GE
Lighting

IMMERSION™
LED Display Lighting

Refrigerated Horizontal Cases
RH30 Series

Canopy Lighting
12-INCH:
GEMT301250CAN-SY (84050)
GEMT301240CAN-SY (84046)
GEMT301230CAN-SY (84048)

24-INCH:
GEMT302450CAN-SY/SB (69640/69641)
GEMT302440CAN-SY/SB (69652/69653)
GEMT302430CAN-SY/SB (69682/69684)
GEMT302435CAN-SY/SB (69709/69710)

36-INCH:
GEMT303650CAN-SY/SB (69642/69643)
GEMT303640CAN-SY/SB (69660/69661)
GEMT303630CAN-SY/SB (69685/69686)
GEMT303635CAN-SY/SB (69711/69712)

48-INCH:
GEMT304850CAN-SY/SB (69644/69645)
GEMT304840CAN-SY/SB (69662/69663)
GEMT304830CAN-SY/SB (69687/69688)
GEMT304835CAN-SY/SB (69713/69714)

Premium Canopy Lighting
12-INCH:
GEMT311240CAN-SY (84043)
GEMT311230CAN-SY (84041)

24-INCH:
GEMT312430CAN-SY/SB (69697/69698)
GEMT312440CAN-SY/SB (69670/69671)

36-INCH:
GEMT313630CAN-SY/SB (69699/69700)
GEMT313640CAN-SY/SB (69672/69673)

48-INCH:
GEMT314830CAN-SY/SB (69701/69702)
GEMT314840CAN-SY/SB (69674/69675)

Undershelf Lighting
12-INCH:
GEMT301250USL-SY (84052)
GEMT301240USL-SY (84047)
GEMT301230USL-SY (84049)

24-INCH:
GEMT302450USL-SY/SB (69646/69647)
GEMT302440USL-SY/SB (69664/69665)
GEMT302430USL-SY/SB (69689/69690)
GEMT302435USL-SY/SB (69715/69716)

36-INCH:
GEMT303650USL-SY/SB (69648/69649)
GEMT303640USL-SY/SB (69666/69667)
GEMT303630USL-SY/SB (69691/69694)
GEMT303635USL-SY/SB (69717/69718)

48-INCH:
GEMT304850USL-SY/SB (69650/69651)
GEMT304840USL-SY/SB (69668/69669)
GEMT304830USL-SY/SB (69695/69696)
GEMT304835USL-SY/SB (69719/69720)

Premium Undershelf Lighting
12-INCH:
GEMT311240USL-SY (84045)
GEMT311230USL-SY (84042)

24-INCH:
GEMT312430USL-SY/SB (69703/69704)
GEMT312440USL-SY/SB (69676/69677)

36-INCH:
GEMT313630USL-SY/SB (69705/69706)
GEMT313640USL-SY/SB (69678/69679)

48-INCH:
GEMT314830USL-SY/SB (69707/69708)
GEMT314840USL-SY/SB (69680/69681)

STOP

BEFORE YOU BEGIN
Read these instructions
completely and carefully.

FOR YOUR SAFETY

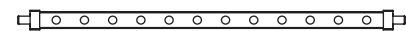**Read and observe all CAUTIONS and WARNINGS shown throughout these instructions.**

• Installation to be performed by factory trained service personnel only.
• For use inside a commercial refrigeration case with packaged foods only.
• Use this unit only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.
• Before installing, servicing or cleaning unit, switch power off at the service panel and follow appropriate lock out/tag out safety procedures.

OPERATING TEMPERATURE
• Minimum is -20°C
• Maximum is 25°C
• Maximum TC Point is 55°C

LED DRIVER COMPATIBILITY
This system is compatible with GE LED Drivers GEPS6000NCMUL-SY, GEPS6500NCMUL-SY, GEPS24-100UGL-IP, GEPS6100NCCON-SY.

TC Point Max 55°C

⚠ WARNING/AVERTISSEMENT

Risk of electrical shock. Disconnect power before servicing or installing product. LED Retrofit Kit Installation requires knowledge of luminaires electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician. Install this kit only in the luminaires that have the construction features and dimensions shown in the photographs and/or drawings. / **Risque de choc électrique.** Couper le courant avant de réparer ou installer le produit. LED Retrofit Kit d'installation nécessite la connaissance des systèmes luminaires électriques. Si vous n'êtes pas qualifié, ne tentez pas l'installation. Contactez un électricien qualifié. Installez ce kit seulement dans les luminaires qui ont les caractéristiques de construction et les dimensions figurant sur les photographies et / ou des dessins.

