

# Eluxa high fidelity speaker strobes & speakers



## Description

The Wheelock Eluxa speakers by Eaton feature high fidelity sound output, and speaker strobe models include an advanced power saving LED technology with a full range of candela settings for indoor wall and ceiling-mount applications. With the widest frequency response range (300 to 8000 Hz) in the industry, the Eluxa ELSPK and ELPST feature leading intelligibility with crisp, clear voice messages and tone signaling, ideal for emergency communications, mass notification, voice evacuation, and fire alarm.

## High efficiency, LED technology

Eaton's high energy efficient technology leads the industry in lowest current draw across the full candela range, which reduces overall power consumption and costs in fire alarm systems. As the first notification appliances in the industry to utilize LED as the light source, this breakthrough and patented optical design, resulting in best-in-class efficiency, enables material and system cost savings, allowing for a greater number of appliances on the notification appliance circuit and fewer power supplies. All strobe models feature six candela settings: 15, 30, 75, 110, 135, 185 cd on wall models and 15, 30, 75, 110, 150, 177 cd on ceiling models.

## Low profile design and rich feature set

With the industry's smallest footprint, the Eluxa speakers and speaker strobes are aesthetically pleasing to building owners as the low profile design does not detract from the interior decor. Eluxa is feature rich with 6 candela settings in 1 device, dual voltage (25/70 VRMS) capability, field selectable taps from 1/8 to 2 watts (5W 70V) pre-wire/pre-test via mounting plate with hinged feature for ease-of-installation, and no tools needed for setting changes. These products are suitable for indoor wall and ceiling mount applications. The ELPST speaker strobes and ELSPK speakers are 24V operation.

## Approvals and synchronization

Eaton's Eluxa strobes meet the 20 millisecond light pulse duration requirements of the 2016 edition of NFPA 72. By meeting this latest requirement, xenon and LED devices can now be in the same field of view.

The Eluxa notification appliances are listed under UL Standards 1971, 1638, and 1480 and under CAN/ULC-S526 and CAN/ULC-S541. The appliances are Restriction of Hazardous Substances (RoHS) compliant and contain no mercury or other hazardous substances.

In addition, the Eluxa product line has been UL/ULC listed as compatible with all Fire Alarm Control Panels (FACP) and accessories that have been determined to be compatible with Exceder LED3 and Wheelock RSS strobe-based products, including the RSS, CH, E, EH, ET, ST, HS, MT, S8, SA, STH and Z Series. The listing also includes the ability to install the Eluxa strobes in the same notification zone and field of view with any Wheelock RSS strobe models.

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## Features

- High Fidelity Sound Output
  - High intelligibility at minimum wattage across a frequency range of 300 to 8000 Hz
- Energy Efficient
  - LED technology provides industry’s lowest current draw
  - Fewer power supplies required, smaller wire gage, reduced wire runs
- Low-Profile Design
  - Smallest footprint with sleek, modern aesthetics
- Special Lettering Available
- 6 Field Selectable Settings in 1 Device
  - Wall: 15, 30, 75, 110, 135, 185 cd
  - Ceiling: 15, 30, 75, 110, 150, 177 cd
- 5 Field Selectable Taps
  - 1/8 watt up to 2 watts (5W 70V)
  - 25 or 70 VRMS operation
- Easy-to-Install
  - Mounting plate included with all models: Convenient capture hinge allows installers to easily hold the device while fastening the single-mount screw in place.
  - Pre-wire/pre-test capability to check for wiring and ground faults prior to appliance installation
  - Finger slide switches–No tools needed for setting changes
  - Built-in level adjustment feature and snap-on grille cover
  - IN/OUT screw terminals using #12 to #18 AWG wires
  - Mounting options include ELSPKBB backboxes and 4” square, 2 1/8” deep backboxes for wall models and LSPKBB-C backboxes and 4” square, 2 1/8” deep backboxes for ceiling models.
- Strobe Synchronization Components
  - Meet synchronizing standards with Wheelock’s DSM Sync Modules, PS Power Supplies or SAFEPATH products
  - Ability to mix xenon and LED strobes in the same field of view
- Compliance
  - NFPA 72 2016 - 20 ms flash duration requirements
  - UL 1971, UL 1628, UL 1480, ULC-S526, ULC-S541
  - California State Fire Marshal (CSFM)
  - Low frequency requirements of UL 464 (520 Hz) to meet NFPA’s 520 Hz tone requirements for sleeping areas
  - ADA/NFPA/ANSI/OSHA

**Note:** Please read these specifications and associated installation instructions, before using, specifying, or installing this product. Visit [Eaton.com/Lifesafetynotification](http://Eaton.com/Lifesafetynotification) for current installation instructions.

