



CEILING MOUNT STROBES AND SPEAKER-STROBES

GENESIS LED MASS NOTIFICATION



OVERVIEW

Genesis LED Ceiling Mass Notification strobes and speaker-strobes combine high performance output with a sleek, low-profile design and energy-efficient technology that make them less expensive to install and operate. High performance LEDs require fewer power supplies, backup power, and batteries. These new appliances are designed with energy efficiency, and life safety in mind.

Genesis LED Ceiling Mass Notification Strobes use high efficiency optics, combined with patented electronics, to deliver a highly controlled and efficiently focused light distribution pattern in exchange for lower current requirements. Strobes are available in 4 color lenses: amber, red, green and blue. Cover skins are available with alert marking or no marking, and all strobe colors have the same low current draw.

Compared with Xenon-type strobes, Genesis LED Ceiling Mass Notification appliances offer greatly reduced current draw which provides benefits in longer circuit lengths, more devices per circuit, smaller wire gauge and reduced power supply quantities for an installation. They are also backwards-compatible with legacy strobes, so there's no need to replace all your existing devices to upgrade to new LED technology. In fact, LED strobes can be mixed on the same circuit and used in the same field of view as Xenon-based strobes. This makes Genesis Mass Notification Series ideal for new installations and retrofits alike.

Genesis LED Ceiling Mass Notification speaker-strobes feature selectable wattage taps to be configured in the field. Settings remain clearly visible — even after final installation. Speakers are also capable of both 25V and 70V and voltage in a single model

with a field-selectable switch. All this flexibility allows devices to be easily fine-tuned to exactly how they're needed to perform. All Genesis speakers include a DC blocking capacitor to allow electrical supervision of the audio distribution circuit.

Field-configurable speaker sound output levels provide the flexibility modern life safety projects demand, while the Genesis LED Mass Notification control protocol keeps multiple strobes on compatible NAC circuits synchronized to well within NFPA 72 requirements. The Speakers are approved for low frequency sounder applications when used with compatible tone file and systems, meeting NFPA and UL 520 Hz requirements for sleeping areas, making them ideal for new construction or retrofits.

Genesis LED Ceiling Mass Notification speakers produce crisp, clear voice audio output that is highly intelligible over large areas. In an emergency, intelligibility is critical to life safety. Understanding the content of the message is as important as knowing there is an emergency. Intelligibility is measured in Speech Transmission Index and anything above .76 is considered excellent. Genesis Ceiling Mass Notification speakers deliver audio with an STI of .81, ensuring the message is clear.

Serviceability is another area where Genesis LED Ceiling Mass Notification appliances shine. The universal room side wiring plate allows for pre-installation and electrical wiring, as well as checking continuity with the included diagnostics check bar. Devices can then be easily snapped into place with the confidence of knowing the wiring is correct. The innovative undercover diagnostic test points provide easy access to device circuit testing while mounted.

STANDARD FEATURES

- **High Fidelity performance with excellent STI**
 - Increased sound fidelity and audio intelligibility with an STI rating of .81 (more than .76 is excellent).
- **Low Frequency (520 Hz) capable**
 - Low frequency output meets NFPA standards for newly constructed commercial sleeping areas
- **High Performance LED Strobe Technology**
 - Ultra-low device current consumption allows:
 - More devices per circuit
 - Ability to use lower-gauge wire
 - Longer wire runs
 - Fewer booster power supplies
 - High efficiency optics
 - Available in amber, red, blue, and green lens colors
 - LED devices may be mixed with legacy Xenon strobes on the same circuit and in the same field of view
- **Field flexibility**
 - Speakers are also capable of both 25V and 70V and voltage in a single model with a field-selectable switch
 - Speakers feature selectable wattage taps for ¼W, ½W, 1W, and 2W to configure sound output levels in the field
- **Low-profile Design**
 - Ultra-slim ... protrudes about 1.5" from the mounting surface
 - Attractive appearance ... no visible mounting screws
- **Multiple Marking Options**
 - Order Alert or no markings
 - Change markings at any time with replaceable quick-swap covers
- **Easy to Install**
 - Pre-install and pre-wire with convenient universal room side wiring plate
 - Check electrical continuity on room side wiring plate with included diagnostics check bar
 - Diagnostics port streamlines device circuit testing
 - Fits 2-gang and 4-inch-square electrical boxes
 - Optional red and white trim plates available
 - Slide switches for field configuration
 - 12 to 18 AWG in-out screw terminals for quick wiring
- **Current draw is the same for all candela output settings**
 - Easier for new system design
 - Flexible for future changes in light output needs

