

# Exceder LED Horn Strobes, Strobes & Horns



## Description

Eaton's Cooper Notification business has designed the Wheelock Exceder™ LED Horn Strobes, Strobes and Horn Series with the industry's lowest current draw and an aesthetically-pleasing low-profile design for indoor ceiling-mount applications. Ideal for Green Buildings, it's the pinnacle of life safety, performance and energy-efficiency.

As the first notification appliances in the industry to utilize Light Emitting Diode (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, 95 cd) on a single appliance. Models with an audible feature 2 sound settings (90 & 95 dB). All switches to change settings, can be set without the use of a tool and are located behind the appliance to prevent tampering.

Wheelock Exceder™ LED strobes, horn strobes and horns feature the industry's smallest footprint and a sleek modern design that will please building owners with reduced total cost of ownership. 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 LSTC Strobe, LHSC Horn/Strobe, and the LHNC Horn are for 24V operation. LHNC is also suitable for 12V applications.

The Exceder™ LED 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.


Exceder LED Strobes and Horn Strobes may be synchronized when used in conjunction with the Wheelock DSM Sync Modules, Wheelock Power Supplies, SAFEPATH family of products or other manufacturers panels incorporating the Wheelock Patented Sync Protocol. Wheelock synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy.

# EATON

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
  - Meet synchronizing standards with Wheelock's DSM Sync Modules, PS-6/8 Power Supplies or SAFEPATH products
- Compliance
  - UL 1971, UL 464, ULC-S525, ULC-S526
  - California State Fire Marshal (CSFM)
  - Factory Mutual (FM)
  - RoHS
  - FCC Part 15, ICES

Note: All CAUTIONS and WARNINGS are identified by the symbol . All warnings are printed in bold capital letters.

### WARNING

**PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. VISIT [WWW.COOPERNOTIFICATION.COM](http://WWW.COOPERNOTIFICATION.COM) OR CONTACT COOPER NOTIFICATION FOR THE CURRENT INSTALLATION INSTRUCTIONS. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.**

