SPHWB-100W-480-EN54

- Weatherproof Horn Loudspeaker
- 100W 100V
- High Sound Pressure Level
- Indoor or Outdoor Use, Including Tunnels
- Weatherproof to IP65
- UL 94-V0 Speaker Housing
- Thermal Fuse and Ceramic Terminals
- Full range sound Quality
- Certified to EN 54-24

OVERVIEW

The SPHWB-100W-480-EN54 100V weatherproof horn loudspeaker is suitable for indoor or outdoor use in Voice Alarm and Public Address applications. It is built to withstand corrosive atmospheric contaminants, high moisture levels and temperature extremes, and is suitable for use in environments such as tunnels.

The horn provides an enormous sound pressure level, providing a maximum average SPL of at least 135dB Pmax/1m which enables intelligible voice announcements over a large area using a minimum number of loudspeakers.

The SPHWB-100W-480-EN54 has an asymmetric hyperbolic horn geometry; a very balanced frequency response; a very low distortion (using a high quality 100W horn driver with a high performance CCAR voice coil) and can make intelligible Voice Alarm and Public Address announcements over distances of 90 to 300 metres. The loudspeaker housing for the horn and driver cover are made from an UL 94-V0 flame retardant and impact resistant black plastic, with rust-free stainless steel fastenings.

Two mounting kit options are available for installing the loudspeaker to ceilings, both containing high quality V4A/A4 Austenitic Stainless Steel Brackets and Screws. The SPAC-V4A-HW4 kit includes 4 Brackets. The SPAC-V4A-HWP kit includes 3 pieces which are assembled to create a premium speaker bracket which can be installed by one person. Both kits include M8x20 screws to fix the speaker to the brackets.

No additional equalizer is needed to ensure the speaker's frequency response meets the requirements of the EN 54-24 standard.

The recommended settings of EQ / DSP when using a STIPA test signal at maximum load are: High pass (HP) 300 Hz to 400 Hz with 12 dB slew rate (Butterworth).

Enhanced Acoustic Simulator for Engineers (EASE) data for this loudspeaker is available on request.

TECHNICAL DATA

Power Tappings	100W / 50W / 25 W	
Impedance (100V)	100 / 200 / 400 ohm	
Frequency Range	280 - 9,000 Hz	
Frequency Response	250 – 10,000 Hz	
SPL 1W / 1m, peak	119,0 dB	
SPL 1W / 4m, peak	107,0 dB	
SPL Pmax / 4m, peak	127,0 dB	
SPL IEC 60268-5 1W/1m	113,0 dB	
SPL IEC 60268-5 Pmax/1m	133,0 dB	
SPL EN 54-24, Pmax/4m	119,0 dB	
Sensitivity EN 54-24, 1W / 4m	101,0 dB	
Dispersion (-6dB, 500Hz) Horizontal / Vertical Plane*	58° (horizontal) / 35° (vertical)	
Dispersion (-6dB, 1KHz) Horizontal / Vertical Plane*	35° (horizontal) / 25° (vertical)	
Dispersion (-6dB, 2KHz) Horizontal / Vertical Plane*	40° (horizontal) / 20° (vertical)	
Dispersion (-6dB, 4KHz) Horizontal / Vertical Plane*	54° (horizontal) / 15° (vertical)	
Temperature Range	-25 / +70 °C	
Dimensions	1228 x 832 x 413mm	
IP Rating	IP65	
Weight (net)	16.0 kg	
Colour	Black	
Connector	4-pin ceramic block	
Maximum Cable Passage	8 mm²	
Mounting	SPAC-V4A-WH4	4 bracket mounting kit or
	SPAC-V4A-WHP	Premium bracket mounting kit
Compliance	EN 54-24	

