



## Industry's first LED Notification Appliances



### Description:

The Wheelock® Exceder™ Series expands to include the industry's first LED notification appliances in one of the smallest, most compact single gang designs in the world. Cooper Notification's patented LED technology provides the industry's lowest current draw that allows for energy savings of 52%. Ideal for Green Buildings, it's the pinnacle of life safety, performance and energy-efficiency.

Using LED as the strobe light source is a technological breakthrough that does not require reflectors that are bulky in appearance. The patented design produces a highly controlled and even light distribution pattern.

About the size of a cell phone, 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, single-gang design, no tools needed for setting changes, and four convenient mounting options for both new and retrofit construction. These products are suitable for indoor wall-mount applications. The LST Strobe, LHS Horn/Strobe, and the LHN Horn are for 24V operation. LHN is 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.

The Wheelock Exceder™ Series incorporates high reliability and high efficiency optics to minimize current draw 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. The 15 and 30 candela settings provide the lowest current draw in the industry. 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.

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

\* Compared to competitor models.

- Industry's first **LED** strobes and horn strobes
- **Lowest current draw** in the industry
- **Save up to 52%** in current draw\*

### Features

- **Energy Efficient & Environmentally Friendly**
  - Patented LED technology provides industry's lowest current draw
  - Fewer power supplies required, smaller wire gage, reduced wire runs
  - Restriction of Hazardous Substances (RoHS)
- **Low-Profile Design**
  - One of the smallest, most compact single-gang designs
  - Sleek, modern aesthetics
  - No visible mounting screws
- **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
  - Convenient mounting to LED backboxes, any single-gang backbox and to 4" square and double gang with adapter kit
  - In/out screw terminals for faster installation
  - #12 through #18 AWG terminals
- **Strobe Synchronization Components**
  - Meet stringent synchronizing standards with Wheelock's DSM Sync Modules, PS-6/8 Power Supplies or SAFEPATH products
- **Compliance**
  - UL 1971 and UL 464
  - ULC-S525 and ULC-S526
  - FCC Part 15, ICES
  - RoHS

**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:

General Notes:

- Strobes are designed to flash at 1 flash per second.
- All candela ratings represent minimum effective strobe intensity based on UL Standard 1971.
- Series Exceder LED Strobe products are listed for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93%.
- Series Exceder LED horns are under UL Standard 464 for audible signal appliances (Indoor use only).

## Low Current Draw = Fewer Power Supplies

Strobe Ratings		UL/ULC Max Current*			
		24 VDC			
Model	Regulated Voltage Range VDC	15	30	75	110
LST	16.0-33.0	0.032	0.045	0.128	0.246

Code 3 Horn Ratings			
Model	Regulated Voltage Range VDC	95 dB	90 dB
LHN	8.0-17.5	0.028	0.025
LHN	16.0-33.0	0.038	0.026

Code 3 Horn Strobe Ratings		UL/ULC Max Current* at Anechoic 95 dBA			
		24 VDC			
Model	Regulated Voltage Range VDC	15	30	75	110
LHS	16.0-33.0	0.040	0.051	0.146	0.258

		UL/ULC Max Current* at Anechoic 90 dBA			
		24 VDC			
Model	Regulated Voltage Range VDC	15	30	75	110
LHS	16.0-33.0	0.039	0.055	0.146	0.256



## Specification & Ordering Information

Model	Strobe Candela	Red	White	Sync w/ DSM or Wheelock Power Supplies
<b>Horn Strobes</b>				
LHSR	15/30/75/110	X		X
LHSW	15/30/75/110		X	X
<b>Strobes</b>				
LSTR	15/30/75/110	X		X
LSTW	15/30/75/110		X	X
<b>Horn</b>				
LHNR		X		X
LHNW			X	X

