.98"	Linear w/End Leads
60	12V	T1120012V-60LE	120V	1	64	L=9.49", W=1.69", H=1.22"	Linear w/End Leads
60	12V	T1UNV012V-60LF	120 - 277 (50/60)	1	64	L=9.49", W=1.69", H=1.22"	Linear w/End Leads
60	24V	T1UNV024V-60LF	120 - 277 (50/60)	1	64	L=9.49", W=1.69", H=1.22"	Linear w/End Leads
75	12V	T1UNV012V-75L	120 - 277 (50/60)	1	64	L=9.49", W=1.69", H=1.22"	Linear w/End Leads
75	24V	T1UNV024V-75L	120 - 277 (50/60)	1	64	L=9.49", W=1.69", H=1.22"	Linear w/End Leads
100	24V	T1UNV024V-100LE (4KV/4KV)	120 - 277 (50/60)	1	64	L=9.49", W=1.69", H=1.22"	Linear w/End Leads
100	24V	T1UNV024V-100LS (2KV/4KV)	120 - 277 (50/60)	1	64	L=10.25", W=1.70", H=1.21"	Linear w/End Leads
150	48V	T1UNV048V-150L	120 - 277 (50/60)	1	62	L=8.27", W=2.56", H=1.54"	Linear w/End Leads



- Harsh / Wet Location Rated Drivers for use in Outdoor Luminaires
- Dimming and Non-Dimming Choices
- cULus Listed
- Universal 120-277VAC Input Voltage

OUTDOOR LED DRIVERS



NEW

Non-Dimmable Constant Current: Most Frequently Ordered

WATTS	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (VDC)	MODEL/ITEM NUMBER	INPUT VOLTAGE (VAC)	DIMMING TYPE	N° OF CH.	IP RATING	DIMENSIONS (LxWxH)	LEAD POSITION
33	700	26 - 48	T1UNV0700-36C	120 - 277 (50/60)	N/A	1	IP66	95mm(3.74") x 70mm(2.76") x 32mm(1.26")	Compact w/End Leads
105	1000	75 - 105	T1UNV1000-105L	120 - 277 (50/60)	N/A	1	IP65	197mm(7.76") x 65mm(2.56") x 38mm(1.5")	Linear w/End Leads
200	700	114 - 190	T1UNV0700-200L	120 - 277 (50/60)	N/A	1	IP65	225mm(8.86") x 68mm(2.66") x 39mm(1.52")	Linear w/End Leads
200	1050	114 - 190	T1UNV1050-200L	120 - 277 (50/60)	N/A	1	IP65	225mm(8.86") x 68mm(2.66") x 39mm(1.52")	Linear w/End Leads
210	1000	150 - 210	T1UNV1000-210L	120 - 277 (50/60)	N/A	1	IP65	197mm(7.76") x 65mm(2.56") x 38mm(1.5")	Linear w/End Leads

Dimmable Constant Voltage: Most Frequently Ordered

150	N/A	24V	T1M1UNV024V150L	120 - 277 (50/60)	0 - 10V	1	IP67	227mm(8.94") x 43mm(1.69") x 40mm(1.56")	Linear w/End Leads
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Non-Dimmable Constant Voltage: Most Frequently Ordered

60	N/A	12V	T1UNV012V-60L	120 - 277 (50/60)	N/A	1	IP66	241mm(9.49") x 43mm(1.70") x 31mm(1.21")	Linear w/End Leads
60	N/A	12V	T1UNV012V-60LG	120 - 277 (50/60)	N/A	1	IP68	242mm(9.53") x 42mm(1.67") x 34mm(1.34")	Linear IP68
150	N/A	24V	T1UNV024V-150L	120 - 277 (50/60)	N/A	1	IP67	227mm(8.94") x 43mm(1.69") x 40mm(1.56")	Linear w/End Leads

LED MODULES



- Standard and Custom Boards Available
- 2700, 3000, 3500, 4000 and 5000K CCT Choice Available
- 80 CRI Standard - 90 CRI Available
- Choice of Easy Push-In Dual Connectors or Pre-Wired with Leads
- Dimmable when used with Dimming LED Driver
- Optional Diffusers Available
- Choice of Standard FR-4 or Metal Clad Printed Circuit Boards Available



LED Modules: Round: Most Frequently Ordered

WATTS	LUMEN OUT-PUT	CCT	MODEL/ITEM NUMBER	MAX INPUT CURRENT (mA)	FORWARD VOLTAGE (Vdc)	CRI	TERMINATION TYPE	BOARD MATERIAL	DIMENSIONS
13	1,450	4000	TM40RD0540-201	500	32	80	Dual Connector	FR-4	7" Diameter
21	2,325	4000	TM64RD0540-201	1050	32	80	Dual Connector	FR-4	9" Diameter
25	2,900	4000	TM80RD0540-201	1050	32	80	Dual Connector	FR-4	9" Diameter

LED Modules: Half-Round: Most Frequently Ordered

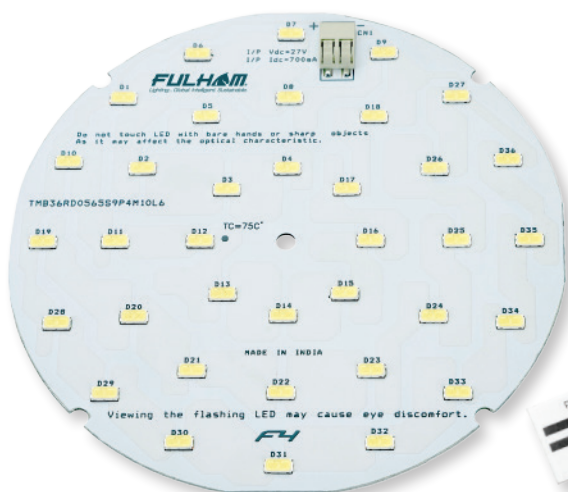
11	1,450	4000	TM40HR0540-201	500	32	80	Dual Connector	FR-4	7" Diameter
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LED Modules: Rectangle: Most Frequently Ordered

11	1,450	4000	TM40RT0540-201	500	32	80	Dual Connector	FR-4	4" X 6"
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LED Modules: Linear: Most Frequently Ordered

7	450	3000	TM02LN4030-002	700	10	80	Wire Leads	MCPCB	0.94" X 5.51"
7	500	4000	TM02LN4040-002	700	10	80	Wire Leads	MCPCB	0.94" X 5.51"
10	990	3000	TM21LN0530-002	1050	9.5	80	Wire Leads	FR-4	1.4" X 11"
10	990	3000	TM21LN0530-202	1050	9.5	80	Dual Connector	FR-4	1.4" X 11"
10	1,225	4000	TM21LN0540-002	1050	9.5	80	Wire Leads	FR-4	1.4" X 11"
10	1,225	4000	TM21LN0540-202	1050	9.5	80	Dual Connector	FR-4	1.4" X 11"
21	1,960	3000	TM42LN0530-002	1050	19.8	80	Wire Leads	FR-4	1.4" X 22"
21	1,960	3000	TM42LN0530-202	1050	19.8	80	Dual Connector	FR-4	1.4" X 22"
21	2,450	4000	TM42LN0540-002	1050	19.8	80	Wire Leads	FR-4	1.4" X 22"
21	2,450	4000	TM42LN0540-202	1050	19.8	80	Dual Connector	FR-4	1.4" X 22"



AC LED LIGHT ENGINES



NEW



AC LED Light Engines: Most Frequently Ordered

WATTS	LUMEN OUTPUT	MODEL NUMBER	INPUT VOLTAGE (VAC)	SHAPE	CCT	CRI	DIMENSIONS
10	850	TAT120010AC830	120	Round	3000	80	6.5" Diameter - 0.56" H
15	1,275	TAT120015AC830	120	Round	3000	80	6.5" Diameter - 0.56" H
25	2,125	TAT120025AC830	120	Round	3000	80	9" Diameter - 0.56" H

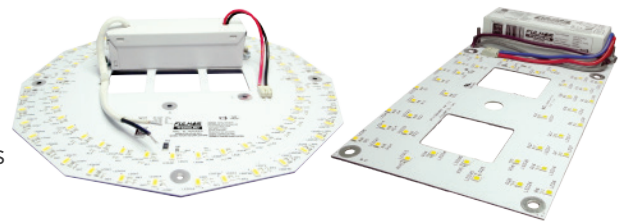
DC LED LIGHT ENGINES



NEW

Dimmable

- Round, Half-Round, Rectangle Light Engines
- Perfect for Ceiling and Wall Mounting/Sconce Retrofits
- 0-10V / TRIAC Dimmable
- 2700 - 5000K Color Temperature Available
- LED Retrofit Kits are cULus Classified for field installation. LED modules, drivers and light engines (assembled modules + drivers) are UL Recognized. If standard options do not meet your application requirements, modules and drivers can be purchased separately.



DC LED Light Engines: Round: Most Frequently Ordered*

WATTS	LUMEN OUTPUT	DIMMING TYPE	MODEL NUMBER	INPUT VOLTAGE (VAC)	SHAPE	CCT	CRI	DIMENSIONS	CLAS.
13	1,450	TRIAC	TET120013RD3001	120	Round	3000	80	7 Inch Diameter - 1.25" H	cULus
13	1,450	0-10V	TEMUNV013RD3001	UNV	Round	3000	80	7 Inch Diameter - 1.25" H	
21	2,325	TRIAC	TET120021RD3001	120	Round	3000	80	9 Inch Diameter - 1.75" H	
21	2,325	0-10V	TEMUNV021RD3001	UNV	Round	3000	80	9 Inch Diameter - 1.75" H	
25	2,900	TRIAC	TET120025RD3001	120	Round	3000	80	9 Inch Diameter - 1.75" H	
25	2,900	0-10V	TEMUNV025RD3001	UNV	Round	3000	80	9 Inch Diameter - 1.75" H	

DC LED Light Engines: Half-Round: Most Frequently Ordered*

13	1,450	TRIAC	TET120013HR3001	120	Half Rd	3000	80	7" L, 3.5" W, 1.25" H	cULus
13	1,450	0-10V	TEMUNV013HR3001	UNV	Half Rd	3000	80	7" L, 3.5" W, 1.25" H	

DC LED Light Engines: Rectangle: Most Frequently Ordered*

13	1,450	TRIAC	TET120013RT3006	120	Rectangle	3000	80	7" L, 4.0" W, 1.25" H	cULus
13	1,450	0-10V	TEMUNV013RT3006	UNV	Rectangle	3000	80	7" L, 4.0" W, 1.25" H	

DC LED Light Engines: Round - UL Classified Kits (Comes With Mounting Hardware Kit) Most Frequently Ordered

13	1,450	0-10V	TKMUNV013RD3001	UNV	Round	3000	80	7 Inch Diameter - 1.25" H	CLASSIFIED cULus
21	2,325	0-10V	TKMUNV021RD3001	UNV	Round	3000	80	9 Inch Diameter - 1.75" H	
25	2,900	0-10V	TKMUNV025RD3001	UNV	Round	3000	80	9 Inch Diameter - 1.75" H	

*TET items are primarily for OEMs

LED DRIVER/BATTERY ALL-IN-ONE

LED EMERGENCY

FULHAM

WORKHORSELED™

NEW

- All-In-One Programmable 40 Watt LED Driver / Emergency Battery Back Up Combination Unit
- Programmable from 250mA to 1.4 Amp Output Current both with new hand held programmer (TPSB-100) or with Accessory Wire Harness
- Adjustable to one (1) mA increments with Programmer or 50 mA Increments with Harnesses
- Selectable Constant Power 5 Watt - 180 Minute Run Time or 10 Watt - 90 Minute Run Time Emergency Output
- Comes Standard with Self Diagnostics - User Selectable

All-In-One LED Programmable Driver/Emergency Battery Pack Unit: Most Frequently Ordered

WATTS	OUTPUT CURRENT (mA)	OUTPUT VOLTAGE (VDC)	MODEL/ITEM NUMBER	INPUT VOLTAGE (VAC)	DIMMING TYPE	N° OF CH.	IP RATING	DIMENSIONS (LxWxH)	LEAD POSITION
40	250-1450	11-57	FHSACT1UNV40C	120 - 277 (50/60)	0 - 10V	1	IP60	160mm(6.29") X 76mm(3.0") X 28mm(1.10")	Compact w/End Leads
Programmer			TPSB-100	5 Volt/Mini USB	Hand Held Programmer to Program Output Current, Voltage, Address, Mode, Dimming Curve, Groups, etc.				