⚠ CAUTION/ATTENTION

Risk of injury. While performing installations described, gloves, safety glasses or goggles should be worn. / **Risque de blessure.** Lors de l'exécution des installations décrites, des gants, des lunettes de sécurité ou des lunettes de protection doivent être portées.
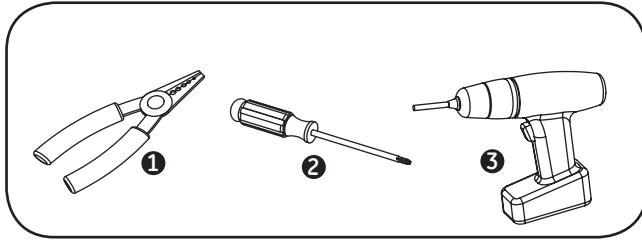

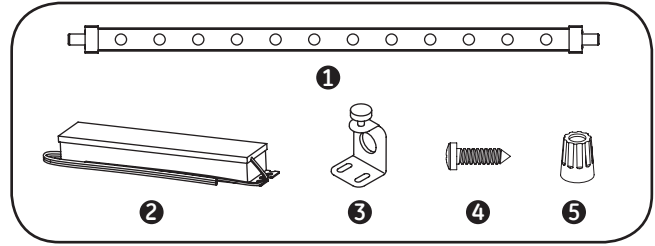imagination at work

Conforms to the following:

c UL us LISTED   SANITATION NSF/ANSI 7   CSA   C E   c UL us CLASSIFIED

Tools Required

❶ Wire Stripper/Cutter
❷ Screwdriver
❸ Cordless drill with driver bit

Components Required

❶ LED Light
❷ LED Driver
❸ L-clip with thumbscrew
❹ 6-32 x 1/2" screws
❺ Twist-lock splice wire connectors.

⚠ **WARNING/AVERTISSEMENT**

Risk of fire or electric shock. Luminaire wiring and electrical parts may be damaged when drilling for installation of LED retrofit kit. Check for enclosed wiring and components. / **Risque de feu ou électrocution.** Les pièces et câbles électriques risquent d'être endommagés lors du perçage des trous pour l'installation du luminaire à DEL. Veuillez vérifier si des câbles et composantes se trouvent derrière la paroi avant de percer.
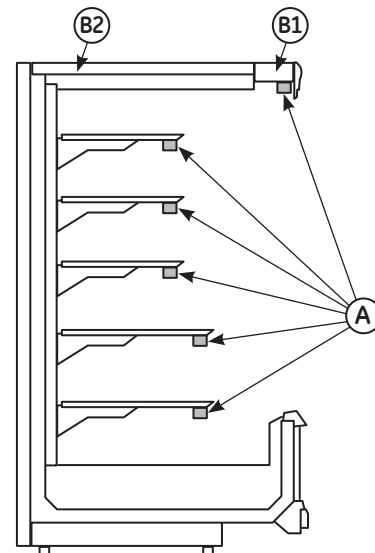
To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects. / Pour éviter l'endommagement de câblage ou l'abrasion, ne pas exposer le câblage aux bords de feuilles de métal ou d'autres objets tranchants.

Retrofit Installation (for OEM install, proceed to Step 2)

① Remove Existing Lighting Components

- For retrofit only. If you are an OEM, please refer to the OEM Installation Guide.

- Refer to manufacturing manual for refrigeration case to identify lighting control circuits. Ensure that power is switched off at the service panel for the lighting circuit. If a lighting power switch is not provided in the refrigeration case, power removal can be performed at the main breaker panel.

- Locate existing lighting components including ballasts, lampholders, lamps, and lampguards in the refrigeration case for removal. Please refer to refrigeration manual for any questions dealing with component locations.

- Remove lamps, lampholder and lamp guards. Cut the wiring, making the cut as close to the lampholder as possible. Do not remove wiring from case as it will be utilized to attach the LED light. Dispose of components per federal and local regulations.