*** EN 54-24 Definitions for Speaker Reference Axis, Point, Plane + Horizontal & Vertical Planes:**

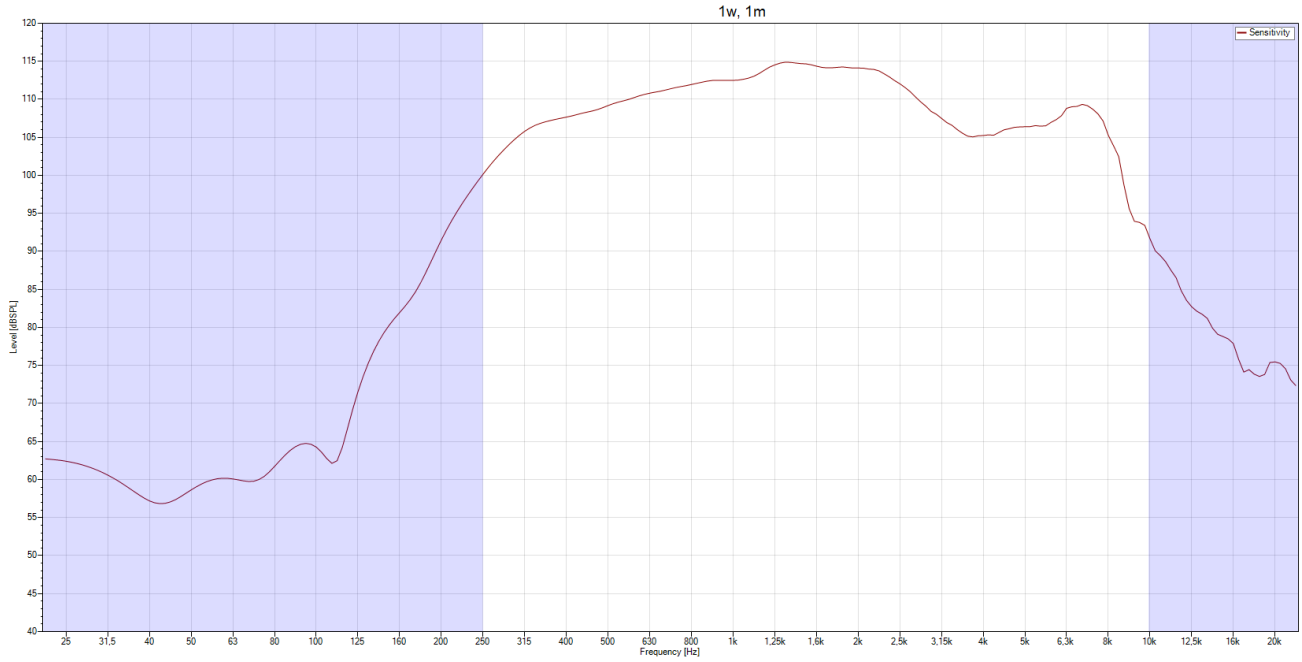
- Reference Axis: Axis is through the centre of the speaker grille surface and is perpendicular to the grille surface.
- Reference Plane: Plane is across the front of the speaker grille surface and is perpendicular to the reference axis.
- Horizontal Plane: Plane contains the reference axis and is perpendicular to the reference plane.
- Vertical Plane: Plane contains the reference axis and is perpendicular to the reference plane.
- Reference Point: Point is at the centre of the front of the speaker grille surface where all the above intersect.

All measurements in the table above relate to the Reference Axis unless otherwise stated

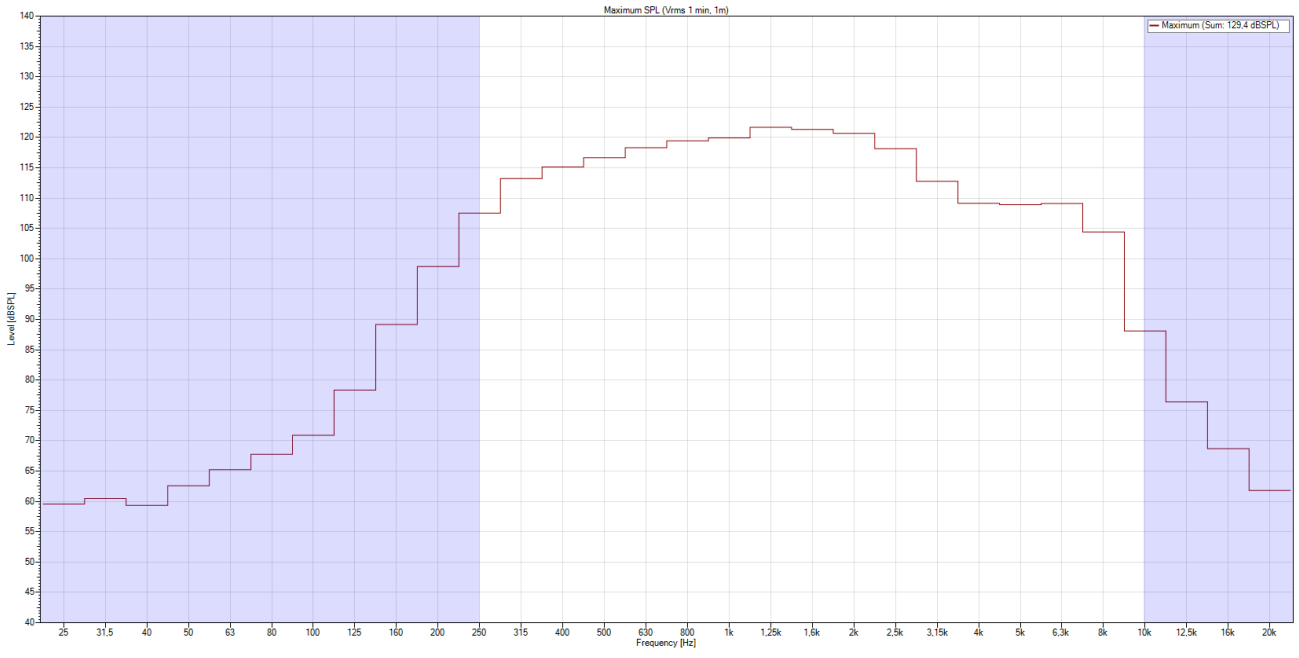
EN 54-24 Annex A, Measurement Environments:

Flush-mounted loudspeakers e.g. ceiling loudspeakers, shall be measured under half-space free field conditions.
All other speakers shall be measured under free-field conditions or in a ground plane arrangement that simulates a free-field condition.

FREQUENCY RESPONSE DIAGRAM—SENSITIVITY 1W / 1m

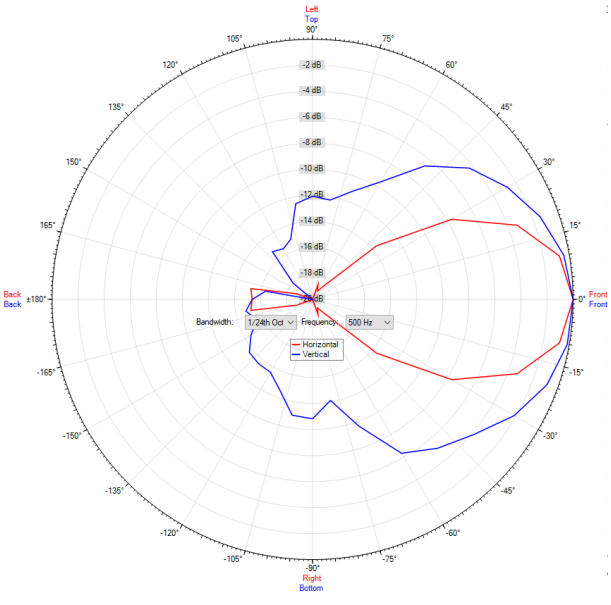


FREQUENCY RESPONSE DIAGRAM—MAXIMUM SPL (Vrms 1 min, 1m)