*Programmer optional

Or... Select Harness from below to select specific current output:

OUTPUT CURRENT (mA)	MODEL/ITEM NUMBER
250	FHS-HARNESS-250
300	FHS-HARNESS-300
350	FHS-HARNESS-350
400	FHS-HARNESS-400
450	FHS-HARNESS-450
500	FHS-HARNESS-500
550	FHS-HARNESS-550
600	FHS-HARNESS-600
650	FHS-HARNESS-650
700	FHS-HARNESS-700



FULHAM

HOTSPOTLED™

FireHorse™ HotSpot1 kits for troffers are UL Classified battery backup lighting systems approved for field installation. Each kit includes a FireHorse™ brand LED driver, a FireHorse™ brand battery pack, a ThoroLED™ brand LED module, required hardware, the necessary UL Classified label (to secure to the fixture after installation), and complete installation instructions. These battery backup kits are independent (no electricity connected) from the normal lumination source.

HOTSPOT1 UL CLASSIFIED KITS FOR TROFFERS LED BATTERY BACKUP



UL Classified Kits: Most Frequently Ordered

MODEL/ITEM NUMBER	WATTS	LUMEN OUTPUT	ESTIMATED RUN TIME	ARRAY TYPE	ARRAY DIMENSIONS
FHSKITTO4LNC	4	500	145 Mins	Linear	L=4.68", W=0.82"
FHSKITTO4LND	4	500	200 Mins	Linear	L=4.68", W=0.82"
FHSKITTO4LNF	4	500	360 Mins	Linear	L=4.68", W=0.82"
FHSKITTO6SHC	6	750	90 Mins	Small-H	L=3.54", W=3.93"
FHSKITTO6SHD	6	750	125 Mins	Small-H	L=3.54", W=3.93"
FHSKITTO6SHF	6	750	235 Mins	Small-H	L=3.54", W=3.93"
FHSKITTO8LHD	8	1000	90 Mins	Large-H	L=5.71", W=3.93"
FHSKITTO8LHF	8	1000	175 Mins	Large-H	L=5.71", W=3.93"
FHSKITTO10LHF	10	1250	135 Mins	Large-H	L=5.71", W=3.93"
FHSKITTO10SHF	10	1250	135 Mins	Small-H	L=3.54", W=3.93"

UL Classified Kits: Most Frequently Ordered

Input Voltage	120V - 277V(UNV)	Output Short Circuit Protection	Self-Resetting PTC
Classification	cULus Classified (Field-installable)	Recharge Time Required	24 Hours
Surge Protection	C62.41 (TVS)	Battery Type	NiCd 3.6VDC
Over Current Protection	Fuse	Illumination Time	Minimum 90 Minutes
Input Current	0.07A	Output Classification	UL 1310 / Class 2
Input Power	<4W	Ambient Temperature	0°C - 50°C
Output Voltage	3.6V	Standard 5 Year Warranty	

HOTSPOT1 LIGHTING SYSTEM

LED EMERGENCY



FireHorse HotSpot1 modular LED systems add inconspicuous emergency lighting capability to existing non-emergency fixtures, such as recessed lighting and wall sconces.

A wide choice of lumen output levels, run times, discrete size, universal input voltage, and plug-n-play low voltage output wiring provide extreme adaptability, low cost of installation, and a high level of safety during operation. Ask About our UL Certified Retrofit Kits.



HotSpot1 LED Modules: Linear: Most Frequently Ordered

MODEL/ITEM NUMBER	WATTS	APPLICATIONS
FHS1 AR 4W L	4W	Wall Sconce, Ceiling Flush Mount, Low Level Lighting

HotSpot1 LED Modules: Circular: Most Frequently Ordered

FHSBATT8-C3L**	4W	Recessed Down Lighting, Wall Sconce Cylinder
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HotSpot1 LED Modules: H-Config Large: Most Frequently Ordered

FHS3 AR 6W SH	6W	Wall Sconce, Ceiling Flush Mount
FHS3 AR 10W SH	10W	Wall Sconce, Ceiling Flush Mount

HotSpot1 LED Modules: Cluster: Most Frequently Ordered

FHS4 AR 8W LH	8W	Wall Sconce, Ceiling Flush Mount
FHS4 AR 10W LH	10W	Wall Sconce, Ceiling Flush Mount

HotSpot1 Battery Packs

FHS5 AR 6W CL	6W	Circular Lamp Applications, e.g. Parking Lot Fixtures
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HotSpot1 Battery Packs

MODEL/ITEM NUMBER	BATTERY QTY/TYPE	OPERATION DURATION	OUTPUT POWER/TIME	CASE SIZE
FHSBATT3-C3	3C	3 Amp Hrs	4W: 145min, 6W: 90min	L=1", W=2", H=1"
FHSBATT3-D4	3D	4 Amp Hrs	4W: 200min, 6W: 125min, 8W: 90min	L=4", W=2.5", H=1.35"
FHSBATT3-F7	3F	7 Amp Hrs	4W: 360min, 6W: 235min, 8W: 175min, 10W: 135min	L=4", W=3.6", H=1.35"

HotSpot1 Driver

MODEL/ITEM NUMBER	FHS1-UNV-3.6L
Compatible Batteries	NiCd, 3.6 VDC
Battery Capacities	3AH, 4AH, 7AH
Total Led Power	10W
Illumination Time	90 - 360 Min.
Input Voltage	100-277VAC (UNV)
Input Frequency	50/60Hz
Input Current	0.07 A
Input Wattage	4W
Surge Protection	C62.41 (TVS)
Over Current Protection	Fuse
Recharge Time	24 Hrs - 48 Hrs
Led Connection	Parallel
Led Output Protection	Self Resetting PTC
Output Classification	UL1310/Class 2



HOTSPOT2 LIGHTING SYSTEM*

LED EMERGENCY

FireHorse HotSpot2 is a UL924 recognized emergency lighting system useable with LED modules driven by a constant current source. The battery charger automatically adjusts to the battery size and use. With the proper connector, the driver provides output current based on the harness connected, allowing a wide choice of lumen output and run times.

HotSpot2 Driver

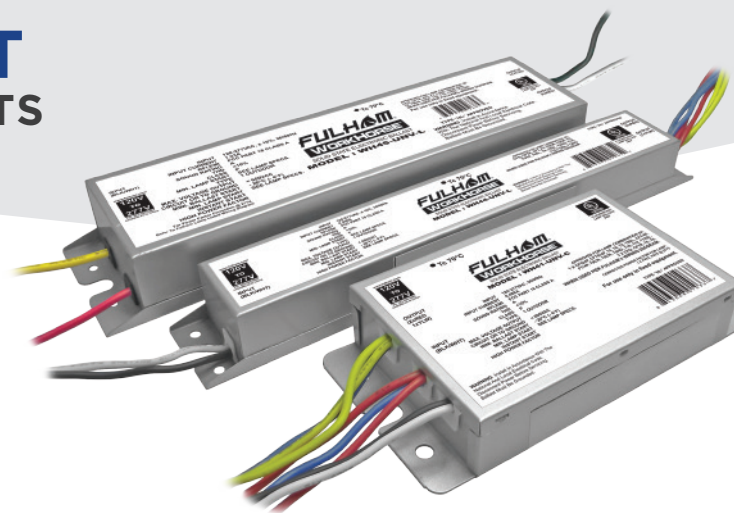
Model	FHS2-UNV-36L	FHS2-UNV-56S
Input Voltage	100-277VAC	
Input Frequency	50/60Hz	
Input Current	0.07 A	
Surge Protection	C62.41 (MOV)	
Over Current Protection	Fuse	
Recharge Time	24-48Hrs	
LED Connection	Series	
LED Output Protection	Self Resetting PTC	
Output Classification	UL1310/Class 2	
Illumination Time	90 - 350 Min	
LED Currents	100mA - 700mA	
Total LED Power	20W	
Output Working Voltage	11 - 36 VDC	11 - 56 VDC
Dimensions (LxWxH)	5.3" x 1.7" x .93"	9.5" x 1.19" x 1"

HotSpot2 Battery Packs

MODEL/ITEM NUMBER	DIMENSIONS	CHEMISTRY	CAPACITY	BATTERY COUNT	MAX LOAD FOR 90 MIN	RECHARGE TIME
FHSBATT8-AA.9	5.23" X 2.39" X 0.66"	NiCd	900mAh	8 Cells	4W	24Hrs
FHSBATT8-C3	4.15" X 3.29" X 2.11"	NiCd	3000mAh	8 Cells	16W	32Hrs
FHSBATT8-C3L**	7.89" X 2.06" X 1.04"	NiCd	3000mAh	8 Cells	16W	32Hrs
FHSBATT8-D4	4.95" X 3.84" X 2.66"	NiCd	4000mAh	8 Cells	20W	32Hrs
FHSBATL3-1	3.48" X 2.29" X 0.91"	LiFePo4	1000mAh	3 Cells	4W	24Hrs
FHSBATL3-1.5	3.48" X 2.70" X 0.91"	LiFePo4	1500mAh	3 Cells	8W	24Hrs
FHSBATL3-3	4.39" X 2.76" X 1.22"	LiFePo4	3000mAh	3 Cells	16W	32Hrs
FHSBATL6-6	5.23" X 1.88" X 0.88"	LiFePo4	1200mAh	6 Cells	6W	24Hrs
FHSBATL6-1.5	5.70" X 2.70" X 0.91"	LiFePo4	3000mAh	6 Cells	16W	32Hrs
FHSBATL6-1.5L**	7.89" X 1.50" X 1.19"	LiFePo4	3000mAh	6 Cells	16W	32Hrs
FHSBATL6-3	7.52" X 2.76" X 1.22"	LiFePo4	6000mAh	6 Cells	20W	48Hrs

*HotSpot 2 is primarily for OEMs

FLUORESCENT ELECTRONIC BALLASTS



Universal Voltage

MODEL/ITEM NUMBER	DIMENSIONS (LxWxH)		INPUT CURRENT	MASTER CARTON QTY
	IN	MM		
WH41-UNV-C	9.48 x 2.25 x 1.22	241 x 57 x 31	1.23A	25
WH41-UNV-L	9.48 x 1.41 x 1.02	241 x 36 x 26	0.96A	20
WH42-UNV-L	5.77 x 2.99 x 1.05	147 x 76 x 27	0.96A	30
WH43-UNV-L	9.48 x 1.41 x 1.026	241 x 36 x 26	0.88A	20
WH44-UNV-C	9.48 x 1.41 x 1.026	241 x 36 x 26	0.496A	25
WH44-UNV-L	9.48 x 1.41 x 1.02	241 x 36 x 26	0.496A	25
WH45-UNV-L	5.77 x 2.99 x 1.05	147 x 76 x 27	0.488A	30

Universal Voltage Con't

WORKHORSE 15	
Model No. 120-277V (UNV)	WH15-UNV-L
Max. Current 120VAC	.75 AMP
Max. Current 277VAC	.318 AMP
Max. Power	90.32W
Black/White Wires	25" +/- 1"
Red/Yellow Wires	46" +/- 1"
Blue Wire	31" +/- 1"
Ballast Sizes	H 1.04", W 1.41", L 9.48"
Weight	1.15 lbs.
Case Qty	25 pcs.