APPLICATION

Strobes

Genesis LED Ceiling Mass Notification strobes are available in four colors to customize the identification of emergency events and comply with the latest Enhanced synchronization circuitry requirements of UL 1638 and CAN/ULC-S526 for use indoors as wall or ceiling private- or public-mode notification appliances. Synchronization is important in order to avoid triggering seizures in people with photosensitive epilepsy. All Genesis strobes exceed UL synchronization requirements (within 10 milliseconds over a two-hour period) when used with a synchronization source. See the specifications table for a list of compatible sources.

SPEAKERS

The suggested sound pressure level for each signaling zone used with alert or alarm signals is a minimum of 15 dB above the average ambient sound level or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater. This is measured 5 feet (1.5 m) above the floor.

Doubling the distance from the signal to the ear will theoretically cause a 6 dB reduction in the received sound pressure level. The actual effect depends on the acoustic properties of materials in the space. Doubling the power output of a device (e.g., a speaker from 1W to 2W) will increase the sound pressure level by 3 dBA.

High Fidelity Sound

Genesis LED Ceiling Mass Notification Series High Fidelity appliances feature 87dB of sound output along with a highly intelligible Speech Transmission Index (STI) rating of .81. An STI rating above .76 is considered excellent for speech intelligibility. They are also effective in areas subject to high levels of ambient noise.

These appliances are ideal for hotels, dormitories and other residential occupancies that have sleeping areas that require 520 Hz tones. In sleeping areas, always ensure that the wattage tap of the speaker is set sufficiently high so that the sound pressure reaches at least 75 dBA at the pillow.

These appliances are part of an end-to-end audio system approved for use in sleeping areas when used in conjunction with approved audio hardware and a factory-supplied 520 Hz tone. Check the System Compatibility List for other 520 Hz signaling requirements.

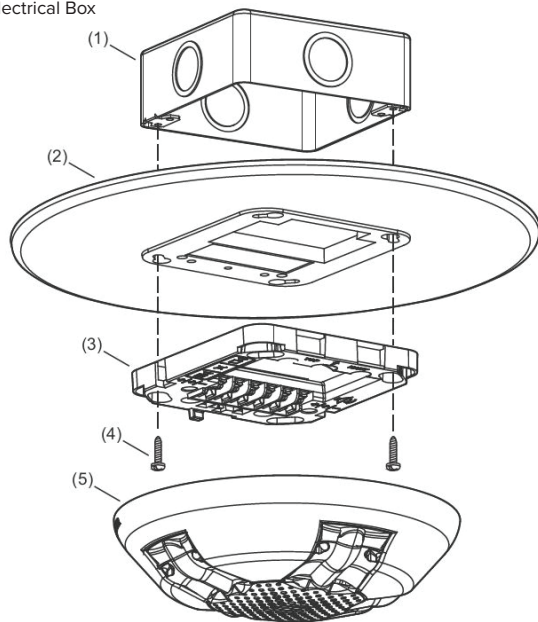
INSTALLATION

Genesis LED Ceiling Mass Notification strobes and speaker-strobes mount to the required GRSW room side wiring plate. The GRSW mounting plate is ordered separately from the GCS device in packs of 10 (GRSW-10) for convenient pre-installing and pre-wiring. The device can be removed easily from the room side wiring plate by pushing up with a screwdriver. The cover can also be removed from the device easily with a screwdriver to access the light and sound output settings and a diagnostics test port for voltage testing.

Genesis LED GCS Series speakers and speaker-strobes mount to any standard two-gang and 4-inch-square electrical box. Matching optional GCT trim rings are available to cover oversized openings. Optional color-matched, double-gang surface boxes are also available.

