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COMPLIANT



SHS15P-UNV-H

Electronic Ballast For Use With UV & Tanning Applications

- Input Voltage/Frequency: 120-277VAC, 50/60Hz
- Load Rating: 32W-190W per lamp, 310W Max. Load
- 310W Max.lamp load: @800mA-1050mA (+/- 10% tolerance)
- 260W Max.lamp load: @1060mA-1200mA (+/- 10% tolerance)

General Specifications

Input Voltage / Frequency	120-277VAC, 50/60Hz
Max. Line Current	2.7A@120V
Input Power at Full load	320W
Power Factor	>0.9
THD	See Electrical Data
Ballast Efficiency	92% @ Full Load (See Figure 1)
Ballast Type	Programmed Rapid Start Type R.S
Max. Output Voltage / Output Voltage To Ground	388V~
Load Rating	32W-190W per lamp, 310W Max. Load
Number of Lamps	1 or 2
Factory Default Output Current	800mA (+/- 10% tolerance) Factory programming available upon request, MOQ may apply
Programmable Output Current Range	800mA - 1200mA (+/- 10% tolerance of set current)
Lamp Type	Four pin T5/T6/PL-L
Lamp Wiring Method	Series Connection (when one lamp fails both lamps will turn off)
Lamp Operating Frequency	>=42KHZ
Lamp Current Crest Factor	<1.7
Number of Lamps Starts	10,000-15,000
Lamp Preheat Time	1.2 Seconds *** (customization through communication port using SHS-DISP and Fulham software.)
Remote Operation	30ft (9.144m)
Min. Operating Temperature	-20°C (-4°F)
Max. Case Temperature Tc (Per UL)	84°C (183.2°F)
Lamp ON/OFF Indicator Connection / Recommended Type	Yes / LED Type: 3V/5mA min.
Case Dimensions	L 10" x W 2.8" x H 1.79" (254.0mm x 71.7mm x 45.4mm)
Connectors or Wires	Push in Connectors (Use 14-20AWG solid copper wire stripped to 3/8")
Weight	1.56Kg (3.44lb)
Approvals / Standards	UL 935 (USA), CSA C22.2 NO.74-16 / cULus, Class P CE (Europe), CB USA (ANSI/IEEE C62.41) Type 1 Outdoor, Type CC, Type HL
IP Rating	IP20
RFI / EMI	FCC Part 18B (Consumer) Europe_Cispr15
Protections	Input Surge Protection Line-Neutral 2.5KV, Line & Neutral-Ground 2.5KV Over Current Protection End of Life Protection
Max Lamp Load Power	310W Max. @800mA-1050mA / 260W Max. @1060mA-1200mA
Communication Port/Type	RJ12 / I ² C
**Soft Start Capable	Yes (through ON/OFF ports using a dry contact switch or using SHS-DISP display)
Lamps ON/OFF LED Indicator Port	Yes
Ballast ON/OFF LED Indicator Port	Yes
Programmable Lamp Hour Counter	Yes (through SHS-DISP display)
Programming Device	TPSB-100 or using SHS-DISP display
Sound Rating	A
Service Life	50,000 hours lifetime @ Tc 83°C(181.4°F)
Warranty	5 Years @ Tc 83°C(181.4°F) from the date of manufacture when properly installed.

**ON/OFF to ballast output without removing AC input.

***Lamp pre-heat time changes should be reviewed with and approved by the lamp manufacturer for optimal lamp life and performance. Failure to do so may result in damage to the lamp.



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WARNING

This product may utilize Germicidal Ultraviolet (UV-C) Lamps. Germicidal ultraviolet rays are harmful to the eyes and skin. Avoid exposure to direct or reflected germicidal ultraviolet rays. Follow all the other safety instructions according to installation sheet.