Commercial & Residential Dedicated Voltage

	WORKHORSE 1	WORKHORSE 2	WORKHORSE 22	WORKHORSE 3	WORKHORSE 33
Model No. 120V	WH1-120-L	WH2-120-L WH2-120-C (BLS)	WH22-120-L WH22-120-C (BLS)	WH3-120-L WH3-120-C (BLS)	WH33-120-L WH33-120-C (BLS)
Max. Current 120vac	.20 AMP	.33 AMP	.25 AMP	.56 AMP	.53 AMP
Model No. 230V	N/A	WH2-230-L	N/A	WH3-230-L	N/A
Max. Current 230vac		.26 AMP		.29 AMP	
Model No. 277V	WH1-277-L	WH2-277-L WH2-277-C (BLS)	WH22-277-L WH22-277-C (BLS)	WH3-277-L WH3-277-C (BLS)	N/A
Max. Current 277vac	.11 AMP	.15 AMP	.15 AMP	.24 AMP	
Max. Power	28W	35W	35W	64W	64W
Black/White wires	12"	L-18" C-12"	L-18" C-12"	L-18" C-12"	L-18" C-12"
Red/Yellow wires	24"	L-36" C-12"	L-36" C-12"	L-36" C-12"	L-36" C-12"
Ballast Sizes	120L: H .75", W 1", L 6" 277L: H .75", W 1", L 7.5"	120L: H 1", W 1", L 5.5" 230L: H 1", W 1", L 5.5" 277L: H 1", W 1", L 5.5" 120C: H 1", W 1.75", L 3.3" 277C: H 1", W 2.3", L 3.3"	120L: H 1", W 1", L 5.5" 277L: H 1", W 1", L 5.5" 120C: H 1", W 1.75", L 3.3" 277C: H 1", W 2.3", L 3.3"	120L: H 1", W 1.5", L 6.5" 230L: H 1", W 1.5", L 6.5" 277L: H 1", W 1.5", L 6.5" 120C: H 1", W 2.5", L 3.8" 277C: H 1", W 3.1", L 3.8"	120L: H 1", W 1.5", L 6.5" 120C: H 1", W 3.1", L 3.82"
Weight	4.5 oz.	7 oz.	7 oz.	10 oz.	10 oz.
Case Qty	50 pcs.	50 pcs.	50 pcs.	50 pcs.	50 pcs.
	WORKHORSE 4	WORKHORSE 5	WORKHORSE 6	WORKHORSE 7	WORKHORSE 8
Model No. 120V	WH4-120-L	WH5-120-L	WH6-120-L	WH7-120-L WH7-120-H	WH8-120-L
Max. Current 120vac	.56 AMP	1.15 AMP	1.04 AMP	1.82 AMP	1.8 AMP
Model No. 230V	N/A	WH5-230-L	N/A	WH7-230-L	WH8-230-L
Max. Current 230vac		0.57 AMP		1.10 AMP	1.1 AMP
Model No. 277V	WH4-277-L	WH5-277-L	WH6-277-L	WH7-277-L	WH8-277-L
Max. Current 277vac	.21 AMP	0.48 AMP	0.50 AMP	.85 AMP	.74 AMP
Max. Power	70W	128W	140W	220W	220W
Black/White wires	18"	18"	18"	18"	18"
Red/Yellow wires	36"	36"	36"	36"	36"
Ballast Sizes	L: H 1", W 1.5", L 6.5"	120L: H 1", W 1.72", L 8.5" 277L: H 1", W 1.72", L 9.5"	L: H 1", W 1.72", L 8.5" 277L: H 1", W 1.72", L 9.5"	L: H 1", W 1.72", L 19.25" H: H 1.25", W 3.25", L 11.75"	L: H 1", W 1.72", L 19.25"
Weight	10 oz.	14 oz.	15 oz.	32.8 oz.	34 oz.
Case Qty	50 pcs.	50 pcs.	50 pcs.	25 pcs., except the WH7-120-H: 16pcs case	25 pcs.

FLUORESCENT ELECTRONIC BALLASTS



CANADIAN UL LISTED WORKHORSE BALLASTS

Electronic Fluorescent Ballasts: Canadian UL Listed Workhorse Ballasts

MODEL/ITEM NUMBER	DESCRIPTION	MODEL/ITEM NUMBER	DESCRIPTION
CWH2-120-BLS	WH2, 120V, Cube Case, BLS	CWH3-277-L	WH3, 277V, Long Case
CWH2-120-C	WH2, 120V, Cube Case	CWH33-120-BLS	WH33, 120V, Cube Case, BLS
CWH2-120-L	WH2, 120V, Long Case	CWH33-120-C	WH33, 120V, Cube Case
CWH22-120-BLS	WH22, 120V, Cube Case, BLS	CWH33-120-L	WH33, 120V, Long Case
CWH22-120-C	WH22, 120V, Cube Case	CWH4-120-L	WH4, 120V, Long Case
CWH22-120-L	WH22, 120V, Long Case	CWH5-120-L	WH5, 120V, Long Case
CWH22-277-C	WH22, 277V, Cube Case	CWH5-120-LR	WH5, 120V, Long Case, RoHS Compliant
CWH22-277-L	WH22, 277V, Long Case	CWH6-120-L	WH6, 120V, Long Case
CWH3-120-BLS	WH3, 120V, Cube Case, BLS	CWH7-120-H	WH7, 120V, H CAN
CWH3-120-C	WH3, 120V, Cube Case	CWH7-120-L	WH7, 120V, Long Case
CWH3-120-L	WH3, 120V, Long Case	CWH8-120-L	WH8, 120V, Long Case



COMMERCIAL GRADE T8/T12 BALLASTS



Electronic Fluorescent Ballasts: Commercial Grade T8/T12

MODEL NO.	WHCG1-120-T8-IS	WHCG2-120-T8-IS	WHCG3-120-T8-IS	WHCG4-120-T8-IS	WHCG5-120-T12 RS	WHCG6-120-T12 RS
Input Voltage	120V 60Hz (108V-132V)	120V 60Hz (108V-132V)	120V 60Hz (108V-132V)	120V 60Hz (108V-132V)	120V 60Hz (108V-132V)	120V 60Hz (108V-132V)
Input Power	30W (with T8 32W lamp)	58W (with T8 32W lamp)	85W (with T8 32W lamp)	112W (with T8 32W lamp)	74W (with T12 40W lamp)	36W (with T12 20W lamp)
Max. Current	.26 AMP	.50 AMP	.71 AMP	.93 AMP	.62 AMP	.31 AMP
Black/White Wires	24"	24"	24"	28"	24"	24"
Red Wires	48"	48"	48"	30"	32"	32"
Blue Wires	32"	32"	32"	30"	32"	32"
Yellow Wires	N/A	N/A	N/A	46"	48"	48"
Case Qty	25 pcs.	25 pcs.	25 pcs.	25 pcs.	25 pcs.	25 pcs.
CEE				✓		

Electronic Fluorescent Ballasts: Commercial Grade T8/T12 Common Specifications

Power Factor:	97.5% Min.
ATHD:	Less than 20%
EMI: FCC CFR Title 47 Part 18 non-consumer	
Ballast Factor::	>.87
Lamp CF:	< 1.7
Starting Method:	WHCG1-4: Instant Start WHCG5 & 6: Rapid Start
Regulatory Approvals:	UL & cULus Listed Type 1 or Type 2
Min. Starting Temp. :	0°F (-18°C)
Inherent Thermal Protection:	Class P
Ballast Size:	L 9.5", W 1.7", H 1.2" (L 240mm, W 43mm, H 30mm)
Weight:	1.7 lb. (760g)



FLUORESCENT ELECTRONIC BALLASTS

FULHAM[®] T8/T12 FLUORESCENT WORKHORSE[™] ELECTRONIC BALLASTS SPECIFIER GRADE



Electronic Fluorescent Ballasts: Specifier Grade T8/T12 Common Specs

Power Factor:	98.5 % Min.
ATHD:	Less than 10%
EMI: FCC CFR Title 47 Part 18 non-consumer	
Ballast Factor:	>.87
Lamp CF:	< 1.7
Starting Method:	T8: Instant Start T12HO: Modified Rapid Start
Regulatory Approvals:	UL & cULus Listed Type 1 or Type 2
Min. Starting Temp. :	0°F (-18°C)
Inherent Thermal Protection:	Class P
Transient Protection:	C62.41 Class A 7 strikes
Ballast Sizes:	T8: L 9.5", W 1.38", H 1.0" (L 240mm, W 35mm, H 25mm) T12HO: L 11.75", W 2.3", H 1.6" (H L 299mm, W 58mm, 41mm)
Weights:	T8: 1.5 lbs. (700g) T12HO: 4.0 lbs. (1.8 kg)

Electronic Fluorescent Ballasts: Specifier Grade T8/T12

MODEL/ITEM NUMBER	WHS G1-UNV-T8-IS	WHS G2-UNV-T8-IS	WHS G3-UNV-T8-IS	WHS G4-UNV-T8-IS	WHS G7-120-T12 HO	WHS G8-UNV-T8 SL
Input Voltage	120V-277V	120V-277V	120V-277V	120V-277V	120V	120V-277V
Input Power	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Max. Current	33W	59W	85W	112W	200W	109W
Black/White Wires	.28 AMP	.50 AMP	.71 AMP	.93 AMP	1.65 AMP	.92 AMP
Red Wires	24"	24"	24"	28"	22"	25"
Blue Wires	46"	46"	46"	30"	46"	79"
Yellow Wires	32"	32"	32"	30"	46"	46"
Case Qty	N/A	N/A	N/A	46"	70"	N/A
	25 pcs.	25 pcs.	25 pcs.	25 pcs.	10 pcs.	25 pcs.
CEE		✓	✓	✓		

FULHAM[®] T8 HIGH & LOW WORKHORSE[™] BALLAST FACTOR SPECIFIER GRADE



Electronic Fluorescent Ballasts: Specifier Grade T8 High & Low Ballast Factor Common Specs

Power Factor:	98.5% Min.
ATHD:	Less than 10%
EMI: FCC CFR Title 47 Part 18 non-consumer	
Ballast Factor:	>.87
Lamp CF:	< 1.7
Starting Method:	T8: Instant Start
Regulatory Approvals:	UL & cULus Listed Type 1 or Type 2
Min. Starting Temp.:	0°F (-18°C)
Inherent Thermal Protection:	Class P
Transient Protection:	C62.41 Class A 7 strikes
Ballast Size:	L 9.5", W 1.38", H 1.0" (L 240mm, W 35mm, H 25mm)
LB 2-4, HB 2-3	L 9.5", W 1.7", H 1.2" (L 240mm, W 43mm, H 30mm)
HB 4	
Weight:	1.5 lbs. (700g)

Electronic Fluorescent Ballasts: Specifier Grade T8 Fluorescent High & Low Ballast Factor