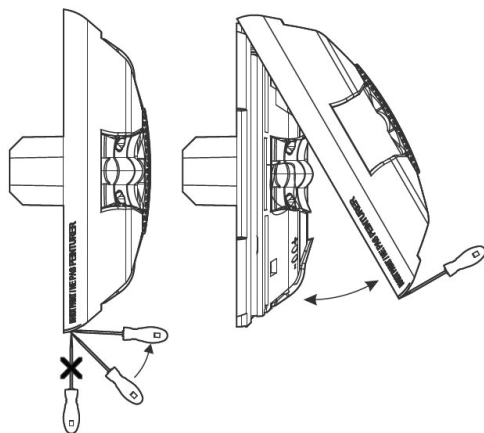
INSTALLATION

Electrical Box

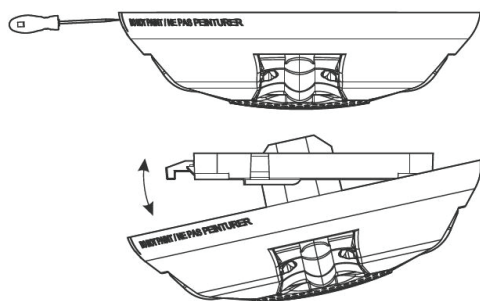


- (1) Electrical box
- (2) Trim plate (optional)
- (3) Wiring plate (required, ordered separately)
- (4) Machine screw (2X, supplied with wiring plate)
- (5) Notification appliance

Removing Cover

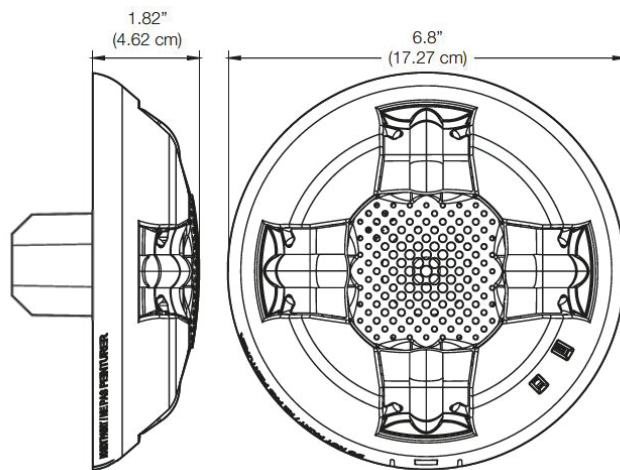


Removing Device

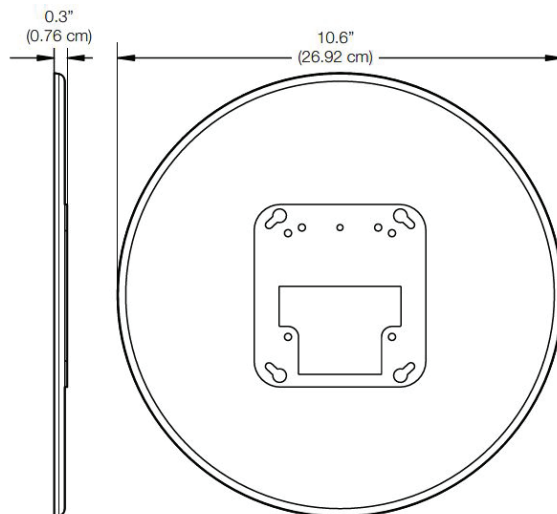


DIMENSIONS

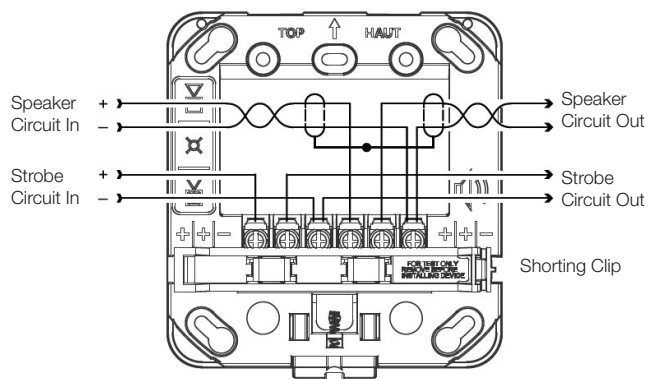
Celing Mass Notification Appliances



GCT Trim Plate (optional)

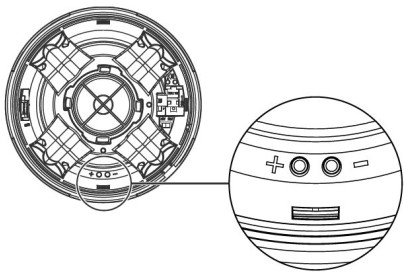


WIRING



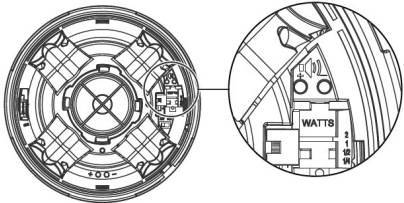
DIAGNOSTICS

Strobe Circuit Test Points



Test points indicated here are used to validate the Notification Appliance Circuit and verify device function.