UL Lamp List Electrical Data - UV Lamps - 800mA

Electrical Data @120VAC

Lamp Wattage / Type	Lamps Operated	Input Wattage	Line Current	Power Factor	Ballast Factor	Efficacy Factor
GHO64T5L/4P	1	155	1.300	0.99	0.97	0.62
	2	282	2.362	0.99	0.97	0.34
GPH843T5L/HO/4P (GHO36T5L)	1	83	0.702	0.99	0.97	1.17
	2	167	1.397	0.99	0.97	0.58
GHO357T5L/RPT	N/A	N/A	N/A	N/A	N/A	N/A
	2	65	0.557	0.98	0.97	1.48
GPH1148T5L/HO/4P	1	114	0.956	0.99	0.97	0.85
	2	232	1.938	0.99	0.97	0.42
GPH893T5L/HO/4P (GHO893T5L)	1	87	0.736	0.99	1.25	1.44
	2	175	1.460	0.99	0.97	0.56
GPH846T5L/HO/4P	1	85	0.713	0.99	0.97	1.15
	2	160	1.342	0.99	0.97	0.61
TUV PL-60W/4P/HO	1	74	0.623	0.98	0.97	1.32
	2	145	1.214	0.99	0.97	0.67
TUV PL-95W/4P/HO	1	98	0.820	0.99	0.98	1.01
	2	183	1.533	0.99	0.97	0.53

Electrical Data @230VAC

Lamp Wattage / Type	Lamps Operated	Input Wattage	Line Current	Power Factor	Ballast Factor	Efficacy Factor
GHO64T5L/4P	1	154	0.693	0.96	0.97	0.63
	2	277	1.218	0.99	0.97	0.35
GPH843T5L/HO/4P (GHO36T5L)	1	83	0.402	0.89	0.97	1.17
	2	164	0.738	0.97	0.97	0.59
GHO357T5L/RPT	N/A	N/A	N/A	N/A	N/A	N/A
	2	66	0.335	0.85	0.97	1.48
GPH1148T5L/HO/4P	1	113	0.525	0.94	0.97	0.86
	2	228	1.004	0.98	0.97	0.43
GPH893T5L/HO/4P (GHO893T5L)	1	87	0.418	0.90	1.25	1.44
	2	172	0.770	0.97	1.25	0.73
GPH846T5L/HO/4P	1	84	0.407	0.90	0.97	1.15
	2	158	0.711	0.96	0.97	0.61
TUV PL-60W/4P/HO	1	73	0.365	0.87	0.97	1.32
	2	144	0.652	0.96	0.97	0.67
TUV PL-95W/4P/HO	1	97	0.458	0.92	0.98	1.01
	2	180	0.805	0.97	0.97	0.54



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UL Lamp List Electrical Data - UV Lamps - 800mA

Electrical Data @277VAC

Lamp Wattage / Type	Lamps Operated	Input Wattage	Line Current	Power Factor	Ballast Factor	Efficacy Factor
GHO64T5L/4P	1	153	0.612	0.90	0.97	0.63
	2	274	1.025	0.96	0.97	0.35
GPH843T5L/HO/4P (GHO36T5L)	1	83	0.397	0.75	0.97	1.17
	2	164	0.646	0.91	0.97	0.59
GHO357T5L/RPT	N/A	N/A	N/A	N/A	N/A	N/A
	2	66	0.349	0.68	0.97	1.48
GPH1148T5L/HO/4P	1	114	0.483	0.85	0.97	0.86
	2	228	0.862	0.95	0.97	0.43
GPH893T5L/HO/4P (GHO893T5L)	1	87	0.411	0.77	0.97	1.11
	2	172	0.674	0.92	1.25	0.73
GPH846T5L/HO/4P	1	84	0.403	0.76	0.97	1.15
	2	158	0.628	0.91	0.97	0.61
TUV PL-60W/4P/HO	1	74	0.371	0.72	0.97	1.32
	2	144	0.582	0.89	1.25	0.87
TUV PL-95W/4P/HO	1	97	0.436	0.80	0.98	1.01
	2	180	0.701	0.93	1.25	0.69