MODEL NUMBER	WHS G2-UNV-T8-LB	WHS G2-UNV-T8-HB	WHS G3-UNV-T8-LB	WHS G3-UNV-T8-HB	WHS G4-UNV-T8-LB	WHS G4-UNV-T8-HB
Input Voltage	120V-277V	120V-277V	120V-277V	120V-277V	120V-277V	120V-277V
Input Power	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Max. Current	52W	74W	76W	104W	98W	146W
Black/White Wires	.44 AMP	.62 AMP	.64 AMP	.91 AMP	.82 AMP	1.24 AMP
Red Wires	24"	24"	24"	24"	24"	24"
Blue Wires	46"	46"	46"	46"	46"	30"
Yellow Wires	32"	32"	32"	32"	32"	30"
Case Qty	46"	46"	46"	46"	46"	46"
	25 pcs.	25 pcs.	25 pcs.	25 pcs.	25 pcs.	25 pcs.
CEE	✓	✓	✓	✓	✓	✓

FLUORESCENT ELECTRONIC BALLASTS



HIGH EFFICIENCY & PROGRAM START T8 BALLASTS



Fluorescent Ballasts: High Efficiency & Program Start T8 Common Specs

Operating Voltage:	WHHE: 120-277VAC (UNV) WHPS: 120-277VAC (UNV) ± 10%	Ballast Maximum Case Temp.:	WHHE: 194°F (90°C)
Frequency:	50/60Hz	Ballast Lamp Starting Mode:	WHHE: Instant Start
Power Factor::	WHHE: 98% WHPS: 98.6% Min.	Min. Operating Temp.:	0°F (-18°C)
ATHD:	≤ 10%	Inherent Thermal Protection:	Class P
EMI: FCC CFR Title 47 Part 18 non-consumer		Ballast Size:	L 8.91", W 1.32", H 1.05" (L 226.3mm, W 33.5mm, H 26.7mm)
Ballast Factor:	>.93	Sound Rating	"A"
Lamp CF:	< 1.7	Regulatory Approvals: UL & cULus Listed Type1 or Type 2 Type HL, CC	

Electronic Fluorescent Ballasts: High Efficiency & Program Start T8

MODEL NO.	WHHE2-UNV-T8-IS	WHPS1-UNV-T8-PS	WHPS2-UNV-T8-PS
Starting Method	Instant Start	Program Start	Program Start
Max. Load	59W	30W	57W
Max. Current	0.46 AMP	0.25 AMP	0.48 AMP
Case Quantity	25 pcs.	25 pcs.	25 pcs.
	✓	✓	✓



DIMMABLE BALLASTS



Electronic Fluorescent Ballasts: 0-10V & DALI Dimmable

MODEL NUMBER	CERTIFICATIONS	LAMP COMPATIBILITY
CF DA UNV 332T8 W	UL Class P, Indoor, FCC 47CFR Part 18 (Non-consumer); CEE/NEMA High Performance	1x or 2x 32W T8s, or 1x to 2x 25W, or 2x 17W T8s.
CF DA UNV 332T8 L CF DA UNV 254T5 L	UL Class P, Indoor, UL 935, FCC 47CFR Part 15 Class A or B; CEE/NEMA High Performance	These two ballasts operate many T8, T5, and T5HO lamp wattages and numbers of lamps. See spec sheet on www.fulham.com for full details.

CFL

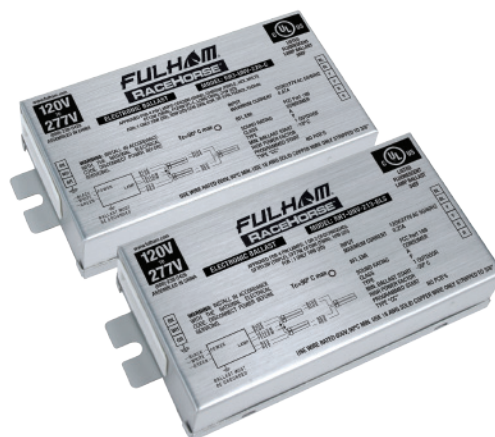
ELECTRONIC BALLASTS & CONTRACTOR KITS



Electronic Fluorescent Ballasts: CFL Common Specifications

Operating Voltage:	120V-277V (Universal Voltage)	Lamp Starting Temp.:	See Lamp Specifications
Frequency:	50/60Hz	Ballast Maximum Case Temp.:	167°F (75°C) - 5 Year Warranty
ATHD:	< 10% Meets ANSI C82.11-1993	Ballast Maximum Case Temp.:	194°F (90°C) - 3 Year Warranty
Protection/Output:	Open Lamp, Shorted Lamp, End of Life	Ballast Lamp Starting Mode:	Programmed Start
Input Over Current Protection:	Fuse	Inherent Thermal Protection	Class P
Transient Protection:	C62.41 Class A 7 strikes	Sound Rating	"A"
Regulatory Approvals:	UL & cULus Listed Type 1 Outdoor	Remote Mounting	18' Maximum at -18°C
High Power Factor:	> .98	Anti-Arcing Protection	UL Type CC
Open Circuit Voltage:	< 300V RMS Max.	RHA-EMI: FCC CFR Title 47 Part 18 non-consumer (RH-EMI: FCC CFR Title 47 Part 18 consumer & non-consumer)	
Ballast Min. Operating Temp.:	-22°F (-30°C)		

BLS models are approved for air handling spaces



Electronic Fluorescent Ballasts: CFL

	RACEHORSE 1	RACEHORSE 2†	RACEHORSE 3†	RACEHORSE 4†	RACEHORSE 2 347V
Model No.	RHA-UNV-213-BLS/C/K	RHA-UNV-218-BLS/C/K	RHA-UNV-226-BLS/C/K	RHA-UNV-242-BLS/C/K	RHA-347-218-BLS/C/K
Max Load	26W	36W	57W	84W	36W
Max Input Current	.28 AMP	.344 AMP	.52 AMP	.752 AMP	0.115 AMP
Ballast Size	L 5.1" (4.3" case), W 2.4", H 1"	L 5.1" (4.3" case), W 2.4", H 1"	L 5.1" (4.3" case), W 2.4", H 1"	L 5.1" (4.3" case), W 3", H 1.3"	L 5.0" (4.2" case), W 2.4", H 1"
Ballast Weight	5.2 oz.	5.2 oz.	5.2 oz.	7 oz.	5.2 oz.
Case Quantity	BLS Models: 50 pcs/ case C Models: 50 pcs/ case Kits (K): 20 pcs/ case	BLS Models: 40 pcs/ case C Models: 50 pcs/ case Kits (K): 20 pcs/ case	BLS Models: 40 pcs/ case C Models: 50 pcs/ case Kits (K): 20 pcs/ case	BLS Models: 50 pcs/ case C Models: 50 pcs/ case Kits (K): 30 pcs/ case	BLS Models: 40 pcs/ case C Models: 50 pcs/ case Kits (K): 20 pcs/ case



Electronic Fluorescent Ballasts: CFL Lamp Operation

MODEL NUMBER	#OF LAMPS	LAMP TYPE / DESIGNATION
RHA-UNV-213-BLS/C/K	1 x	13CFQ, 13CFTR, 2D16W
	2 x	7CFT, 9CFT, 13CFQ, 13CFTR, 2D10W
RHA-UNV-218-BLS/C/K	1 x	18CFQ, 18CFTR, 2D21W
	2 x	18CFQ, 18CFTR, 2D16W, 2D21W
RHA-UNV-226-BLS/C/K	1 x	13CFT, 26CFQ, 26CFTR, 32CFTR, 42CFTR, 2D21W, 2D28W, 2D38W, T5CR22W, FT18, FT36/39, T5CR40W, FT24/27, 57CFM
	2 x	13CFT, FT18W, 26CFQ, 26CFTR, FT24/27, 2D21W, F24T5HO
RHA-UNV-242-BLS/C/K	1 x	CFM57, CFM70, 42CFTR, FT24/27, FT36/39, FT40, 2D28W, 2D38W, T5CR40W, 36TUV, GPH793T5L
	2 x	26CFQ, 26CFTR, 32CFTR, 42CFTR, FT24/27, FT36/39, FT40, 2D28W, 2D38W, T5CR22W, T5CR40W, 36TUV, GPH793T5L
RHA-347-218-BLS/C/K	1 x	18CFQ, 18CFTR, 2D21W
	2 x	18CFQ, 18CFTR, 2D16W, 2D21W

- BLS = Compact Case with mounting studs (8/32" studs on bottom plate, 2" on center)
- C = Compact Case; No studs on bottom plate
- K = Contractor Kit with stud adapter plate, lead wire set and wire removal tool



† These products have previously been tested as per SASO guidelines and comply with the SASO standards. If you are interested in your shipment being accompanied by a SASO conformity certificate, this can be arranged at cost for the testing. Please contact the Middle East regional office for details.

T5 LINEAR ELECTRONIC BALLASTS



T5 LINEAR BALLASTS

Electronic Fluorescent Ballasts: T5HO & T5HE Common Specifications

Operating Voltage:	120V-277V (Universal Voltage)	High Power Factor:	> .98
Frequency:	50/60Hz	Open Circuit Voltage:	600 V RMS Max.
ATHD:	< 10%	Ballast Min. Operating Temp.:	-18°C (0°F)
Protection/Output: Protection/Input:	End of Life (EOL)	Ballast Maximum Case Temp.:	167°F (75°C) - 5 Year Warranty
Over Current:	Fuse	Ballast Maximum Case Temp.:	194°F (90°C) - 3 Year Warranty
Transient Protection:	C62.41 Class A 7 strikes	Ballast Lamp Starting Mode:	Programmed Preheat Start
EMI: FCC CFR Title 47 Part 18 non-consumer		Inherent Thermal Protection	Class P
Regulatory Approvals:	UL & cULus Listed Type 1 Outdoor	Sound Rating	"A"

T5HO Electronic Fluorescent Ballasts

MODEL NO.	RH21-UNV-224 LT5	RHA-UNV-224-LT5	RHA-UNV-239-LT5	RHA-UNV-254-LT5	RHA-UNV-454-LT5
Max. Load	52W	54W	93W	120W	240W
Max. Current	0.44 AMP	0.45 AMP	0.78 AMP	1.0 AMP	2.0 AMP
Ballast Size	L 16.89", W 1.20", H 1"	L 9.45", W 1.31", H 1.06"	L 9.45", W 1.31", H 1.06"	L 9.53", W 1.32", H 1.05"	L 16.88", W 1.69", H 1.18"
Connector Type	No Leads	Leads	Leads	Leads	Leads
Case Quantity	20 pcs.	20 pcs.	20 pcs.	25 pcs.	20 pcs.
Compliance	RoHS	RoHS	RoHS		

T5HE Electronic Fluorescent Ballasts

MODEL NO.	RH13-UNV-228 LT5	RHA-UNV-228-LT5	RH14-UNV-235 LT5
Max. Load	67W	67W	77W
Max. Current	0.56 AMP	0.56 AMP	0.64 AMP
Ballast Size	L 16.89", W 1.20", H 1"	L 9.45", W 1.31", H 1.06"	L 16.89", W 1.20", H 1"
Connector Type	No Leads	Leads	No Leads
Case Quantity	20 pcs.	20 pcs.	20 pcs.
Compliance	RoHS	RoHS	RoHS