- Locate ballast within system. The most common location is in the canopy or on top of the case.

- Disconnect ballast input and output connectors. Cut the ballast connector wires nearest to the connector and remove connector. Unscrew the mounting screws that attach ballast and remove ballast. Dispose of ballasts according to federal and local regulations. LED driver installation will begin at Step 5 and Step 6.

- To install the LED light, first identify the wiring for connection to the LED driver. After removing the connector from ballast, leave the existing ballast input and output wires for reconnection in a later step.
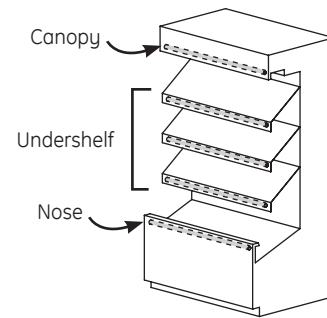
Fluorescent Component Location

Ⓐ Lamp and lamp holders

Ⓑ Ballast
  1. Canopy
  2. Top of case

(2) Select Installation Position

- Select installation position:
  2A Undershelf
  2B Canopy and Nose

Canopy
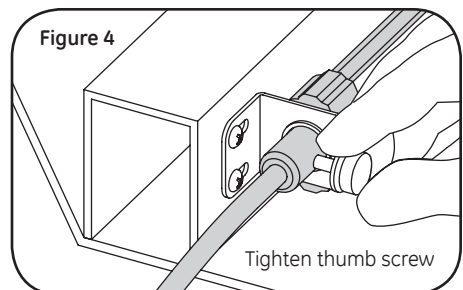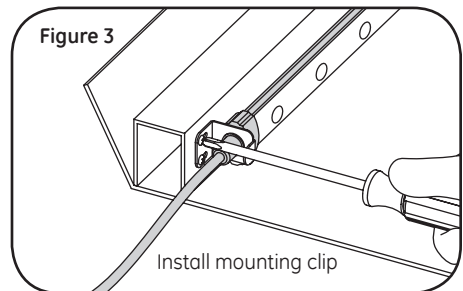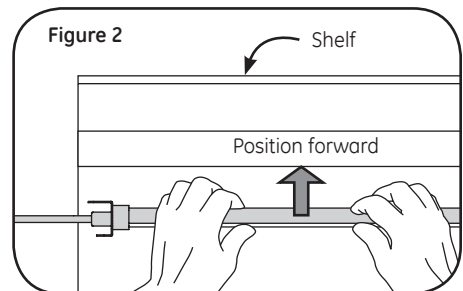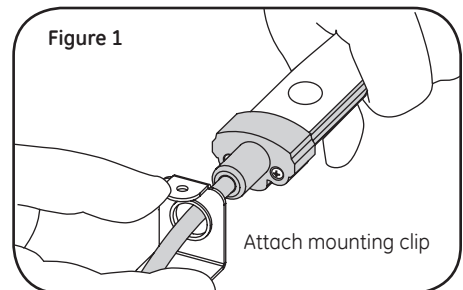Undershelf
Nose

⚠ WARNING/AVERTISSEMENT

Risk of electrical shock. Only those open holes indicated in the photographs and/or drawings may be made or altered as a result of kit installation. Do not leave any other open holes in an enclosure of wiring or electric components / **Risque de choc électrique.** Seuls les trous ouverts indiqués dans les photos et / ou les dessins peuvent être faites ou modifiés à la suite du montage du kit. Ne pas laisser autres trous ouverts dans l'enceinte du câblage électrique ou composants.

(3A) Install LED Lights into Undershelf Position

- Remove each shelf and turn upside down on work surface.
- Thread LED Light wire through the large hole in selected mounting clip and slide over the end of LED Light. Slightly tighten thumb screw. Refer to Figure 1.
- Slide second mounting clip over opposite end of LED Light.
- With mounting clips still attached, place LED Light flush with shelf edges, positioning it as far forward as possible while still concealing LED Light from view. Refer to Figure 2.
- Install mounting clip to shelf with two #6 self-drilling pan headed screws per mounting clip. Refer to Figure 3.
- Insert tension screw into both mounting clips and partially tighten each screw into nut to enable the LED Light position to adjust. Refer to Figure 4.

