

# Exceder LED3 Horn Strobes, Strobes & Horns



## Description

The Wheelock Exceder™ LED3 horns, horn strobes, and strobes by Eaton feature an advanced power saving LED technology in a sleek, modern, single-gang enclosure that will provide high energy efficiency and an aesthetically pleasing low profile design that will blend with the building's interior décor.

## Compliant and Compatible

Eaton's Exceder LED3 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. With the Exceder LED3 line, Eaton now offers a full range of products with low and high candela settings ideal for both retrofits and new construction.

## High Efficiency, LED Technology

Eaton's high energy efficient technology leads the industry in lowest current draw for the most popular candela settings, which reduces overall power consumption and costs in fire alarm and emergency communication 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 a wide-range of candela settings (15, 30, 75, 110cd) on a single appliance.

## Low Profile Design and Feature Set

With the industry's smallest footprint, the Exceder LED3 horns, horn strobes, and strobes are aesthetically pleasing to building owners as the low profile design does not detract from the interior decor. Installers will benefit from its comprehensive feature list, including lowest current draw, single-gang design, no tools needed for setting changes, and three convenient mounting options for both new and retrofit construction. These products are suitable for indoor wall-mount applications. The LST3 Strobe, LHS3 Horn Strobe, and the LHN3 Horn are for 24V operation. LHN3 is suitable for 12V applications.

## Approvals and Synchronization

The Exceder LED3 notification appliances are listed under UL Standards 1971 and 464 and under CAN/ULC-S525 and CAN/ULC-S526. The appliances are Restriction of Hazardous Substances (RoHS) compliant and contain no mercury or other hazardous substances.

In addition, the Wheelock Exceder LED3 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 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 Exceder LED3 strobes in the same notification zone and field of view with any Wheelock RSS strobe models.

# EATON

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**Features**

- Energy Efficient
  - LED technology provides industry’s lowest current draw
  - Fewer power supplies required, smaller wire gage, reduced wire runs
- Low-Profile Design
  - One of the smallest, most compact single-gang designs
  - Sleek, modern aesthetics with no visible mounting screws
- Special Lettering Available
- 4 Field Selectable Settings in 1 Device
  - Select 15, 30, 75, 110 cd
- 2 Audible Settings
  - Select 90 or 95 dB
  - Select temporal or steady horn output
- Easy-to-Install
  - Finger slide switches–No tools needed for setting changes
  - IN/OUT screw terminals using #12 to #18 AWG wires
  - Mounting Options include Exceder LSBB, any single-gang back-box and to 4” square with adapter kit
- 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 464, ULC-S525, ULC-S526
  - California State Fire Marshal (CSFM)
  - RoHS
  - FCC Part 15, ICES