T5HO & T5HE Electronic Fluorescent Ballasts: Lamp Operation

MODEL NUMBER	# OF LAMPS	LAMP TYPE / DESIGNATION
RH21-UNV-224 LT5 RHA-UNV-224-LT5	1 x	F24T5HO, F39T5HO, FT24W, T5CR22W, T5CR40W, FT40W, FT36W
	2 x	F24T5HO, FT24W, T5CR22W
RHA-UNV-239-LT5	1 x	F39T5HO, F24T5HO, T5CR40W, T5CR22W, FT36W, FT24W, FT40W
	2 x	F39T5HO, F24T5HO, T5CR40W, T5CR22W, FT36W, FT24W
	1 each	T5CR22W + T5CR40W
RHA-UNV-254-LT5	1 x	F54T5/HO, FC12T5/HO, FT55, FT50, F54T5HO/49W
	2 x	F54T5/HO, FC12T5/HO, FT55, FT50, F54T5HO/49W
	2 x	FT36W, FT55W, F54T5HO, F54T5HO/49W
RHA-UNV-454 LT5	3 x	FT36W, FT55W, F54T5HO, F54T5HO/49W
	4 x	FT36W, FT55W, F54T5HO, F54T5HO/49W
	4 x	FT36W, FT55W, F54T5HO, F54T5HO/49W
RH13-UNV-228 LT5 RHA-UNV-228-LT5	1 x	F28T5/HE, F21T5/HE, F14T5/HE
	2 x	F28T5/HE, F21T5/HE, F14T5/HE
RH14-UNV-235 LT5	1 x	F35T5/HE, F28T5/HE, F21T5/HE
	2 x	F35T5/HE, F28T5/HE, F21T5/HE, F14T5/HE

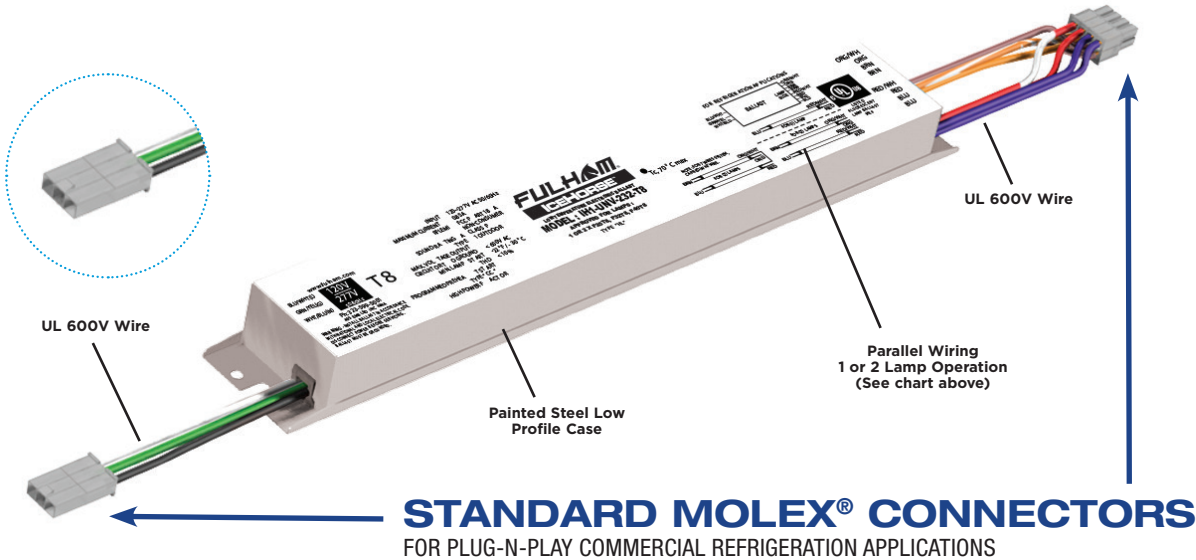
LOW TEMPERATURE ELECTRONIC BALLASTS



Fluorescent Low Temperature Electronic Ballasts: Common Specifications	
Input Voltage	120V-277V (UNV)
Input Voltage Range	± 10%
Power Line Frequency	50/60Hz
High Power Factor	> 0.98
ATHD	< 10%
Re-Lamping Circuit	Deactivated Lamp Protection
Current Protection	Fuse
Lamp Operation Mode	Programmed Start
Lamp Connection	Parallel
Ignition Method	Programmed Pre-Heat Start
Lamp Current Crest Factor	< 1.7
Transient Protection:	C62.41 Class A 7 strikes
Circuit to Ground	< 600 VAC
UL / cULus Listed	Type 1 Outdoor
Type "CC" Rated	Anti-Arc
Thermal Protection	Class "P"
EMI/RFI Compliance	FCC Part 18 non-consumer
Sound Rating	A
Minimum Operating Temperature	-30°C (-22°F)
Maximum Case Temperature	70°C (158°F)
Ballast Case Construction	Painted Steel
Input/Output Connections	Wire Leads + Connectors
Potted	Yes
Warranty	3 years

Fluorescent Low Temperature Electronic Ballasts:			
	ICEHORSE™1	ICEHORSE™2	ICEHORSE™3
Model No.	IH1-UNV-232-T8	IH2-UNV-270-T8	IH3-UNV 272 T12HO
Max. Current	.85 AMP	1.35 AMP	1.38 AMP
Max. Power	100W	155W	150W
Common Ballast Size	L 12", W 1.7", H 1" L 304.80mm, W 43.18mm, H 25.4mm		
Weight	1.4 lbs	1.5 lbs	1.4 lbs
Case Qty	25 pcs.	25 pcs.	25 pcs.

Fluorescent Low Temperature Electronic Ballasts: Lamp Operations		
MODEL NUMBER	# OF LAMPS	LAMP TYPE / DESIGNATION
IH1-UNV-232-T8	1 or 2	F25 / F32 / F40 T8
IH2-UNV-270-T8	1 or 2	F58 / F70 T8
IH3-UNV 272 T12HO	1 or 2	F48 / F60 T8HO F48 / F60 T10VHO F48 / F60 / F72 T12HO
	1	F72T8HO, F72T10VHO, F96T12VHO



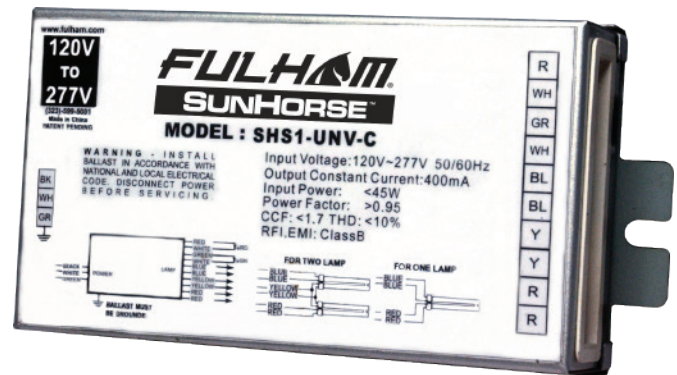
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UV/TANNING ELECTRONIC BALLASTS



Dimmable & Standard Electronic Ballasts For UV & Tanning: Common Specifications

Frequency	50/60Hz
Protection Output	Yes
Protection Input	Fuse/MOV
Over Current	Yes
Transient Protection	C62.41 Class A 7 strikes
EMI	FCC PART 18 non-consumer
Regulatory Approvals	UL/cULus as indicated in chart below
Class P Inherent Thermal Protection	Type 1 Outdoor
Sound Rating	"A"



Standard Electronic Ballasts For UV & Tanning

STANDARD MODELS	OPERATING VOLTAGE	MAX. INPUT CURRENT	RATED MAX. LOAD	MIN. OPERATING TEMP.	MAX CASE TEMP.	BALLAST DIMENSIONS (LxWxH)	UL US	CE
SHS4-120-C	120VAC	0.303A	21W	0°C (32°F)	75°C (167°F)	78.5mm(3.09") x 36.83mm(1.45") x 25.4mm(1")	✓	
SHS1-UNV-C	120-277VAC	0.408A	42W	0°C (32°F)	75°C (167°F)	128.3mm(5.05") x 60mm(2.36") x 25.4mm(1.00")	✓	
SHS1-UNV-C-I*	120-277VAC	0.408A	42W	0°C (32°F)	75°C (167°F)	128.3mm(5.05") x 60mm(2.36") x 25.4mm(1.00")	✓	
SHS5-024-C	24VAC	2.59A	42W	0°C (32°F)	75°C (167°F)	92.5mm(3.64") x 79.3mm(3.12") x 25.6mm(1.01")	✓	
SHS2-MLT-L	120-240VAC	0.19A	17W	0°C (32°F)	75°C (167°F)	149.1mm(5.87") x 38.1(1.50") x 26.4mm(1.04")		
SHS3-MLT-L	120-240VAC	0.29A	32W	-10°C (14°F)	75°C (167°F)	149.1mm(5.87") x 38.1(1.50") x 26.4mm(1.04")		✓
SHS10-UNV-H	120-277VAC	1.25A	150W	0°C (32°F)	80°C (176°F)	254mm(10") x 66mm(2.6") x 32mm(1.26")		
SHS11-UNV-H	120-277VAC	1.35A	190W	0°C (32°F)	70°C (158°F)	254mm(10") x 66mm(2.6") x 32mm(1.26")		
SHS14-UNV-H	120-277VAC	1.6A	150W	0°C (32°F)	70°C (158°F)	254mm(10") x 66mm(2.6") x 32mm(1.26")		
SHS15-UNV-H	120-277VAC	2.9A	310W	0°C (32°F)	75°C (167°F)	254mm(10") x 66mm(2.6") x 32mm(1.26")		
FEP-120-600-L	120VAC	2.86A	320W	-18°C (0°F)	70°C (158°F)	489mm(19.25") x 76.2mm(3") x 31.8mm(1.25")	✓	
FEP-210-600-L	210VAC	1.52A	320W	0°C (32°F)	70°C (158°F)	489mm(19.25") x 76.2mm(3") x 31.8mm(1.25")	✓	✓
FEP-230-600-L	230VAC	1.50A	320W	-18°C (0°F)	70°C (158°F)	489mm(19.25") x 76.2mm(3") x 31.8mm(1.25")	✓	
SHGS1 MID 2 200 L	208-240VAC	1.85A	380W	0°C (32°F)	75°C (167°F)	304.8mm(12") x 79mm(3.11") x 44mm(1.73")	✓	
SHGS2 MID 4 100 L	208-240VAC	1.88A	380W	0°C (32°F)	75°C (167°F)	304.8mm(12") x 79mm(3.11") x 44mm(1.73")	✓	
SHGS3 MID 6 100 L	208-240VAC	2.50A	600W	0°C (32°F)	75°C (167°F)	406.4mm(16") x 79mm(3.11") x 45mm(1.77")	✓	
SHGS5 MID 2 200 N	208-240VAC	1.70A	400W	10°C (50°F)	N/A - No case	250mm(9.84") x 70.1mm(2.76") x 48mm(1.89")		✓
SHGS6 MID 4 120 N	208-240VAC	1.70A	480W	10°C (50°F)	N/A - No case	250mm(9.84") x 70.1mm(2.76") x 48mm(1.89")		✓
SHGS7 MID 6 120 N	208-240VAC	2.50A	720W	10°C (50°F)	N/A - No case	323.1mm(12.72") x 75mm(2.95") x 50mm(1.97")		✓

Dimmable Models

SHGD1 MID 2 200 L	208-240VAC	1.71A	400W	0°C (32°F)	75°C (167°F)	304.8mm(12") x 79mm(3.11") x 44mm(1.73")	✓	
SHGD2 MID 4 100 L	208-240VAC	1.74A	400W	0°C (32°F)	75°C (167°F)	304.8mm(12") x 79mm(3.11") x 44mm(1.73")	✓	
SHD21-230-L	230VAC	1.64A	320W	0°C (32°F)	70°C (158°F)	4.24mm(16.69") x 43.7mm(1.72") x 30mm(1.18")	✓	✓
SHD21-230-L-I*	230VAC	1.64A	320W	0°C (32°F)	70°C (158°F)	4.24mm(16.69") x 43.7mm(1.72") x 30mm(1.18")	✓	