## General Notes

- Strobes are designed to flash at 1 flash per second minimum over their “Regulated Voltage Range.” Note that NFPA-72 specifies a flash rate of 1 to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.
- All candela ratings represent minimum effective Strobe intensity based on UL 1971.

## Drawings

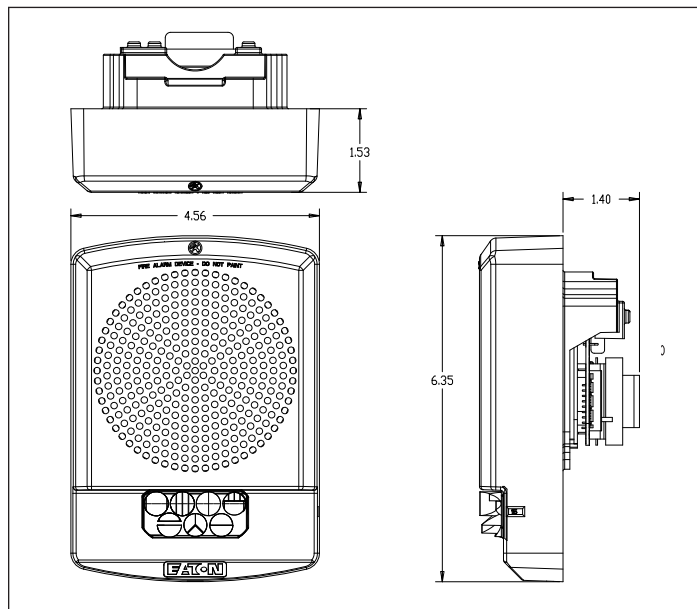


Figure 1. Wall speaker strobe

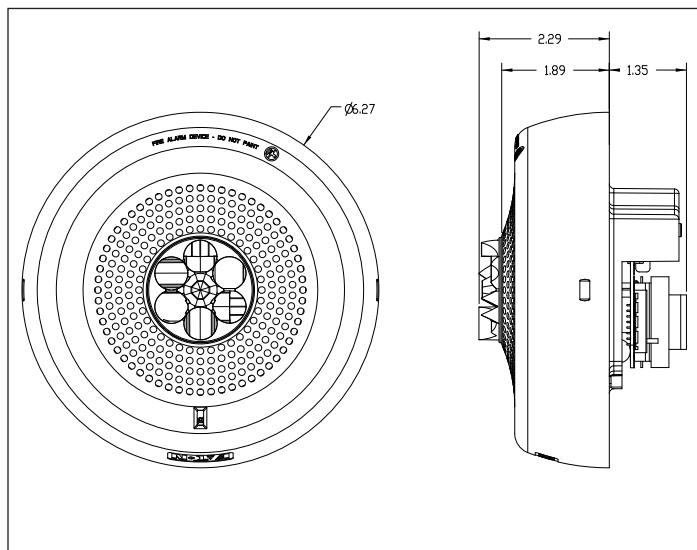


Figure 2. Ceiling speaker strobe

## Mounting plate images



**Table 1. Strobe ratings**

Model	Regulated Voltage Range VDC	UL/ULC Max Current ①							
		24VDC							
		15	30	75	110	135	150	177	185
ELSPST	16.0-33.0	0.022	0.030	0.060	0.086	0.125			
ELSPSTC	16.0-33.0	0.022	0.030	0.060	0.086		0.125	0.185	0.185