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

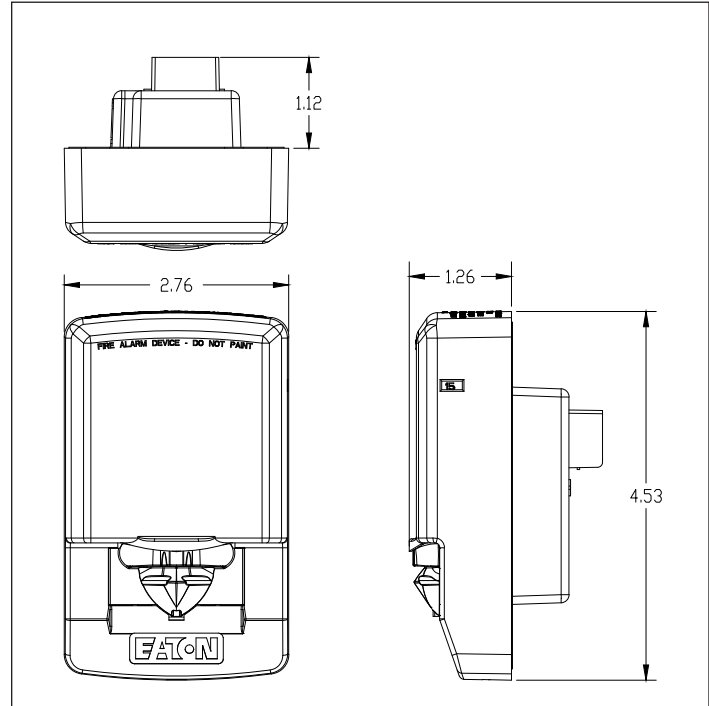


Figure 1. Wall Strobe

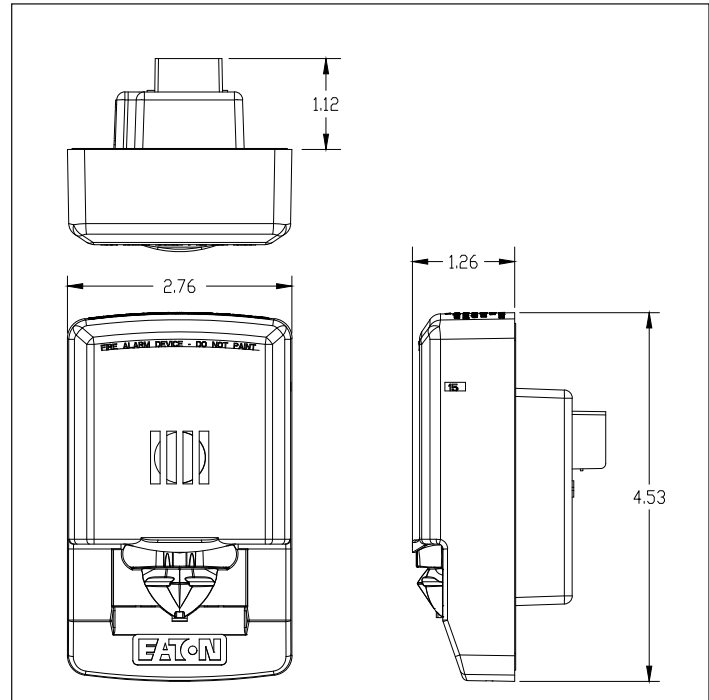


Figure 2. Wall Horn Strobe

**Table 1. Strobe Ratings**

Exceder LED3 Strobes		UL/ULC Max Current ①			
		24VDC			
Model	Regulated Voltage Range VDC	15	30	75	110
LST3	16.0-33.0	0.030	0.040	0.100	0.195

**Table 2. Horn Ratings**

Exceder LED3 Horns			
Model	Regulated Voltage Range VDC	95 dB	90 dB
LHN3	8.0 - 17.5	0.024	0.018
LHN3	16.0 - 33.0	0.030	0.022

**Table 3. Code 3 Horn Strobe Ratings**

Model	UL/ULC Max Current ① at Anechoic 95 dBA					UL/ULC Max Current ① at Anechoic 90 dBA				
	Voltage ②	15	30	75	110	Voltage ②	15	30	75	110
LHS3	16.0 -33.0	0.034	0.046	0.105	0.197	16.0 -33.0	0.032	0.042	0.102	0.196

