

# 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, 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, 95cd) 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, no tools needed for setting changes, and convenient mounting options for both new and retrofit construction. These products are suitable for indoor ceiling-mount applications. The LSTC3 Strobe, LHSC3 Horn/Strobe, and the LHNC3 Horn are for 24V operation. LHNC3 is also 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.

# EAT•N

Powering Business Worldwide

**Features**

- Energy Efficient
  - Patented LED provides industry's lowest current draw
  - Fewer power supplies required, smaller wire gauge, reduced wire runs
  - Restriction of Hazardous Substances (RoHS)
- Low-Profile Design
  - One of the smallest, most compact ceiling designs
  - Sleek, modern aesthetics with no visible mounting screws
- Special Lettering Available
- 4 Field Selectable Settings in 1 Device
  - Select 15, 30, 75, 95 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 LSPKBB-C backboxes, 4" square, 1 1/2" or 2 1/8" deep and 4" Octagonal, 1 1/2" or 2 1/8" deep
- Strobe Synchronization Components
  - Ability to mix xenon and LED strobes in the same field of view
  - Meet synchronizing standards with Wheelock's DSM Sync Modules, PS Power Supplies or SAFEPATH products
- 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**

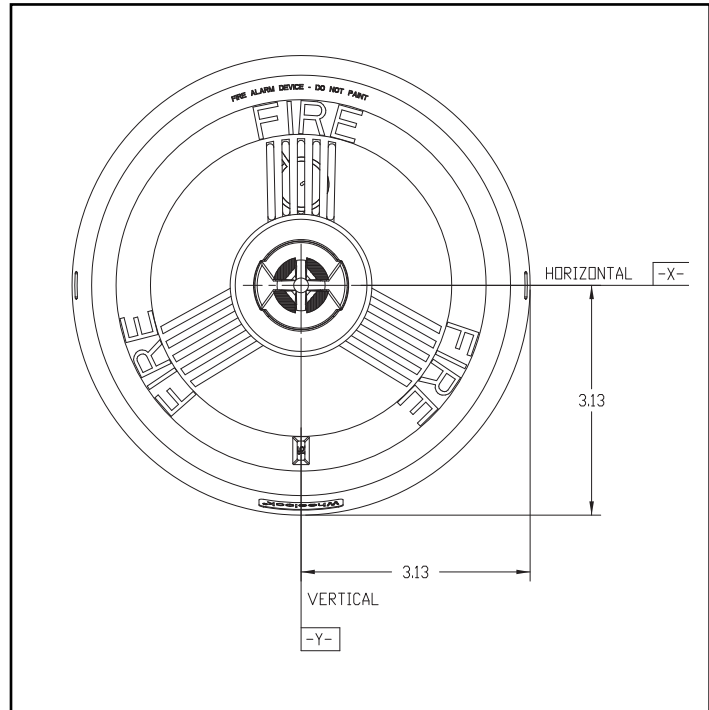


Figure 1. Ceiling Horn Strobe - Top View

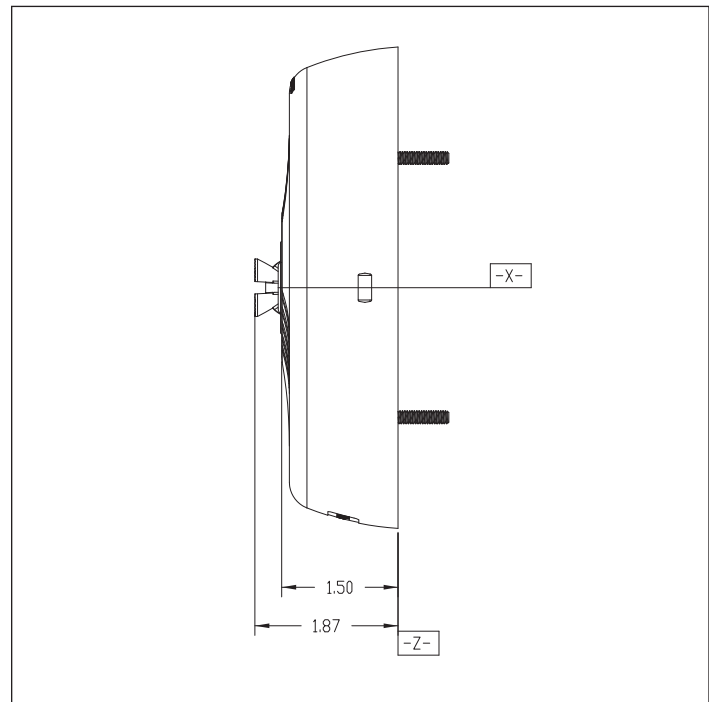


Figure 2. Ceiling Horn Strobe - Side View

**Table 1. Strobe Ratings**

Exceder LED3 Strobes	Regulated Voltage Range VDC	UL/ULC Max Current <sup>a</sup>			
		24VDC			
Model		15	30	75	95
LSTC3	16.0-33.0	0.040	0.053	0.155	0.248