UNIVERSAL VOLTAGE EMERGENCY FLUORESCENT BALLASTS



SPECIFIER GRADE

- Universal voltage (120-277V, 50/60Hz)
- Designed for use with standard and TCLP “green” lamps
- Lamps operated on AC during emergency operation
- Wide range of lumen output
- Wide range of lamp & ballast compatibility
- Low profile models available
- Integrated LED Power Indicator/ Test Switch
- Complies with minimum light output requirements per UL924, supplement “SH”
- Factory or field installation
- Full 5-year warranty
- UL listed for damp locations
- Vandal-resistant, sealed, painted steel case type

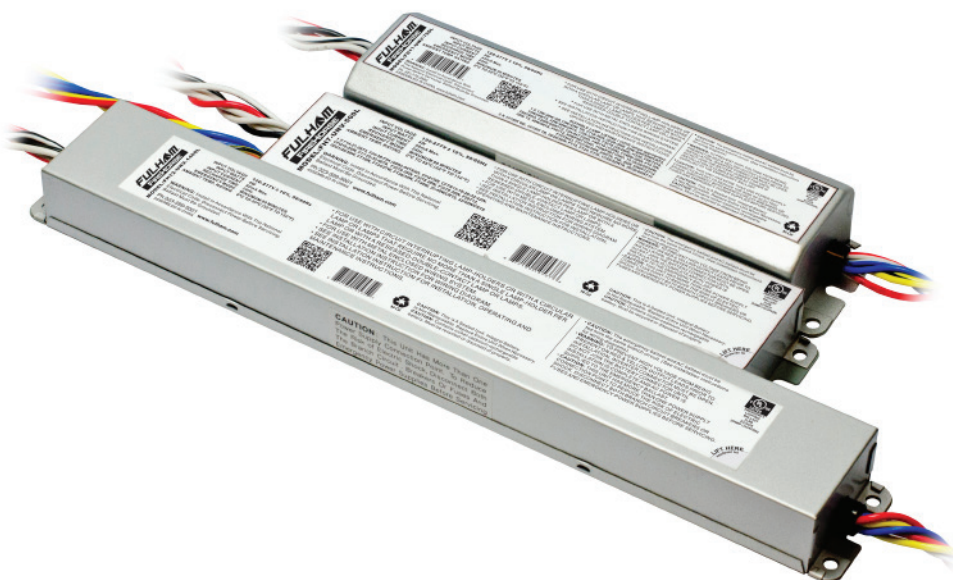


Common Specifications

Operating Voltage:	Universal 120 - 277V	Operating Temp Range:	0°C - 55°C	Fixture Wiring:	Switched or Unswitched
Frequency:	50/60Hz	Operating Temp Range FH7:	20°C - 55°C	Installation:	Factory or Field
Listing:	Emergency	Test Switch:	LED Push Button	Battery Type:	High Temp. Long Life Rechargeable NiCd
Alternate Listing:	Inverter/Charger Pack	Indicator Type:	LED Type	Minimum Emergency Operation:	90 Mins.
Regulatory Approval:	cULus	Ballast Compatibility:	Electronic/Energy Saving	Min. Required Charging Time:	24 Hours
Regulatory Compliance:	Meets or Exceeds N.E.C./LSC	Special Ballast Compatibility:	Electronic Dimming Type/End-of-Life	Case Construction:	Vandal Resistant Painted Steel
Location Rating:	Damp	Lamp Compatibility:	Fluorescent Type/TCLP		

Emergency Fluorescent Ballasts: Universal Voltage: Most Frequently Ordered

MODEL NUMBER	INITIAL LUMEN OUTPUT	EOL TIME DELAY	AC INPUT	OUTPUT TYPE	CHARGING CURRENT AT 120VAC	CHARGING CURRENT AT 277VAC	BATTERY VOLTAGE	BATTERY RATING	MINIMUM ILLUMINATION TIME	RECHARGE TIME	BALLAST SIZE	WEIGHT
FH7-UNV-500L	500	Yes	3W	AC	50mA Max.	30mA Max.	6.0Vdc	12.0Wh	90 Mins	24 Hrs	L=9.60", W=2.16", H=1.13"	1.7 lbs
FH11-UNV-750L	750	Yes	3W	AC	50mA Max.	30mA Max.	3.6Vdc	14.4Wh	90 Mins	24 Hrs	L=9.37", W=2.33", H=1.53"	2.0 lbs
FH12-UNV-1400L	1400	Yes	4W	AC	60mA Max.	40mA Max.	12.0Vdc	24.0Wh	90 Mins	24 Hrs	L=14.58", W=2.17", H=1.23"	1.7 lbs



DUAL VOLTAGE EMERGENCY FLUORESCENT BALLASTS



- End of Life (EOL) Time Delay (FH7, 8, 9, 10)
- Wide Range of Lamp and Ballast Compatibility
- Factory or Field Installation
- Low Profile Models for Integral Mounting
- Damp Location Rated
- Wide Range of Lumen Output
- 2, 3 and 5 Year Warranties

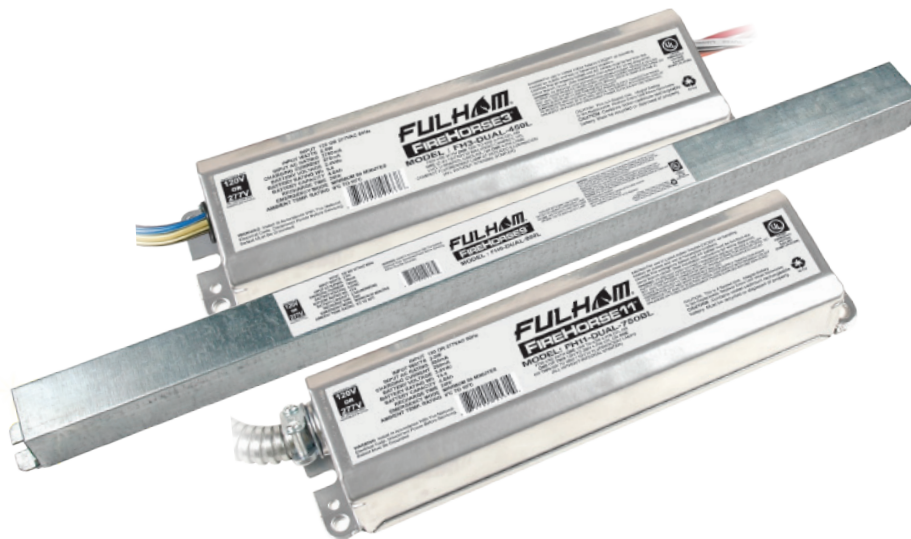


Common Specifications

Operating Voltage:	Universal 120 - 277V	Operating Temp Range:	0°C - 55°C	Fixture Wiring:	Switched or Unswitched
Frequency:	50/60Hz	Operating Temp Range FH7:	20°C - 55°C	Installation:	Factory or Field
Listing:	Emergency	Test Switch:	LED Push Button	Remote Mounting	See Installation Instructions
Alternate Listing:	Inverter/Charger Pack	Indicator Type:	LED Type	Battery Type:	High Temp. Long Life Rechargeable NiCd
Regulatory Approval:	cULus	Ballast Compatibility:	Electronic/Energy Saving	Minimum Emergency Operation:	90 Mins.
Regulatory Compliance:	Meets or Exceeds N.E.C./LSC	Special Ballast Compatibility:	Electronic Dimming Type/End-of-Life	Min. Required Charging Time:	24 Hours
Location Rating:	Damp	Lamp Compatibility:	Fluorescent Type/TCLP	Case Construction (FH1, 3, 4, 5, 6):	Vandal Resistant Painted Steel
				Case Construction (FH7, 8, 9, 10):	Vandal Resistant Galvanized Steel

Emergency Fluorescent Ballasts: Dual Voltage: Most Frequently Ordered

MODEL NUMBER	INITIAL LUMEN OUTPUT	EOL TIME DELAY	AC INPUT	CHARGING CURRENT	BATTERY VOLTAGE	BATTERY RATING	WARRANTY	BALLAST SIZE	BALLAST WEIGHT	CASE QTY	MASTER CARTON QTY
FH1-DUAL-750CFL	750	No	3.5W	280mA Max.	3.6VDC	14.4Wh	2 Years	L=9.4", W=2.4", H=1.5"	2.8lbs	1 pc.	6 pcs.
FH3-DUAL-450L	450	No	2.5W	280mA Max.	2.4VDC	9.6Wh	2 Years	L=9.4", W=2.4", H=1.5"	2.5lbs	1 pc.	6 pcs.
FH4-DUAL-700L	700	No	3.5W	280mA Max.	3.6VDC	14.4Wh	3 Years	L=9.4", W=2.4", H=1.5"	2.8lbs	1 pc.	6 pcs.
FH5-DUAL-1400L	1400	No	3.5W	280mA Max.	6.0VDC	24.0Wh	5 Years	L=13.3", W=2.4", H=1.5"	3.4lbs	1 pc.	6 pcs.



LED EXIT SIGNS



- Thermoplastic, Aluminum and Edgelit Signs available
- LED Illumination for Long Life, Energy Efficiency and Uniform Sign Face Luminance
- Red and Green Letter Choices
- Self Diagnostics Option Available on Select Signs
- Additional Signs Available. Please see our complete catalog on our website.
- New York City and Chicago Approved Units also available



EXIT Signs: Slim Profile Thermoplastic Micro LED: Most Frequently Ordered

MODEL/ITEM NUMBER	HOUSING COLOR	LETTER COLOR	OPERATION MODE	OPTIONS
FHEX20WREM	White	Red	Battery Back Up	None
FHEX20WGEM	White	Green	Battery Back Up	None

EXIT Signs: Thin Profile Thermoplastic LED: Most Frequently Ordered

FHEX21WREM	White	Red	Battery Back Up	None
FHEX21WGEM	White	Green	Battery Back Up	None
FHEX21BRAC	Black	Red	AC Only	None
FHEX21BGAC	Black	Green	AC Only	None

EXIT Signs: Emergency Thin Profile LED - Spanish (Salida): Most Frequently Ordered

FHEX21WGEMSF	White	Green	Battery Back Up	Salida
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EXIT Signs: Edge Lit Surface Mounted LED: Most Frequently Ordered

FHEX24ASREM	Aluminum	Red	Battery Back Up	Single Face
FHEX24ASGEM	Aluminum	Green	Battery Back Up	Single Face

EXIT Signs: Wet Location LED: Most Frequently Ordered

FHEX25REM	Gray	Red	Battery Back Up	None
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- Emergency Heads and Exit Sign Combination Units
- LED Illumination for Long Life, Energy Efficiency and Uniform Sign Face Luminance
- Red and Green Letter Choices
- Self Diagnostics Option Available on Select Signs
- New York City and Chicago Approved Units also available

LED COMBINATION EMERGENCY/LED EXIT SIGNS



LED Emergency and EXIT Signs: Combo: Most Frequently Ordered

MODEL/ITEM NUMBER	HOUSING COLOR	LETTER COLOR	OPERATION MODE	OPTIONS
FHEC30WR	White	Red	Battery Back Up	Micro LED
FHEC30WG	White	Green	Battery Back Up	Micro LED