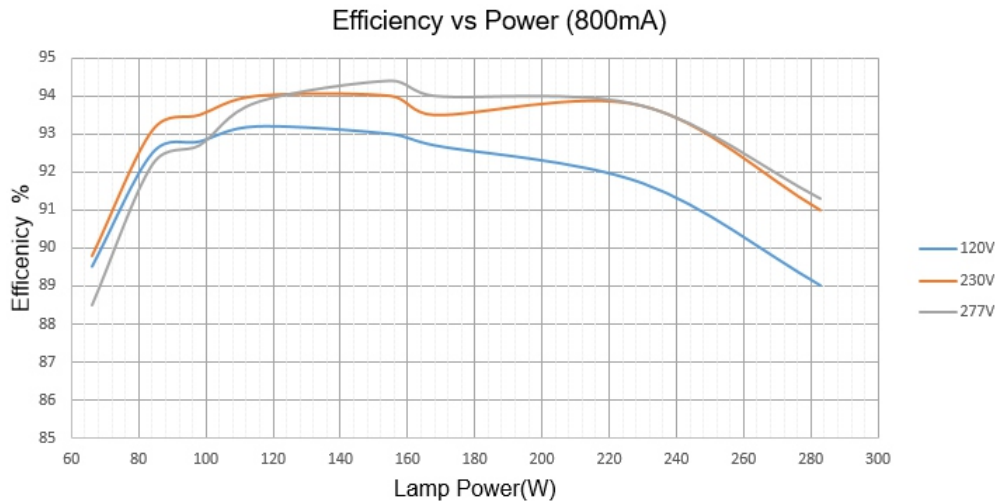
Online Lamp List and Wiring Diagram:

<https://www.fulham.com/contact-us/wiring-diagrams/>

Scan QR code to be directed to
lamp chart and wiring-diagram.



Figure 1





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UL Lamp List Electrical Data - UV Lamps - 1000mA

Electrical Data @120VAC

Lamp Wattage / Type	Lamps Operated	Input Wattage	Line Current	Power Factor	Ballast Factor	Efficacy Factor
LMPHGS500	1	123.3	1.034	0.992	0.97	0.79
	2	239.5	2.023	0.997	0.97	0.41
LMPHGS600	1	141.2	1.177	0.994	0.97	0.69
	2	273.2	2.281	0.998	0.97	0.36

Electrical Data @230VAC

Lamp Wattage / Type	Lamps Operated	Input Wattage	Line Current	Power Factor	Ballast Factor	Efficacy Factor
LMPHGS500	1	122.7	0.562	0.943	0.97	0.79
	2	233.2	1.045	0.981	0.97	0.42
LMPHGS600	1	140.0	0.629	0.955	0.97	0.69
	2	267.7	1.182	0.985	0.97	0.36

Electrical Data @277VAC

Lamp Wattage / Type	Lamps Operated	Input Wattage	Line Current	Power Factor	Ballast Factor	Efficacy Factor
LMPHGS500	1	122.5	0.512	0.861	0.97	0.79
	2	231.8	0.885	0.951	0.97	0.42
LMPHGS600	1	140.2	0.566	0.886	0.97	0.69
	2	264.3	0.989	0.961	0.97	0.37

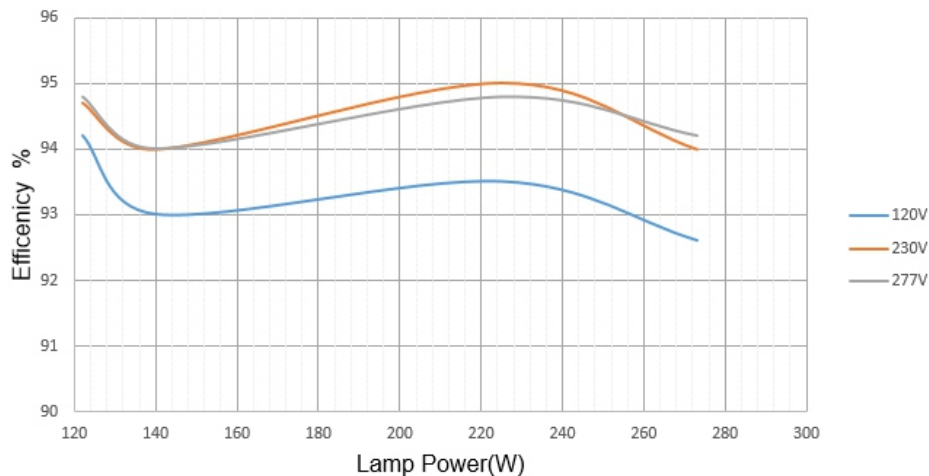
Online Lamp List and Wiring Diagram:
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Scan QR code to be directed to
 lamp chart and wiring-diagram.