**Table 4. Specification & Ordering Information**

Model	Order Code	Strobe Candela	Red	White	Lettering	Sync w/ DSM or Wheelock Power Supplies
<b>Horn Strobes</b>						
LHSR3	0526	15/30/75/110	X		FIRE	X
LHSW3	0527	15/30/75/110		X	FIRE	X
LHSR3-A	0740	15/30/75/110	X		AGENT	X
LHSR3-N	0741	15/30/75/110	X		No Lettering	X
LHSW3-A	0742	15/30/75/110		X	AGENT	X
LHSW3-AL	0743	15/30/75/110		X	ALERT	X
LHSW3-N	0744	15/30/75/110		X	No Lettering	X
<b>Strobes</b>						
LSTR3	0528	15/30/75/110	X		FIRE	X
LSTW3	0529	15/30/75/110		X	FIRE	X
LSTR3-A	0747	15/30/75/110	X		AGENT	X
LSTR3-AL	0748	15/30/75/110	X		ALERT	X
LSTW3-A	0749	15/30/75/110		X	AGENT	X
LSTW3-AL	0750	15/30/75/110		X	ALERT	X
LSTW3-N	0751	15/30/75/110		X	No Lettering	X
LSTR3-N	0754	15/30/75/110	X		No Lettering	X
<b>Horns</b>						
LHNR3	0530		X			X
LHNW3	0531			X		X
<b>Accessories</b>						
LSBB-R	2420	Exceder LED Backbox	X			
LSBB-W	2403	Exceder LED Backbox		X		
ESB-KIT-R	0533	Exceder LED Trim Plate	X			
ESB-KIT-W	0534	Exceder LED Trim Plate		X		

**Table 5. Specifications**

<b>Physical</b>	
Material	Red or white textured UV stabilized, colored impregnated engineered plastic. Exceeds 94V-0 UL flammability rating
Weight	0.35 lbs.
Lens	Light Emitting Diode (LED) in a rugged Lexan lens
Dimensions	4.53" H x 2.76 W x 1.27" D; Trimplate: 5.25" H x 4.58W x 0.32 D
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)	Wall-mount applications only. LHN3 can be used for wall and ceiling-mount applications. Single-gang, Exceder LSBB backboxes or to 4" square with adapter kit
Wire Connections	#12 through #18 AWG
<b>Power &amp; General</b>	
Operating voltage	12 VDC/VFWR: 8 - 17.5 VDC/VFWR; 24 VDC/VFWR: 16 - 33 VDC/VFWR (12 VDC LHN3 models only)
Strobe Output Rating	UL 1971, ULC S526: Selectable 15, 30, 75, 110 candela output
Strobe Flash Rate	Strobes are designed to flash at 1 flash per second
Synchronization Models	Strobes can be synchronized with Wheelock's DSM Sync Modules, PS Power Supplies or SAFEPATH products, using Wheelock patented sync protocol
Temporal Audible Pattern	Selectable Continuous or Code 3 Horn tone: The Code 3 temporal pattern (1/2 second on, 1/2 second off, 1/2 second on, 1/2 second off, 1/2 second on, 1-1/2 off and repeat) is specified by ANSI and NFPA 72 for standard emergency evacuation signaling.

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 FWR ratings, see installation instructions.

② Regulated Voltage Range- VDC

## Architects and Engineers Specifications

The LED notification appliances shall be Wheelock® Exceder™ LED3 LHS3 Audible Strobe appliances, LST3 Visual Strobe appliances and LHN3 Audible appliances for wall-mount applications with a low-profile design or approved equals. The LHS3 and LST3 Strobes shall be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service. The LHS3 and LHN3 Audibles shall be UL Listed under Standard 464 (Fire Protective Signaling). All Series 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.

The LHS3 Audible Strobe and LST3 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 appliances 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 4 field selectable settings at 15, 30, 75, 110, candela for wall mount 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 audible shall have a minimum of two (2) field selectable settings for dBA levels and shall have a choice of continuous or temporal (Code 3) audible outputs.

The LHS3 Audible Strobe, LST3 Strobe, and LHN3 Audible mounting

options shall include LED backboxes, single-gang backbox and to 4" square with adapter kit. Two wire appliance wiring shall be capable of directly connecting to the mounting base. 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 LHS3, LHN3 and LST3 wall models shall have a low profile measuring 4.53"H x 2.76"W x 1.27"D.

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 appliance shall also be designed so that the audible signal may be silenced while maintaining strobe activation when used with Wheelock® patented sync protocol.

NFPA 72 2016, UL 1971, UL 464 ULC-S525-16, ULC-S526-16, CSFM, FCC, RoHS, ICES

**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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