LED COMBINATION EMERGENCY/LED EXIT SIGNS



LED Emergency and EXIT Signs: 5.4 Watt T5 Wedge Base Combo: Most Frequently Ordered

MODEL/ITEM NUMBER	HOUSING COLOR	LETTER COLOR	OPERATION MODE	OPTIONS
FHEC31WR	White	Red	Battery Back Up	5.4W Hds
FHEC31WG	White	Green	Battery Back Up	5.4W Hds

LED Emergency and EXIT Signs: High Brightness Combo: Most Frequently Ordered

FHEC33WR	White	Red	Battery Back Up	None
FHEC33WG	White	Green	Battery Back Up	None

LED Emergency and EXIT Signs: Wet Location Combo: Most Frequently Ordered

FHEC32R	Gray	Red	Battery Back Up	None
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2 HEAD UNITS

EMERGENCY LIGHTING

- Thermoplastic and FRP Housing Choices Available
- Long Life Battery, Energy Efficiency and High Performance
- Self Diagnostic Units Available
- Remote Heads Available
- New York City and Chicago Approved Units also available



Emergency Lighting: Low Profile: Most Frequently Ordered

MODEL/ITEM NUMBER	HOUSING COLOR	LIGHT SOURCE	OPERATION MODE	OPTIONS
FHEM10W	White	LED	Battery Back Up	None
FHEM10WH	White	LED	Battery Back Up	High Lumen
FHEM11W	White	Hal 5.4W	Battery Back Up	None
FHEM12W	White	LED	Battery Back Up	120/277
FHEM12WW	White	LED	Battery Back Up	Wet Location
FHEM13W	White	Hal MR11	Battery Back Up	None
FHEM141250	White	Hal 9W	High Capacity Battery	Oper. Rem. Heads
FHEM1412100	White	Hal 9W	High Capacity Battery	Oper. Rem. Heads
FHEM15	White	Hal 5.4W	Battery Back Up	Wet Location
FHEM16W	White	LED	Battery Back Up	120/277



PHOTOLUMINESCENT GLOW-IN-THE-DARK EXIT SIGNS

- LEED points qualified
- No energy costs - Uses no electricity
- Manufactured in the United States

FreeLite: Most Frequently Ordered

SYSTEM MODEL NUMBER	VIEWING DISTANCE (ft)	FACE	BACKGROUND
FLPL50SG	50	Single	Green
FLPL50SR	50	Single	Red
FLPL75SR	75	Single	Red
FLPL10SG	100	Single	Green
FLPL10SR	100	Single	Red



HORTICULTURE

ELECTRONIC HID BALLASTS

NON-STOCKING ITEMS FOR OEM & PRIVATE LABEL APPLICATIONS
CONTACT US WITH YOUR SPECIFIC NEEDS BASED UPON THESE OPTIONS BELOW:
ORDER@FULHAM.COM - 323-599-5000

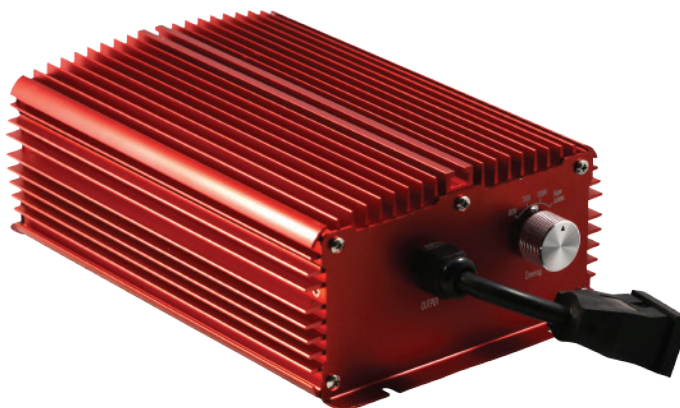


HOBBY HORTICULTURE MH/HPS BALLASTS

- 250W, 400W, 600W, 750W, 1000W
- Dual 120V or 240V: UL, cULus
- Dedicated 230V: CE
- 4-Step Dimming Options:
50%, 75%, 100%, 110%
- Same Ballast operates both MH and HPS Lamps
- Many Case Color Options Available:
Blue, Red, Black, Purple, Yellow, etc.

GREENHOUSE COMMERCIAL HORTICULTURE HIGH PRESSURE SODIUM MH BALLAST-REFLECTOR KITS

- 230V: CE
400W, 600W, 750W, 1000W
- 240V: UL, cULus
400W, 600W, 750W, 1000W
- 347V: UL, cULus
600W, 750W, 1000W
- 400V: CE, UL, cULus
600W, 750W, 1000W
- 0-10V Dimming Options
- Greenhouse Applications / Commercial Growers
- HPS and MH Models

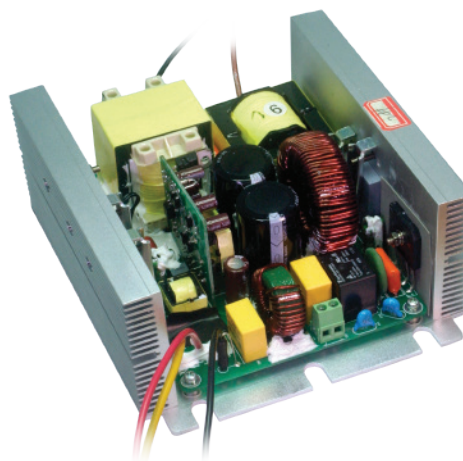


METAL HALIDE MODELS

- 400W 600W 1000W, Dimming and Non-Dimming Options Available
- Aluminum Case Construction

TANNING

ELECTRONIC HID BALLASTS



COMMERCIAL/INDUSTRIAL

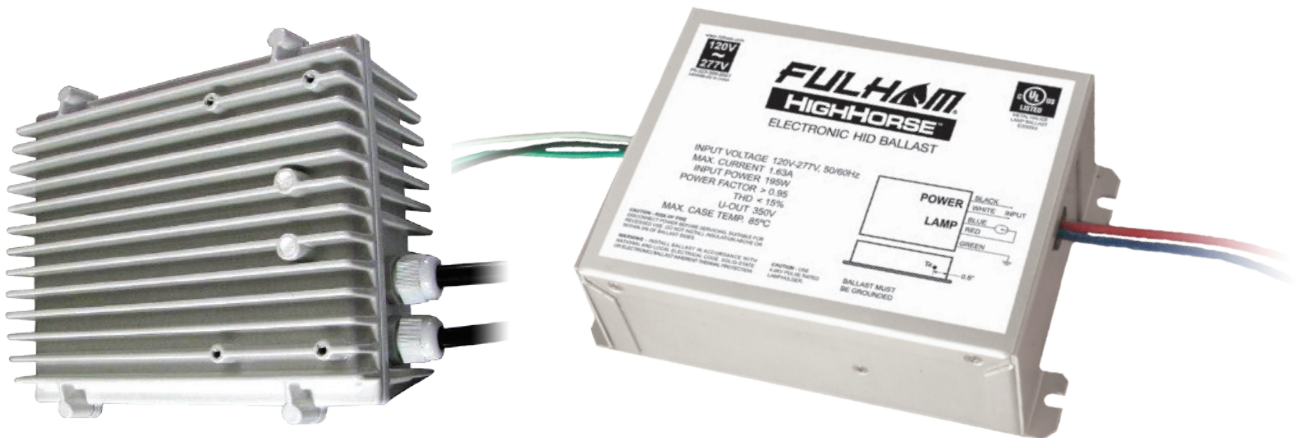
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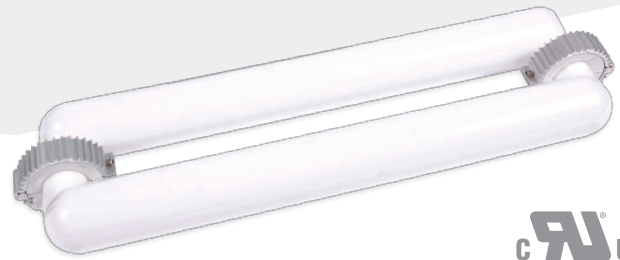


MH & HPS HID BALLASTS

- 200W-450W MH & HPS Models
- Aluminum Case Construction
- Multi-Voltage Options
- 208 / 240 / 277 / 208V-240V / 240V-277V / 208V-277V
- Non-Dimming Options
- 0-10V Dimming Options
- Auto-Dimming Options
- Manual Dimming Options
- UL - cULus Type Outdoor 1



TUBULAR INDUCTION SYSTEMS



SYSTEM MODEL NUMBER	WATTS	INPUT CURRENT (AMP) 120V - 277V	INPUT POWER	RATED INITIAL LUMINANCE (LM)	EFFICACY (LM/W) ^{††}	LUMINANCE MAINTENANCE (60K HRS)	CRI	COLOR TEMP. (KELVIN)	AVERAGE LAMP LIFE (HOURS)
HH ILS TP40 5K HH IL TP40 510M*	40	0.35-0.15	42	2800-3000	70-75	70%-75%	> 80	5000K (standard) Additional Color Temps: 2700K, 3000K, 3500K, 4000K, 4100K, 4500K, 6000K, 6500K	100,000
HH ILS TP70 5K HH IL TP70 510M*	70	0.62-0.27	74	4900-5250	70-75				
HH ILS TP80 5K HH IL TP80 510M*	80	0.70-0.30	84	6000-6400	75-80				
HH ILS TP100 5K HH IL TP100 510M*	100	0.88-0.38	105	7500-8000	75-80				
HH ILS TP120 5K HH IL TP120 510M*	120	1.05-0.45	126	9000-9600	75-80				
HH ILS TP150 5K HH IL TP150 510M*	150	1.32-0.57	158	12000-12750	80-85				
HH ILS TP200 5K HH IL TP200 510M*	200	1.75-0.76	210	16000-17000	80-85				
HH ILS TP200 5 17' HH IL TP200 510M 17'	200	1.75-0.76	210	16000-17000	80-85				
HH ILS TP250 5K HH IL TP250 510M*	250	2.19-0.95	263	21250-22500	85-90				
HH ILS TDC300 5K H I TDC400 5 35	300	2.63-1.14	315	25500-27000	85-90				
HH ILS TDC400 5K	400	3.50-1.52	420	34000-36000	85-90				



CIRCULAR INDUCTION SYSTEMS

SYSTEM MODEL NUMBER	WATTS	INPUT CURRENT (AMP) 120V - 277V	INPUT POWER	RATED INITIAL LUMINANCE (LM)	EFFICACY (LM/W) ^{††}	LUMINANCE MAINTENANCE (60K HRS)	CRI	COLOR TEMP. (KELVIN)	AVERAGE LAMP LIFE (HOURS)
HH ILS CP40 5K HH IL CP40 510M*	40	0.35-0.15	42	2800-3000	70-75	70%-75%	> 80	5000K (standard) Additional Color Temps: 2700K, 3000K, 3500K, 4000K, 4100K, 4500K, 6000K, 6500K	100,000
HH ILS CP70 5K HH IL CP70 510M*	70	0.62-0.27	74	4900-5250	70-75				
HH ILS CP80 5K HH IL CP80 510M*	80	0.70-0.30	84	6000-6400	75-80				
HH ILS CP100 5K HH IL CP100 510M*	100	0.88-0.38	105	7500-8000	75-80				
HH ILS CP120 5K HH IL CP120 510M*	120	1.05-0.45	126	9000-9600	75-80				
HH ILS CP150 5K HH IL CP150 510M*	150	1.32-0.57	158	12000-12750	80-85				
HH ILS CP200 5K HH IL CP200 510M*	200	1.75-0.76	210	16000-17000	80-85				
HH ILS CP250 5K HH IL CP250 510M*	250	2.19-0.95	263	21250-22500	85-90				
HH ILS CDS300 5K HH IL CDS300 510M*	300	2.63-1.14	315	25500-27000	85-90				
HH ILS CDS400 5K HH IL CDS400 510M*	400	3.50 - 1.52	420	34000-36000	85-90				
HH ILS CDS 500 5K	500	4.61 - 2.00	525	42500-45000	85-90				