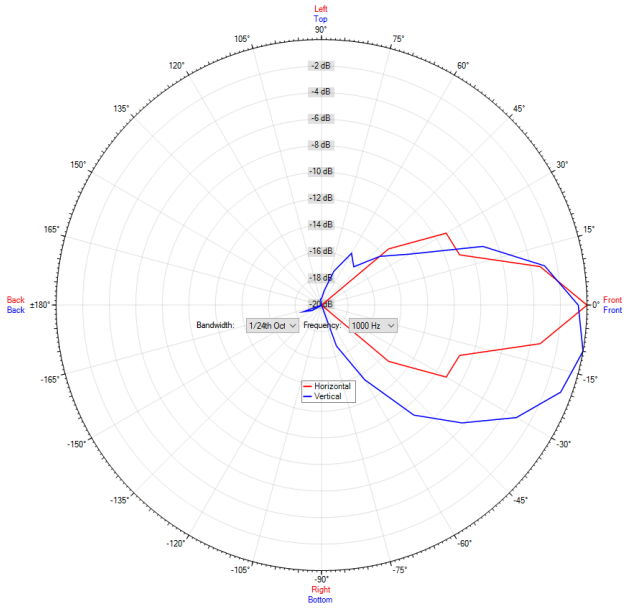


POLAR DIAGRAMS

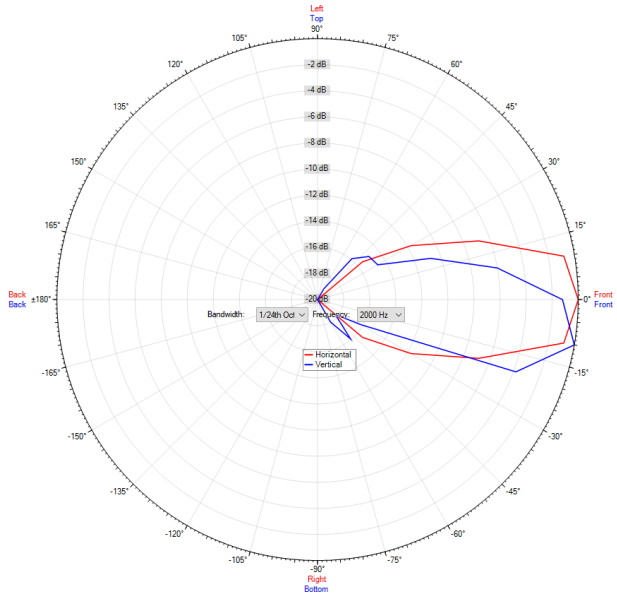
500 Hz



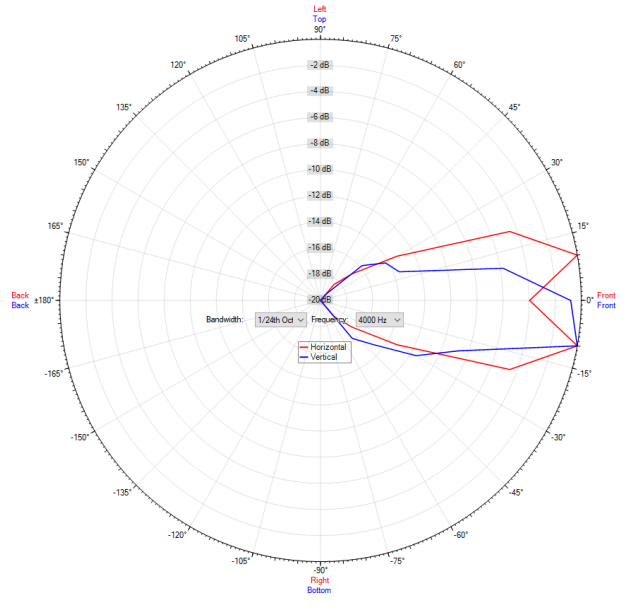
1,000 Hz



2,000 Hz

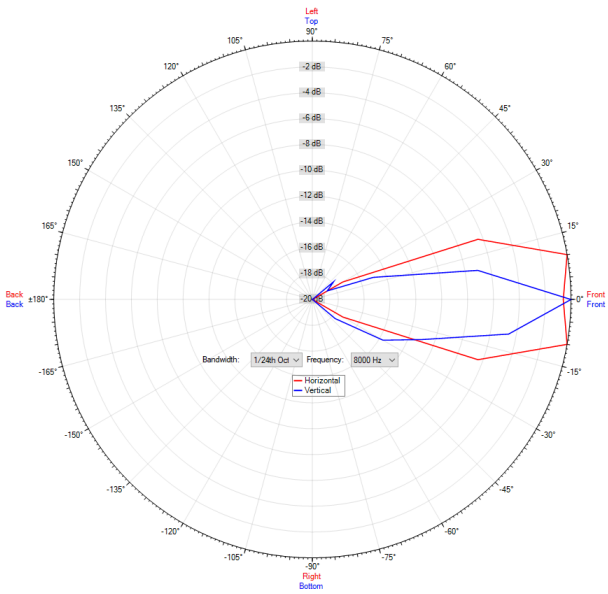


4,000 Hz

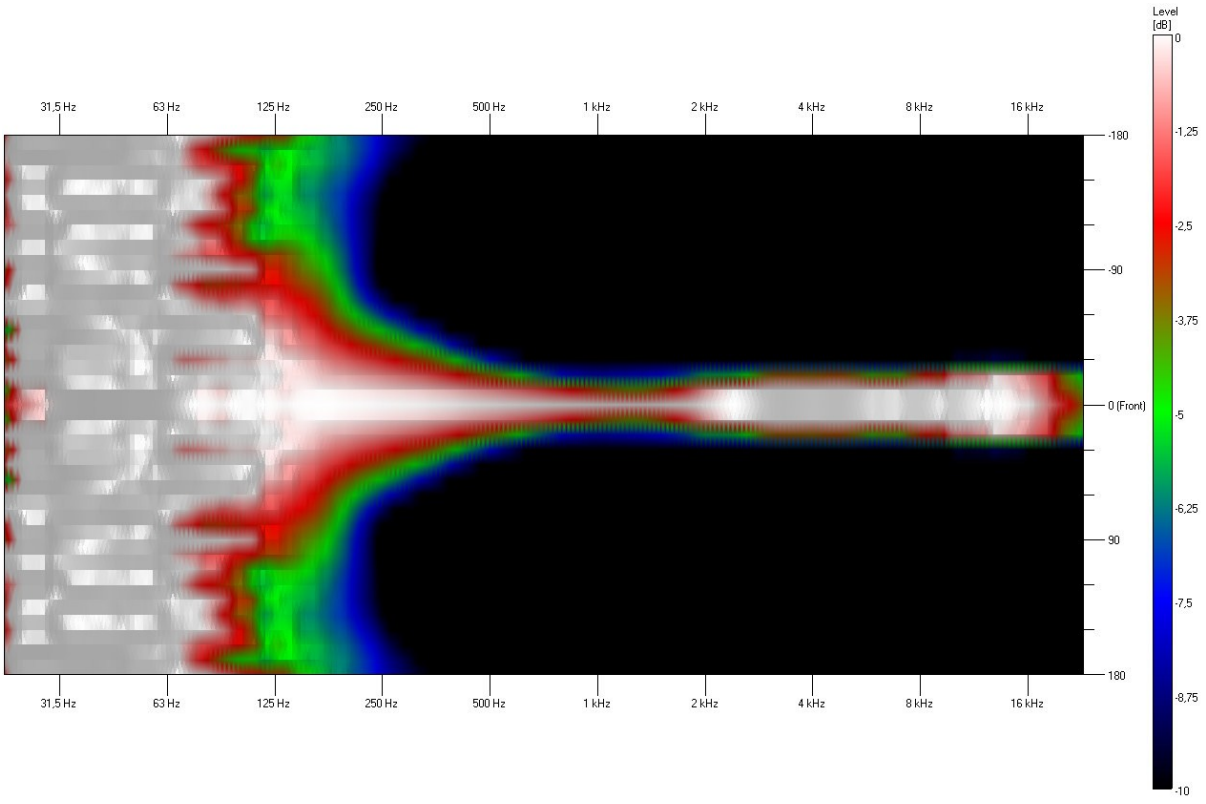