Figure 2

Efficiency vs Power (1000mA)





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UL Lamp List Electrical Data - UV Lamps - 1200mA

Electrical Data @120VAC

Lamp Wattage / Type	Lamps Operated	Input Wattage	Line Current	Power Factor	Ballast Factor	Efficacy Factor
GPH843T5L/4P	1	104.1	0.875	0.990	0.96	0.92
	2	209.2	1.749	0.997	0.94	0.45
GPH1554T5L/4P	1	198.2	1.652	0.997	0.94	0.48
	N/A	N/A	N/A	N/A	N/A	N/A
GPHVA357T5L/4P	N/A	N/A	N/A	N/A	N/A	N/A
	2	102.6	0.863	0.989	0.98	0.96

Electrical Data @230VAC

Lamp Wattage / Type	Lamps Operated	Input Wattage	Line Current	Power Factor	Ballast Factor	Efficacy Factor
GPH843T5L/4P	1	103.8	0.484	0.924	0.96	0.92
	2	205.5	0.933	0.976	0.94	0.46
GPH1554T5L/4P	1	195.2	0.866	0.974	0.94	0.48
	N/A	N/A	N/A	N/A	N/A	N/A
GPHVA357T5L/4P	N/A	N/A	N/A	N/A	N/A	N/A
	2	102.2	0.479	0.923	0.98	0.96

Electrical Data @277VAC

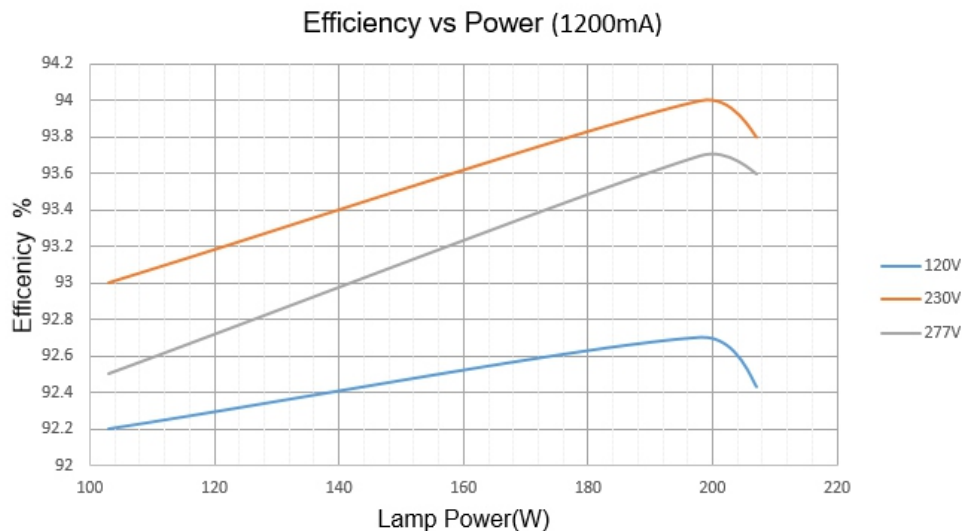
Lamp Wattage / Type	Lamps Operated	Input Wattage	Line Current	Power Factor	Ballast Factor	Efficacy Factor
GPH843T5L/4P	1	103.9	0.459	0.816	0.96	0.92
	2	204.9	0.802	0.939	0.94	0.46
GPH1554T5L/4P	1	195.2	0.751	0.934	0.94	0.48
	N/A	N/A	N/A	N/A	N/A	N/A
GPHVA357T5L/4P	N/A	N/A	N/A	N/A	N/A	N/A
	2	102.3	0.456	0.808	0.98	0.96

Online Lamp List and Wiring Diagram:
<https://www.fulham.com/contact-us/wiring-diagrams/>

Scan QR code to be directed to
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Figure 3