Speaker Circuit Test Points



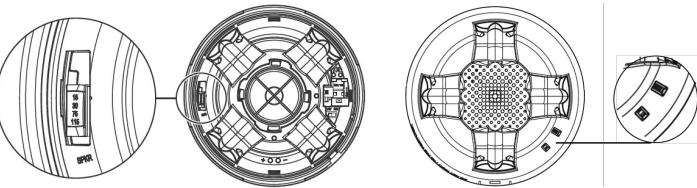
FIELD CONFIGURATION

Genesis LED speakers are capable of both 25V and 70V operation depending on the system. The voltage is set via a switch under the cover. Speakers also may be set for ¼-, ½-, 1-, or 2-watt operation. The wattage setting is visible through a small window on the side of the device and is changed by simply sliding the switch under the cover until the desired setting appears in the window. The speaker does not have to be removed to change the wattage, only the cover skin.

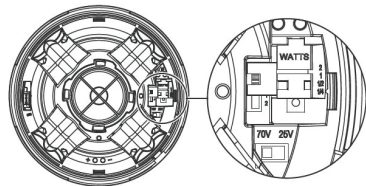
Genesis LED Ceiling Mass Notification strobes and speaker-strobes are available in four lens colors: amber, red, green and blue. Color and light output candela remains visible through a small window on the left-hand side of the device after the cover is closed.

LIGHT AND SOUND OUTPUT SETTINGS

Light Output and Color Window



Sound Settings (Watts and Volts)



OPERATING CURRENT

Strobes

Lens Color	Light Output	16 to 33 VDC	16 to 33 VFWR
Amber lens (-A models)	90 cd		
Green lens (-G models)	75 cd	35 mA	45 mA
Blue lens (-B models)	50 cd		
Red lens (-R models)	15 cd		

Note: Current draw is the same for all color lenses and candela settings

Speakers

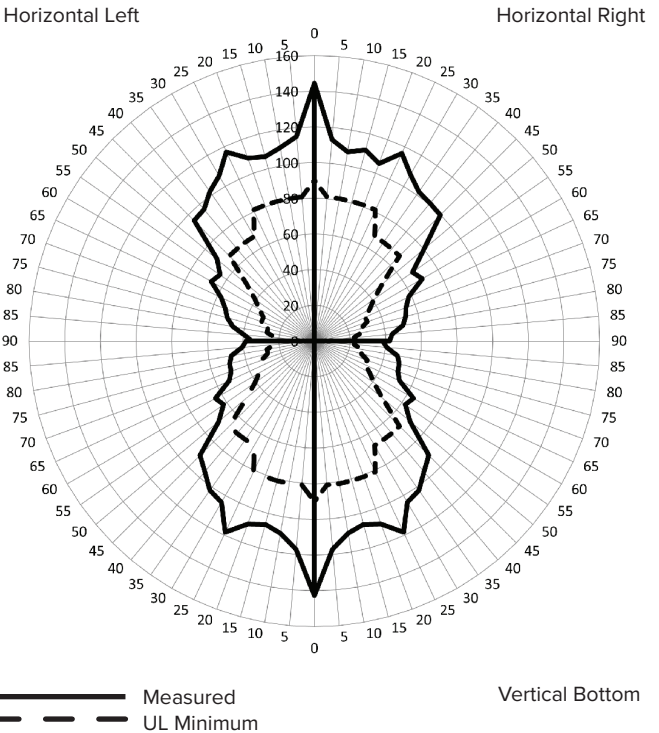
Voltage setting	Wattage setting	Reverberant (UL 1480)	Anechoic (CAN/ ULC-S541)
25V / 70V	¼W	78	77
	½W	81	80
	1W	84	83
	2W	87	86


SOUND OUTPUT


Sound pattern (ULC)

Axis	Angle	Change in output
Horizontal	120° and 60°	-3 dBA
	140° and 40°	-6 dBA
Vertical	120° and 60°	-3 dBA
	145° and 40°	-6 dBA

LIGHT DISTRIBUTION



Notification Appliances		Lens Color	Cover Color	Marking
 Speaker-Strobes	GCSVRA-A	Amber	Red	Alert
	GCSVWA-A	Amber	White	Alert
	GCSVWA-R	Red	White	Alert
	GCSVWA-B	Blue	White	Alert
	GCSVWA-G	Green	White	Alert
	GCSVWN-A	Amber	White	None
	GCSVWN-R	Red	White	None
	GCSVWN-B	Blue	White	None
	GCSVWN-G	Green	White	None