POLAR DIAGRAMS

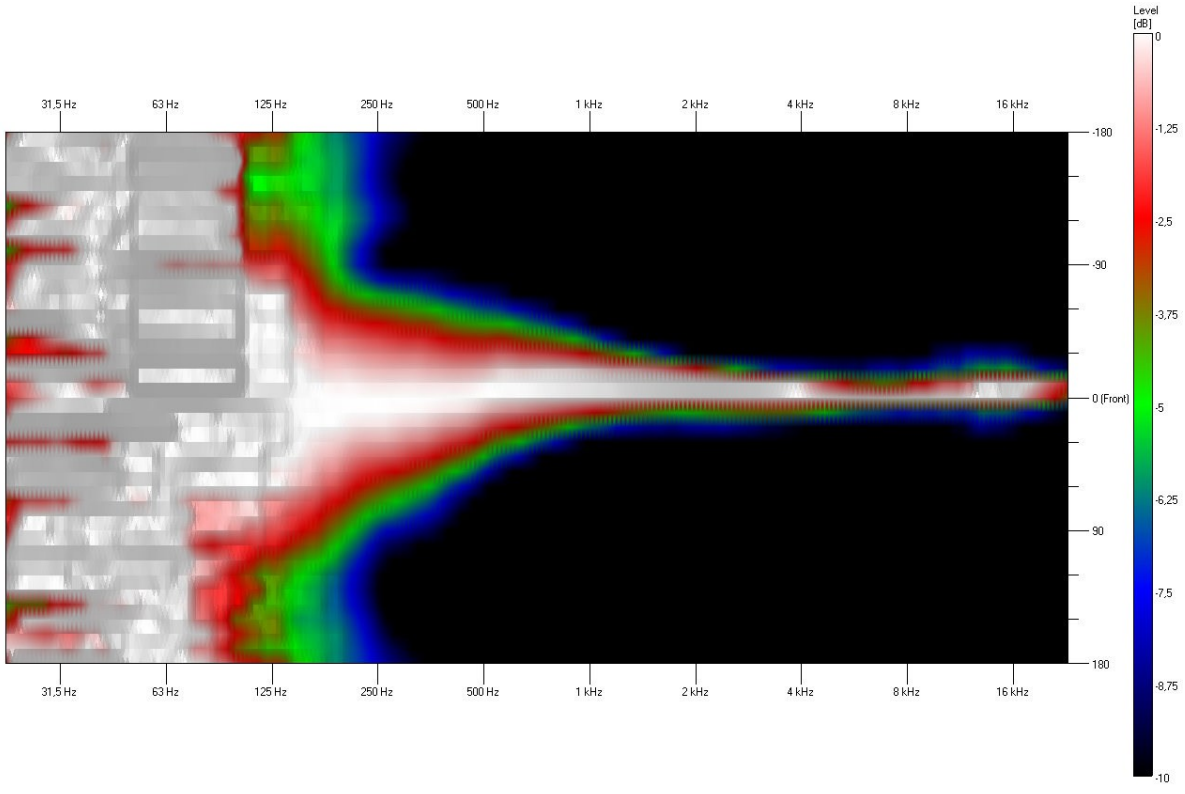
8,000 Hz



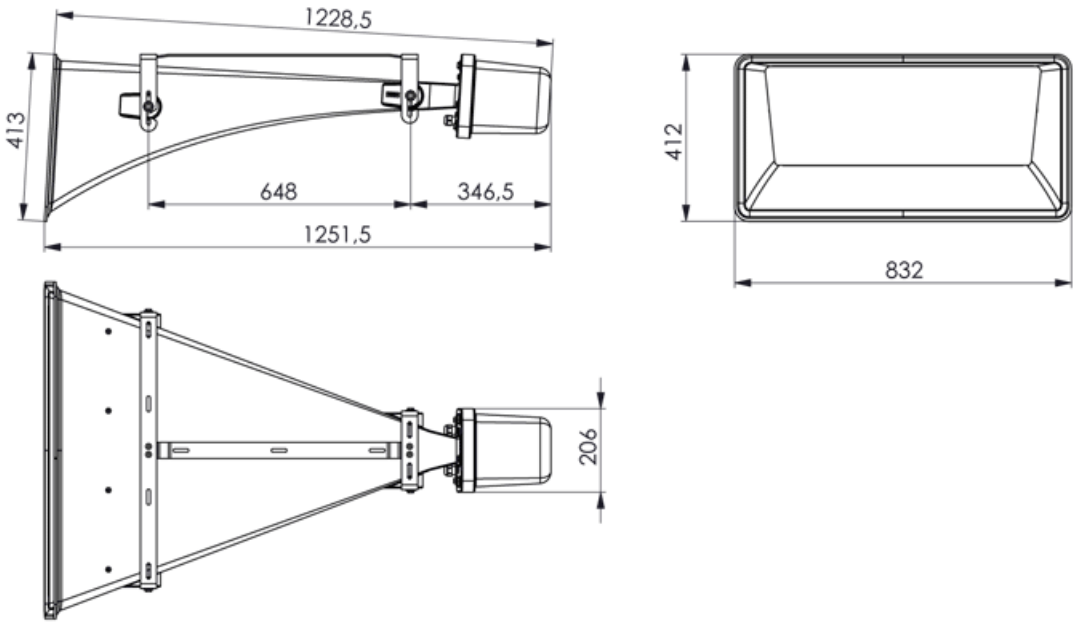
ISOBAR - HORIZONTAL



ISOBAR - VERTICAL



DIMENSIONAL DIAGRAM



This equipment is designed and manufactured to conform to the following EU Directives:

CE

Low Voltage: 2014/35/EU
Restriction of Hazardous Substances (RoHS): 2011/65/EU & 2015/863/EU

Made for:

Zenitel GB Limited

Unit 17 - Cliffe Industrial Estate - Lewes - East Sussex - BN8 6JL - U.K.

www.zenitel.com

Version 2 ASL_Datasheet_SPHWB-100W-480-EN54