**Table 2. Speaker ratings**

Model	UL Reverberant dBA at 10 Feet ①					Anechoic dBA per CAN/ULC-S541 ①				
	1/8 watts	1/4 watts	1/2 watts	1 watts	2 watts (5W 70V)	1/8 watts	1/4 watts	1/2 watts	1 watts	2 watts (5W 70V)
ELSPK/ELSPKC	75	79	82	85	87	75	79	82	85	87
ELSPST/ELSPSTC	75	79	82	85	87	75	79	82	85	87

**Table 3. Specification & Ordering Information**

Model	Strobe Candela	Red	White	Lettering	Wall/Ceiling	Sync w/ DSM or Wheelock Power Supplies
<b>Speaker Strobes</b>						
ELSPSTR	15/30/75/110/135/185	X		FIRE	Wall	X
ELSPSTW	15/30/75/110/135/185		X	FIRE	Wall	X
ELSPSTW-AL	15/30/75/110/135/185		X	ALERT	Wall	X
ELSPSTR-AL	15/30/75/110/135/185	X		ALERT	Wall	X
ELSPSTW-N	15/30/75/110/135/185		X	No Lettering	Wall	X
ELSPSTR-N	15/30/75/110/135/185	X		No Lettering	Wall	X
ELSPSTR-M	15/30/75/110/135/185	X		EMERGENCY	Wall	X
ELSPSTW-M	15/30/75/110/135/185		X	EMERGENCY	Wall	X
ELSPSTRC	15/30/75/110/150/177	X		FIRE	Ceiling	X
ELSPSTWC	15/30/75/110/150/177		X	FIRE	Ceiling	X
ELSPSTRC-AL	15/30/75/110/150/177	X		ALERT	Ceiling	X
ELSPSTWC-AL	15/30/75/110/150/177		X	ALERT	Ceiling	X
ELSPSTWC-N	15/30/75/110/150/177		X	No Lettering	Ceiling	X
<b>Speakers</b>						
ELSPKR		X		FIRE	Wall	X
ELSPKW			X	FIRE	Wall	X
ELSPKR-N		X		No Lettering	Wall	X
ELSPKW-N			X	No Lettering	Wall	X
ELSPKW-AL			X	ALERT	Wall	X
ELSPKR-AL		X		ALERT	Wall	X
ELSPKRC		X		FIRE	Ceiling	X
ELSPKWC			X	FIRE	Ceiling	X
ELSPKRC-N		X		No Lettering	Ceiling	X
ELSPKWC-N			X	No Lettering	Ceiling	X
ELSPKRC-AL		X		ALERT	Ceiling	X
ELSPKWC-AL			X	ALERT	Ceiling	X
ELSPKBC		Black		FIRE	Ceiling	X
<b>Backboxes</b>						
ELSPKBB-R		X			Wall	
ELSPKBB-W			X		Wall	
LSPKBB-CR		X			Ceiling	
LSPKBB-CW			X		Ceiling	

**Table 4. Specifications**

<b>Physical</b>	
Material	Red or white textured UV stabilized, colored impregnated engineered plastic. Exceeds 94V-0 UL flammability rating
Weight	Wall speaker strobe: 1.54 lbs (700g); Ceiling speaker strobe: 1.54 lbs (700g); Speaker Backbox: .44 lb (200g)
Lens	Light Emitting Diode (LED) in a rugged Lexan lens
Dimensions	ELSPK: 6.35" H x 4.56" W x 1.54" D; ELSPST: 6.35" H x 4.56" W x 1.54" D; ELSPKC: 6.27" Diameter x 1.9" D; ELSPSTC: 6.27" Diameter x 2.29" Depth
Operating Temperature	Indoor: 32°F to 122°F (0°C to 50°C) and maximum humidity of 93%
<b>Mounting &amp; Wire Connections</b>	
Mounting (indoor only)	Mounting plate included with all models. ELSPST speaker strobes are for wall-mount applications only. ELSPK speakers can be used for wall or ceiling-mount applications. Mounting options include ELSPKBB backboxes and 4" square, 2 1/8" deep backboxes for wall models and LSPKBB-C backboxes and 4" square, 2 1/8" deep backboxes for ceiling models.
Wire Connections	#12 through #18 AWG
<b>Power &amp; General</b>	
Operating voltage	25/70 VRMS; Strobe: 24VDC/24VFWR
Strobe Output Rating	UL 1971, UL 1638, ULC S526: Wall: Selectable 15, 30, 75, 110, 135, 185 candela output; Ceiling: Selectable 15, 30, 75, 110, 150, 177 candela output
Synchronization Models	Strobes can be synchronized with Wheelock's DSM Sync Modules, PS Power Supplies or SAFEPATH products, using Wheelock patented sync protocol
Frequency Range	300 Hz to 8000 Hz