## 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

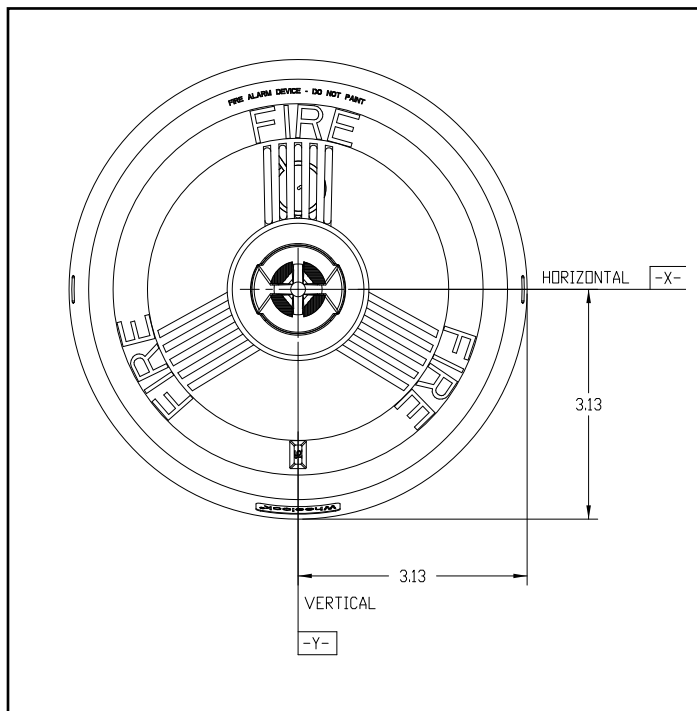


Figure 1. Ceiling Horn Strobe - Top View

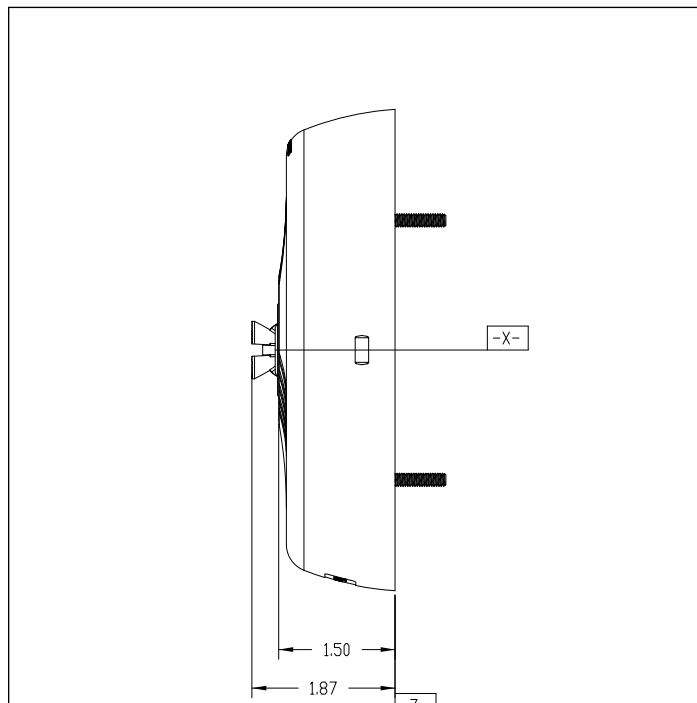


Figure 2. Ceiling Horn Strobe - Side View

**Table 1. Strobe Ratings**

Exceder LED Strobes		UL/ULC Max Current <sup>a</sup>			
		24VDC			
Model	Regulated Voltage Range VDC	15	30	75	95
LSTC	16.0-33.0	0.040	0.058	0.155	0.258

**Table 2. Horn Ratings**

Exceder LED Horns			
Model	Regulated Voltage Range VDC	95 dB	90 dB
LHNC	8.0 - 17.5	0.025	0.020
LHNC	16.0 - 33.0	0.037	0.026

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

Model	UL/ULC Max Current <sup>a</sup> at Anechoic 95 dBA					UL/ULC Max Current <sup>a</sup> at Anechoic 90 dBA				
	Voltage <sup>b</sup>	15	30	75	95	Voltage <sup>b</sup>	15	30	75	95
LHSC	16.0 -33.0	0.049	0.063	0.174	0.273	16.0 -33.0	0.042	0.062	0.170	0.270

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

Model	Strobe Candela	Red	White	Lettering	Sync w/ DSM or Wheelock Power Supplies
<b>Horn Strobes</b>					
LHSRC	15/30/75/95	X		FIRE	X
LHSWC	15/30/75/95		X	FIRE	X
<b>Strobes</b>					
LSTRC	15/30/75/95	X		FIRE	X
LSTWC	15/30/75/95		X	FIRE	X
LSTRC-AL	15/30/75/95	X		ALERT	X
LSTWC-AL	15/30/75/95		X	ALERT	X
<b>Horns</b>					
LHNRC		X		No Lettering	X
LHNWC			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	.035 lbs.
Lens	Light Emitting Diode (LED) in a rugged Lexan lens
Dimensions	6.26" Diameter x 1.5" D
Operating Temperature	Indoor: 33.8°F to 120.2°F (0°C to 49°C) and maximum humidity of 93%
<b>Mounting &amp; Wire Connections</b>	
Mounting (indoor only)	Ceiling-mount applications only. 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: 8 - 17.5 VDC; 24 VDC: 16 - 33 VDC (12 VDC LHN 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-6/8 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.

<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™ Series LHSC Audible Strobe appliances, Series LSTC Visual Strobe appliances and Series LHN Audible appliances for ceiling-mount applications with a low-profile design or approved equals. The Series LHSC and LSTC Strobes shall be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service. The Series LHSC and LHNC 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. 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 Series LHSC Audible Strobe and LSTC 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. 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 Series LHSC Audible Strobe, LSTC Strobe and Series LHNC 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. Continuity checking of the entire NAC circuit prior to attaching any notification appliances shall be allowed. 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 Series LHSC, LHNC and LSTC 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 6/8 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, ULC-S526, CSFM, FM, 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 Cooper Notification standard terms and conditions.



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

Eaton  
Cooper Notification  
273 Branchport Ave.  
Long Branch, NJ 07740  
CooperNotification.com

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