### Model Legend

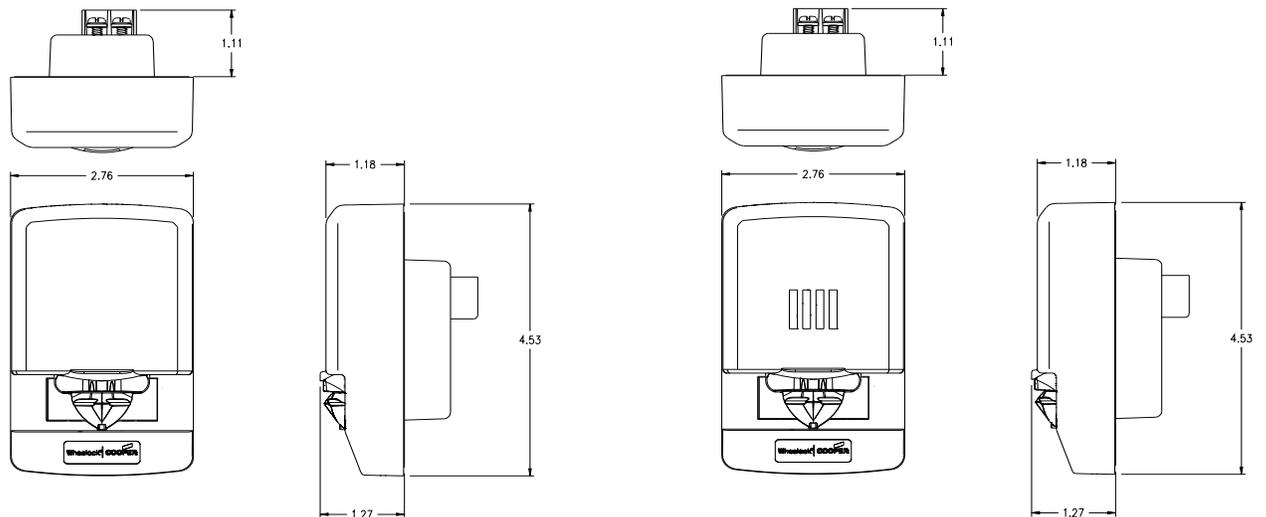
LHN = Horn  
LST = Strobe  
LHS = Horn Strobe  
R = Red  
W = White

\* UL max current rating is the maximum RMS current within the listed voltage range (16-33 VDC for 24 VDC units). For strobes the UL max current is usually at the minimum listed voltage (16 VDC for 24 VDC units). For audibles the max current is usually at the maximum listed voltage (33 VDC for 24 VDC units). For unfiltered Full Wave Rectified ratings, see installation instructions.

## Specifications

Physical	
<b>Material</b>	Red or white textured UV stabilized, colored impregnated engineered plastic. Exceeds 94V-0 UL flammability rating
<b>Weight</b>	0.35 lbs
<b>Lens</b>	Light Emitting Diode (LED) in a rugged Lexan lens
<b>Dimensions</b>	4.53"H x 2.76"W x 1.27"D Trimplate: 5.25" H x 4.58"W x 0.32 D
<b>Operating Temperature</b>	Indoor: 33.8°F to 120.2°F (0°C to 49°C) and maximum humidity of 93%
Mounting & Wire Connections	
<b>Mounting (indoor only):</b>	Strobes, horn strobes and horns are for wall-mount applications only. Single-gang and Exceder LED backboxes or to 4" square and double gang with adapter kit.
<b>Wire Connections:</b>	#12 through #18 AWG
Power & General	
<b>Operating voltage</b>	12 VDC: 8 - 17.5 VDC; 24 VDC: 16 - 33 VDC (12VDC LHN models only)
<b>Strobe Output Rating</b>	UL 1971, ULC S526: Selectable 15, 30, 75, 110 candela output
<b>Strobe Flash Rate</b>	Strobes are designed to flash at 1 flash per second
<b>Synchronization Models</b>	Strobes can be synchronized with Wheelock's DSM Sync Modules, PS-6/8 Power Supplies or SAFEPATH products, using Wheelock patented sync protocol
<b>Temporal Audible Pattern</b>	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.

## Drawings



STROBE

STROBE HORN

**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.

## Architects and Engineers Specifications

The LED notification appliances shall be Wheelock® Exceder™ Series LHS Audible Strobe appliances, Series LST Visual Strobe appliances and Series LHN Audible appliances for wall-mount applications with a low-profile design or approved equals. The Series LHS and LST Strobes shall be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service. The Series LHS and LHN 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. Indoor wall models shall incorporate voltage test points for easy voltage inspection.

The Series LHS Audible Strobe and LST 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, 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 Series LHS Audible Strobe, LST Strobe and Series LHN Audible mounting options shall include LED backboxes, single-gang backbox and to 4" square and double gang with adapter kit. 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 LHS, LHN and LST 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 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, FCC, ICES, RoHS



WE ENCOURAGE AND SUPPORT NICET CERTIFICATION  
3 YEAR WARRANTY

### Exceder LED 5/12

#### NJ Location

273 Branchport Ave.  
Long Branch, NJ 07740  
P: 800-631-2148  
F: 732-222-8707  
[www.coopernotification.com](http://www.coopernotification.com)

#### FL Location

7246 16th Street E, Unit 105  
Sarasota FL 34243-6817  
P: 941-487-2300  
F: 941-487-2389

#### VA Location

103 West Broad Street, Suite 500  
Falls Church, VA 22046  
P: 877-459-7726  
F: 703-294-6560

Cooper Notification is Wheelock®



SAFEPATH®



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