## Architects and Engineers Specifications

The LED high fidelity speaker appliances shall be Wheelock® ELSPK Speakers and ELSPST Speaker Strobes for wall-mount applications and ELSPKC Speakers and ELSPSTC Speaker Strobes for ceiling-mount applications with a low-profile design or approved equals. Special lettering, including ALERT, EMERGENCY, and no lettering, shall be available. The speakers shall be UL Listed under UL 1480 for Fire Protective Service and speakers equipped with strobes shall be listed under UL 1971 for Emergency Devices for the Hearing-Impaired. In addition, the speaker strobes shall meet the requirements of FCC Part 15 and ICES-003. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP) with the ability to operate from 16 to 33 VDC/VFWR.

All speakers shall be designed for a field selectable input of either 25 or 70 VRMS, with selectable power taps from 1/8 watt to 2 watts (5 watts for 70V). All models shall have listed sound output of up to 87 dB at 10 feet and a listed frequency response of 300 to 8000 Hz.

All inputs shall employ terminals that accept #12 to #18 AWG wire sizes. The series ELSPST/ELSPSTC Speaker Strobe appliances shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Light Emitting Diode (LED) as the light source with a rugged Lexan® lens. The series shall be of low current design. The LED strobe flash duration shall be 20 ms. Where Multi-Candela appliances are specified, the strobe intensity shall have 6 field selectable settings at 15, 30, 75, 110, 135 and 185 candela for wall mount applications and 15, 30, 75, 110, 150 and 177 for ceiling applications. The selector switch for selecting the candela shall be tamper resistant. Appliances with candela settings shall show the candela selection in a visible location at all times when installed.

The series ELSPK/ELSPKC and ELSPST/ELSPSTC shall be designed for indoor surface or flush mounting and include a mounting plate. Mounting options shall include ELSPKBB backboxes and 4" square, 2 1/8" deep backboxes for wall models and LSPKBB-C backboxes and 4" square, 2 1/8" deep backboxes for ceiling models. The speaker and speaker strobe shall incorporate a speaker mounting plate with a snap-on grille cover and shall mount to standard electrical hardware requiring no additional trimplate or adapter. Removal of an appliance shall result in a supervision fault condition by the Fire Alarm Control Panel (FACP). All notification appliances shall be backwards compatible.

The ELSPK wall model shall have a low profile measuring 6.35" H x 4.56" W x 1.54" D. The ELSPST wall model shall have a low profile measuring 6.35" H x 4.56" W x 1.54" D. The ELSPKC and ELSPSTC ceiling models shall have a low profile measuring 6.27" diameter with 1.9" D for ELSPKC and 2.29" D for ELSPSTC models. Finish shall be red or white. Special lettering shall be available.

When synchronization is required, the appliance shall be compatible with Wheelock's DSM Sync Modules, PS Power Supplies, SAFEPATH products or other manufacturer's panels with built-in Wheelock® Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync protocol fails to operate, the strobe shall revert to a non-synchronized flash-rate and still maintain (1) flash per second over its Regulated Voltage Range.

The speaker shall be listed to the low frequency requirements of UL 464 (520 Hz) to meet NFPA's 520 Hz tone requirements for sleeping areas.

UL 1971, UL 1638, UL 1480, ULC-S526, ULC-S541, CSFM, FCC, ICES

① RMS current ratings are per UL maximum RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FVWR ratings, see installation instructions.

**Note:** Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Cooper Wheelock Inc., dba Eaton standard terms and conditions.



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