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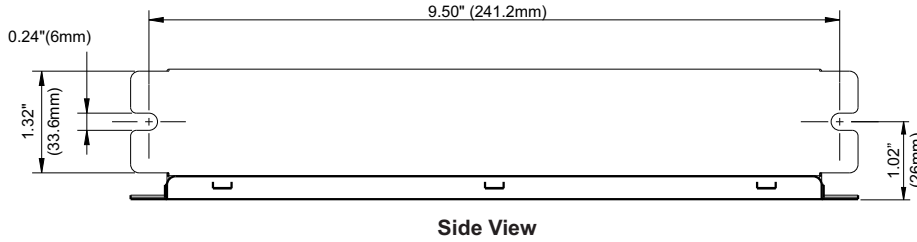
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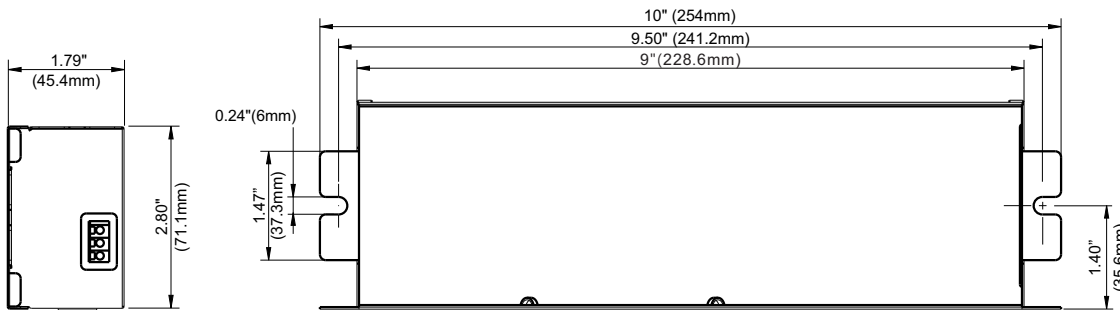
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Mechanical Data

Overall Dimensions	
Length	10.0" [254mm]
Width	2.8" [71.7mm]
Height	1.79" [45.4mm]
Mounting	9.5" [241.2mm]

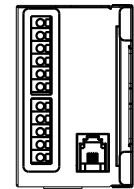


Side View



Top View

Side View: Input

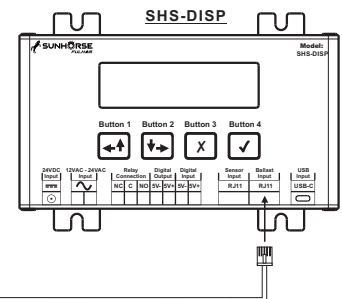
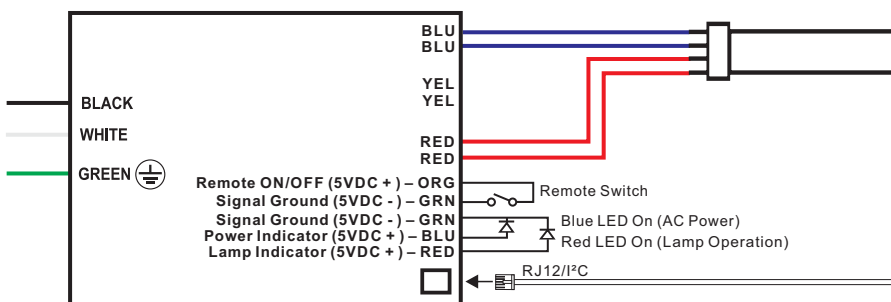
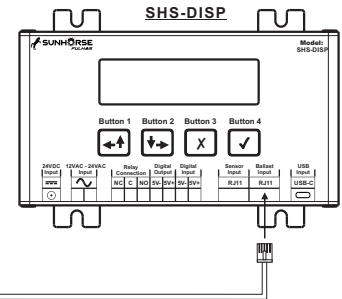
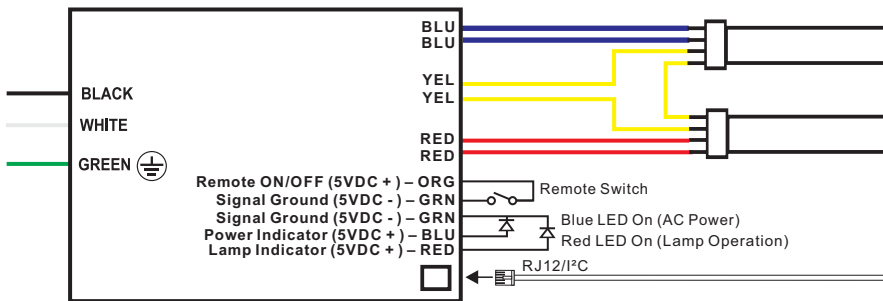


Side View: Output

Where : L = Length, W = Width, H = Height

±0.01" Tolerance

Wiring Diagram



Note:

- 1.) This ballast must be grounded.
- 2.) Use 18AWG solid copper wire stripped to 3/8" with ballast push in connectors.
- 3.) Recommend LED Type: 3V/5mA min.