**Table 2. Horn Ratings**

Exceder LED Horns			
Model	Regulated Voltage Range VDC	95 dB	90 dB
LHNC3	8.0 - 17.5	0.024	0.018
LHNC3	16.0 - 33.0	0.030	0.022

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

Model	Voltage <sup>b</sup>	UL/ULC Max Current <sup>a</sup> at Anechoic 95 dBA				UL/ULC Max Current <sup>a</sup> at Anechoic 90 dBA				
		15	30	75	95	15	30	75	95	
LHSC3	16.0 -33.0	0.044	0.061	0.169	0.267	0.042	0.060	0.168	0.264	

**Table 1. Table 4. Specification & Ordering Information**

Model	Strobe Candela	Red	White	Lettering	Sync w/ DSM or Wheelock Power Supplies
<b>Horn Strobes</b>					
LHSRC3	15/30/75/95	X		FIRE	X
LHSWC3	15/30/75/95		X	FIRE	X
<b>Strobes</b>					
LSTRC3	15/30/75/95	X		FIRE	X
LSTWC3	15/30/75/95		X	FIRE	X
LSTRC3-AL	15/30/75/95	X		ALERT	X
LSTWC3-AL	15/30/75/95		X	ALERT	X
<b>Horns</b>					
LHNRC3		X		No Lettering	X
LHNWC3			X	No Lettering	X
<b>Accessories</b>					
LSPKBB-CR	Exceder LED Backbox	X			
LSPKBB-CW	Exceder LED Backbox		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	0.55 lbs.
Lens	Light Emitting Diode (LED) in a rugged Lexan lens
Dimensions	6.26" Diameter x 1.5" 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)	Ceiling-mount applications. The LHNC3 can also be used for wall-mount applications. Exceder LSPKBB-C backboxes or to 4" square, 1 1/2 or 2 1/8" and Octagonal, 1 1/2" or 2 1/8" deep
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 LHNC3 models only)
Strobe Output Rating	UL 1971, ULC S526: Selectable 15, 30, 75, 95 candela output
Strobe Flash Rate	Strobes are designed to flash at 1 flash per second
Synchronization Models	Strobes and horns 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, 1-1/2 off and repeat) is specified by ANSI and NFPA 72 for standard emergency evacuation signaling.

<sup>a</sup> 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.

<sup>b</sup> Regulated Voltage Range- VDC

### Architects and Engineers Specifications

The LED notification appliances shall be Wheelock® Exceder™ LED3 LHSC3 Audible Strobe appliances, LSTC3 Visual Strobe appliances and LHNC3 Audible appliances for ceiling-mount applications with a low-profile design or approved equals. The LHSC3 and LSTC3 Strobes shall be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service. The LHSC3 and LHNC3 Audibles shall be UL Listed under Standard 464 (Fire Protective Signaling). The Series shall be Restriction of Hazardous Substances (RoHS) compliant and contain no mercury or other hazardous substances. 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 LHSC3 Audible Strobe and LSTC3 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, 95 candela for ceiling-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 LHSC3 Audible Strobe, LSTC3 Strobe and LHNC3 mounting options shall include LED Ceiling backboxes, 4" square, 1 1/2" or 2 1/8" deep and 4" Octagonal, 1 1/2" or 2 1/8" deep. 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 LHSC3, LHNC3 and LSTC3 ceiling models shall have a low profile measuring 6.26" Diameter with 1.5"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.

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

**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.



WE ENCOURAGE AND SUPPORT NICET CERTIFICATION  
3 YEAR WARRANTY

Eaton  
1000 Eaton Boulevard  
Cleveland, OH 44122  
United States  
Eaton.com

Eaton  
Life safety & mass notification solutions  
273 Branchport Ave.  
Long Branch, NJ 07740  
Eaton.com/massnotification

© 2017 Eaton  
All Rights Reserved  
Printed in USA  
Publication No. TD450118EN  
July 2017

Eaton is a registered trademark.

All other trademarks are property of their respective owners.