 Strobes	GCVRA-A	Amber	Red	Alert
	GCVWA-A	Amber	White	Alert
	GCVWA-R	Red	White	Alert
	GCVWA-B	Blue	White	Alert
	GCVWA-G	Green	White	Alert
	GCVWN-A	Amber	White	None
	GCVWN-R	Red	White	None
	GCVWN-B	Blue	White	None
	GCVWN-G	Green	White	None



ACCESSORIES



GRSW-10

Room Side Wiring
Plate 10 pack (required,
ordered separately)



GCTR

Trim plate, GC Series,
red



GCTW

Trim plate, GC Series,
white

27193-21

Two-gang surface
mount box, red

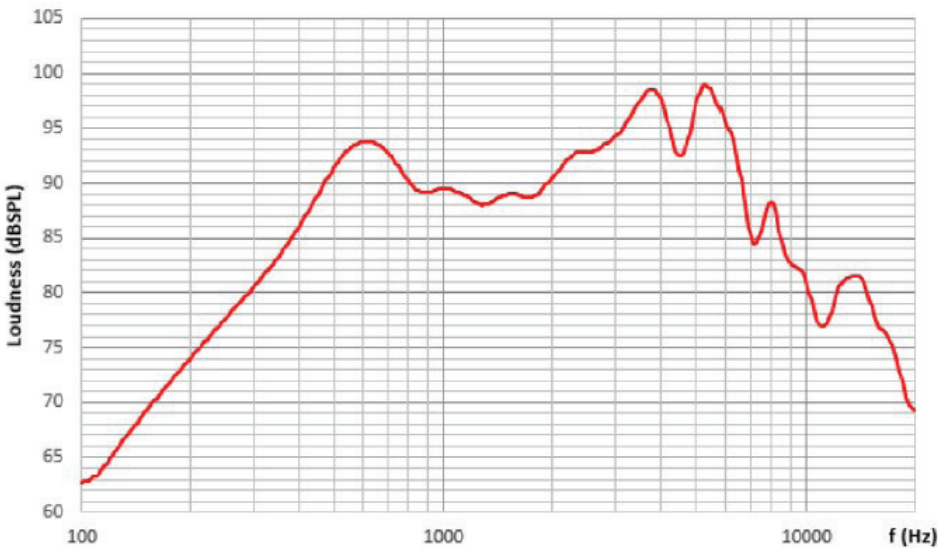
27193-26

Two-gang surface
mount box, white

SPECIFICATIONS

Strobe operating voltage	16 to 33 VDC, 16 to 33 VFWR
Speaker operating voltage	25 VRMS of 70 VRMS (selectable)
Speaker frequency response	400 Hz - 4,000 Hz
(UL rated)	
Speaker frequency response (nominal)	100 Hz - 11,000 Hz
Light output	Amber lens (-A models) 90 cd
	Green lens (-G models) 75 cd
	Blue lens (-B models) 50 cd
	Red lens (-R models) 15cd
Strobe flash rate	1 fps (flash per second) approx.
Synchronization	20 Ω max. between any two devices. To determine allowed wire resistance, refer to these specifications, and the specifications for the synchronized signal source.
Synchronization Sources	Edwards CC/MCC Series Signal Modules ² , Universal Class A/B modules ² , FXNAC ² , Booster and Auxiliary Power Supplies, Intelligent and Conventional Control Panels
Wire size	12 to 18 AWG (0.75 to 2.50 mm ²)
Dimensions (Ø × D)	6.8 x 1.82 in (17.27 x 4.62 cm)
Compatible electrical boxes ¹	2-gang, 4-inch-square
Wiring Plate	GRSW, GRSW-10 (pack of 10)
Trim plates	GCTR, GCTW 10.6 × 0.3 in. (26.92 × 0.76 cm)
Operating environment	
Temperature	32 to 122°F (0 to 50°C)
Relative humidity	0 to 93% noncondensing
Storage Temperature	-40 to 15° F (-40 to 70° C)
RAL Color	Red=RAL 3013
	White=RAL 9002
Environmental compliance	RoHS directive 2011/65/EU

¹Electrical boxes must be at least 1-1/2 in. (3.81 cm) deep.
²Compatibility for these modules limited to 25 appliances



Typical Frequency response @ 1W/1m



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