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Guidelines

Factory Programming

- For currents other than the default 800mA, factory programming is available upon request and minimum order quantities (MOQ's) may apply.
 - Factory Output Current Range: 800mA – 1200mA (+/- 10% tolerance of set current)
 - Fulham must approve any lamp/ballast combination not currently listed for operation in this spec sheet. Failure to do so may result in voidance of warranty.
 - This ballast is UL Listed and approved only for the lamps listed in the “UL Lamp List Electrical Data” sections. Additional UL verification testing will be needed to UL List lamps not already listed. Please contact Fulham for further information.

Grounding

- Ballast must be grounded by means of the driver case or driver ground terminal.

Short Circuit Protection

- Output latches off.

No-load Operation and Protection

- Output latches off.

Remote Mounting

- Up to 30ft with 18AWG.

Service life / Lifetime

- 50,000 hours at $T_c = 83^{\circ}\text{C}$ (181.4°F)

Warranty

- Reference Fulham's limited Warranty: <https://cdn.fulham.com/PDFs/Limited-Warranty.pdf>



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TPSB-100 and SHS-DISP Information

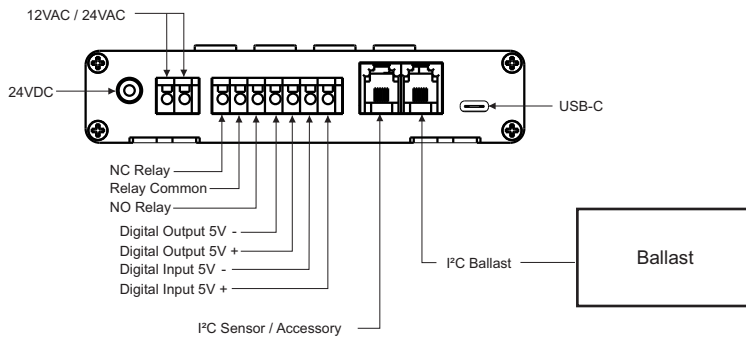
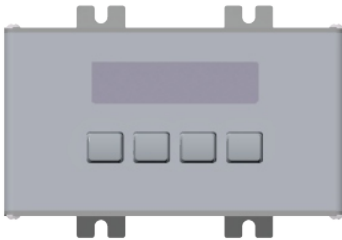
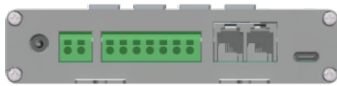
TPSB-100 Programming Controller

Please consult the user manual for instructions on using the TPSB-100 SmartSet programming controller.



- <https://www.fulham.com/PDFs/SpecSheets/TPSB-100-2017-765.pdf>

SHS-DISP display and communication device





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Part Number Matrix

SH

Product Line

SH = SunHorse

S

Ballast Type

S = Standard

15

Ballast Order Number

P

Programmable

P = Programmable

UNV

Input Voltage

UNV = 120V~277V

H

Case Type

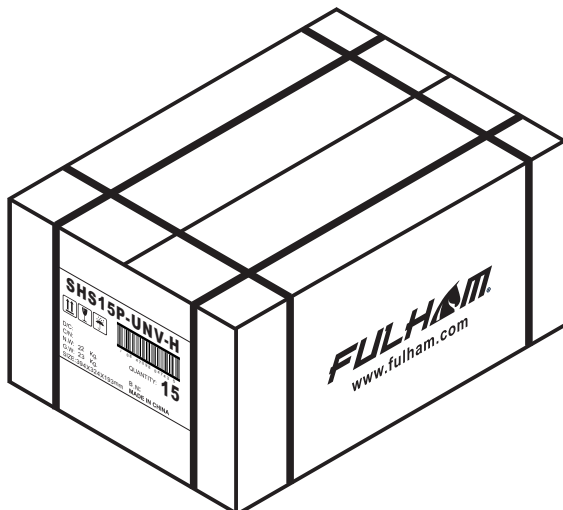
H = Medium

Product Image



Packaging

Master Carton



OUTER DIMENSION		
L	W	H
15.51"(394mm)	12.76"(324mm)	7.60"(193mm)
Net Weight	Gross Weight	QUANTITY
48.5lbs. (22.0kg.)	50.71lbs. (23.0kg)	15pcs.