BULB INDUCTION SYSTEMS

FULHAM

HIGHHORSE

cULus

SYSTEM MODEL NUMBER	WATTS	INPUT CURRENT (AMP) 120V - 277V	INPUT POWER	RATED INITIAL LUMINANCE (LM)	EFFICACY (LM/W) ^{††}	LUMINANCE MAINTENANCE (60K HRS)	CRI	COLOR TEMP. (KEL-VIN)	AVERAGE LAMP LIFE (HOURS)
HH ILS BP35 5K	35	0.31-0.13	37	2450-2625	70-75	70%-75%	> 80	5000K (standard) Additional Color Temps: 2700K, 3000K, 3500K, 4000K, 4100K, 4500K, 6000K, 6500K	100,000
HH ILS BP55 5K	55	0.48-0.21	58	4125-4380	75-80				
HH ILS BP85 5K HH ILS BDS85 5K	85	0.74-0.32	89	6375-6800	75-80				
HH ILS BP100 5K HH ILS BDS100 5K	100	0.88-0.38	105	7500-8000	75-80				
HH ILS BP120 5K	120	1.05-0.45	126	9000-9600	75-80				



FULHAM

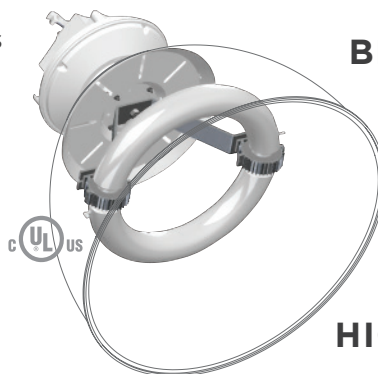
HIGHHORSE

- Thermally tested and fully warranted
- Easy & quick to install
- IES files available
- Highbay Kits for 16", 22" & 25" acrylic refractors (cULus)
- Gas Station Canopy Kits - Enclosure, Top of Fixture and Surface 2'x2' varieties (cULus)
- Billboard Kits to retrofit popular billboard fixtures

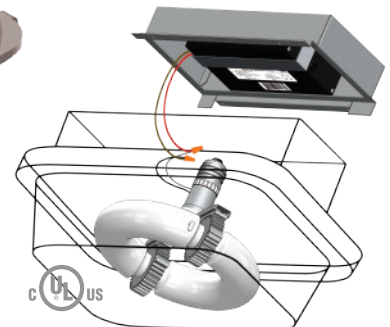
EASY INSTALL RETROFIT KITS



BILLBOARD



HIGHBAY



**GAS STATION
CANOPY**

CUSTOM SOLUTIONS

Fulham is your technology partner when it comes to custom applications and solutions to your lighting needs.

We can design and build:

Custom LED Modules

Unique shapes and sizes can be created to customer specifications.

Custom LED Drivers

Built to customer specifications, available in different sizes and shapes. Proven capabilities in developing and manufacturing lines of digital addressable, controllable LED drivers (DALI and DMX drivers) as private-label items.

Custom Ballasts

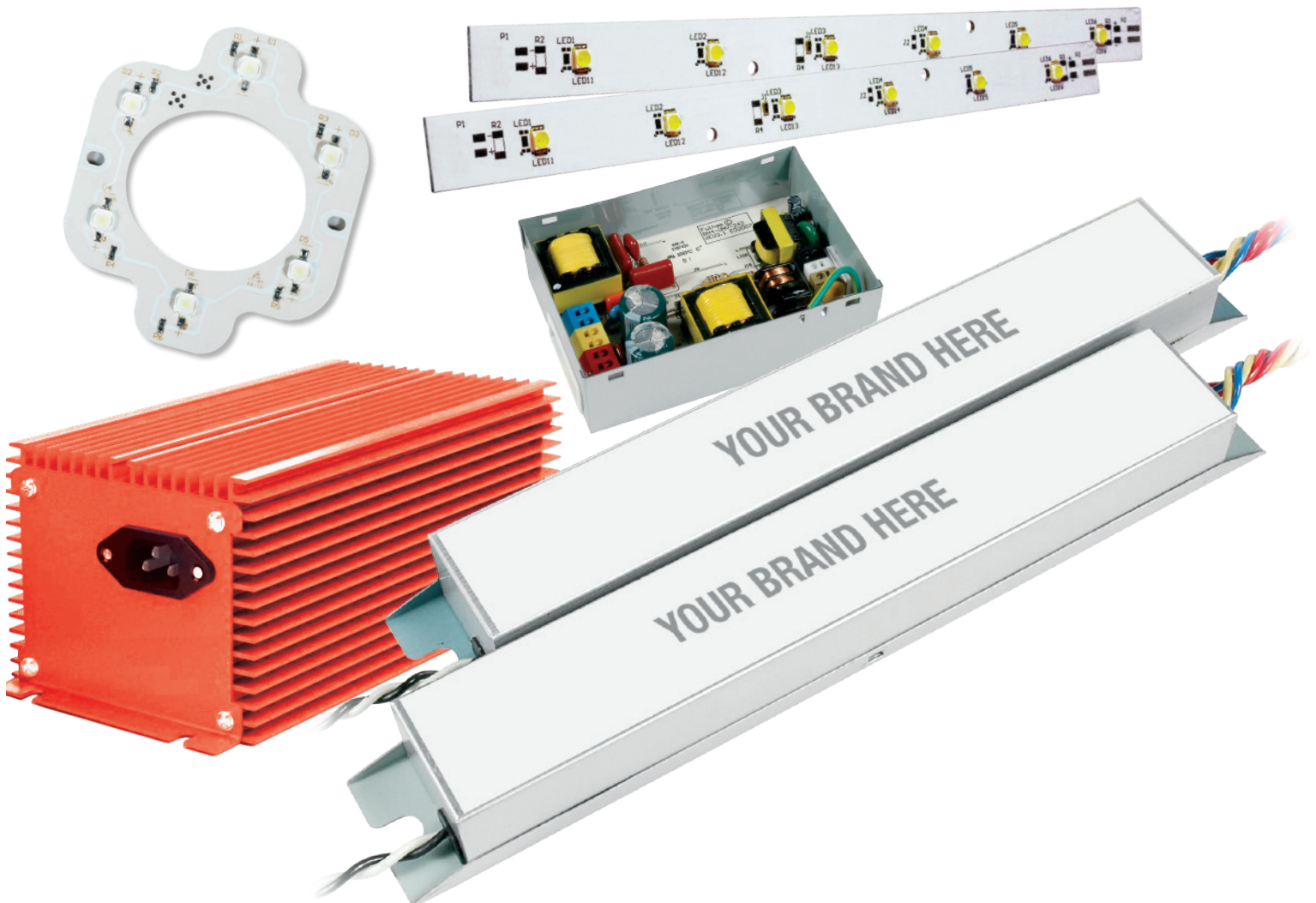
Built to customer specifications, available in different sizes and shapes and can operate custom compact and linear lamps.

Electrical Control Systems

Custom Controls built to customer specifications.

Custom Assemblies

Wiring Harnesses, custom ballast lead lengths, Kits including ballasts with lampholders and lamps. All made to customer specifications.



Fulham Co., Inc.

Length of Warranty and Coverage

Warranty period will be determined from the date of manufacture as indicated by the date code stamped on each product and will be covered as follows:

FireHorse™ - 2 to 5 Years
FREELITE™ - 5 Years
Fulham Lighting Controls Components - 5 Years
HighHorse™ Electronic HID Ballast - 3 Years
HighHorse™ Magnetic HID Ballast - 2 Years
HighHorse™ Induction - 5 to 7 Years
(If installed per instructions)
IceHorse™ Ballast - 3 Years
LongHorse™ Electronic Remote Fluorescent Ballast - 5 Years
PONY™ Electronic Ballast - 2 Years
PONY™ Electronic SugarCube™ - 2 Years
PONY™ Electronic Transformer - 2 Years
RaceHorse™ Electronic Ballast - 70°C 5 Years, 90°C 3 Years
SunHorse™ Ballast - 3 Years
SineHorse™ Ballast - 3 Years
ThoroLED™ Drivers - 2 to 5 Years
ThoroLED™ Modules - 1 Year
WorkHorse™ Electronic Fluorescent Ballast - 5 Years

Warranty Conditions

Fulham extends this express limited warranty only to the original purchaser or to the first user. This constitutes the complete warranty for the ballast. Fulham is not responsible for any auxiliary equipment not furnished by Fulham, which is used in connection with or attached to the ballast, or for operation of the ballast with any auxiliary equipment. Damage to all such equipment is expressly excluded from this warranty. In addition, Fulham is not responsible for any damage to the ballast resulting from the use of auxiliary equipment not supplied by Fulham.

Warranty Conditions Not Covered

This warranty is not applicable to any ballast manufactured by Fulham not installed and operated in accordance with:

- * Underwriters Laboratories Inc. (UL)
- * National Electrical Code (NEC)
- * Applicable international federal, state and local codes
- * Remote applications beyond specifications
 - WorkHorse - Length of the leads
 - HighHorse - 9 feet
 - LongHorse - 20 feet
- * Fulham specific, most recent instructions and application guidelines provided for installation of the ballast

Additionally, this warranty is not applicable to Fulham manufactured ballasts that have been subjected to excessive stress including, but not limited to, operating temperatures exceeding the recommended maximum temperature on any part of the ballast.

Obtaining Warranty Service

If within the warranty period it appears that the installed ballast does not meet the warranty conditions specified, the purchaser must notify Fulham Co., Inc. at 323-599-5001 (or through email at warranty@fulham.com) of its warranty claim. Fulham or its authorized service company will provide warranty service directly to you.

General Provisions

All responsibilities regarding the ballast are set forth by this warranty. Replacement or repairs of the ballast is your exclusive remedy. This warranty is given in lieu of all other express warranties. Implied warranties, including those without limitation, warranties of merchant ability and fitness for a particular purpose, are limited to the duration of this limited warranty. Fulham shall in no event be liable for damages in excess of the purchase price of the ballast, for any loss of use, loss of time, inconvenience, commercial loss, lost profits or savings or other incidental, special or consequential damages arising out of the use or inability to use such product, to the full extent such may be claimed by law.

State Law Exceptions

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, therefore the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and purchasers may have other rights that vary from state to state.

Returned Goods Authorizations (RGA)

Customers shall contact Fulham directly at 323-599-5000 for all RGA's.

After receiving the RGA, the user shall promptly return the product at the user's expense to Fulham Co., Inc. after receiving instructions as to when and where to ship product. Failure to follow this procedure shall void this warranty.

Should the number of pieces received by Fulham differ from the RGA either +/-, the customer will be notified and adjustments will be made at that time. Fulham Co. Inc. reserves the right to examine all failed ballasts and reserves the right to be the sole judge as to whether any ballasts are defective and covered under this warranty.

GLOBAL LOCATIONS:

Fulham Headquarters (USA)

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Hawthorne, CA 90250
Tel: 323.599.5000
Fax: 323.754.9060
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www.fulham.com

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Tel: +852.2314.4801
Fax: +852.2314.4186
hongkongsales@fulham.com

Fulham Co., Inc. (Canada)

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