  Shelf installation shown in figures at right.

Figure 1

Attach mounting clip

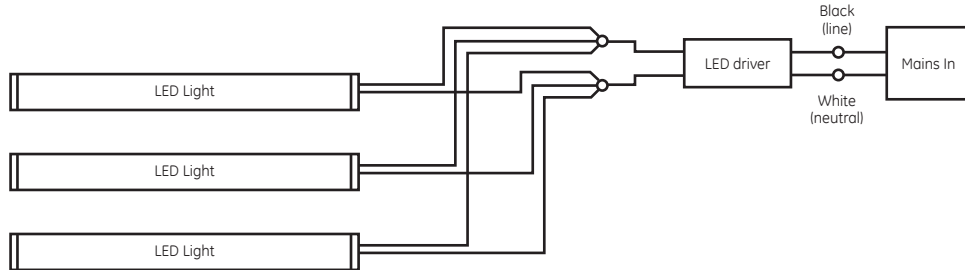Figure 2   Shelf

Position forward

(3B) Install LED Lights into Canopy and Nose Position

- Thread LED Light wire through the large hole in selected mounting clip and slide over the end of LED Light. Refer to Figure 1.
- Slide second mounting clip over opposite end of LED Light.
- With mounting clips still attached, place LED Light flush against mounting surface, positioning it as far forward as possible while still concealing LED Light from view. Refer to Figure 2.
- Install mounting clips to panel with two #6 self-drilling pan headed screws per mounting clip. Refer to Figure 3.
- Insert thumb screw into one mounting clip and partially tighten screw to enable the LED Light position to adjust. Refer to Figure 4.

Figure 3

Install mounting clip

Figure 4

Tighten thumb screw

Wiring Multiple LED Lights

LED Driver Loading Specifications

Any combination of RH30 LED Lights may be loaded onto a power supply following these guidelines.

• Add up total planned LED load watts per table below.
• For efficient operation, load power supply to minimum of 43% of power supply wattage rating.

$$.43 < \frac{\text{total LED load watts}}{\text{power supply rated watts}} < 1.00$$

Maximum LED Driver Loading Specifications

	DC Watts*	LED Driver 50 Watt GEPS6500NCMUL-SY	LED Driver 100 Watt GEPS6000NCMUL-SY, GEPS24-100UGL-IP, GEPS6100NCCON-SY
RH30 Canopy 4 ft.	23	2 LED Lights	4 LED Lights
RH30 Canopy 3 ft.	17	3 LED Lights	5 LED Lights
RH30 Canopy 2 ft.	12	4 LED Lights	8 LED Lights
RH30 Canopy 1 ft.	6	8 LED Lights	16 LED Lights
RH30 Undershelf 4 ft.	8	6 LED Lights	12 LED Lights
RH30 Undershelf 3 ft.	6	8 LED Lights	16 LED Lights
RH30 Undershelf 2 ft.	4	12 LED Lights	24 LED Lights
RH30 Undershelf 1 ft.	2	24 LED Lights	48 LED Lights

* For typical in-situ DC power and actual system power consumption (AC Watts) see RH30 product technical guide.

(4) Connect LED Driver - Output

- For retrofit, place LED driver in the location where the ballast was formerly located.
- Driver must be enclosed and located at least 20cm (7in) away from compressor.
- Make output (DC) connections using one of the two options below:

OPTION 1 - USING 4-WAY CONNECTOR
Connect the LED Driver output leads to the LED Light leads using the appropriate mating connector (Molex P/N 39-01-4046). Terminals installed should be crimped using approved tooling and process per Molex specifications.

OPTION 2 - USING TWIST-ON WIRE CONNECTORS
Remove the 4-way connector from the LED Driver by cutting the wires near the connector and strip the output leads. Connect the LED Driver output leads to the LED Light leads using wire connectors or other connection method approved for low temperature usage and stranded cable.

For non-dimming applications, cap the unused wires with 5/32" (4mm) twist on wire connectors.

(5) Connect LED Driver - Input

- Make input (AC) connections using one of the two options below:
- The LED Driver is required to be reliably bonded to the protective ground conductor.
- The power supply must be connected to an individual properly grounded branch circuit, protected by a 15 or 20 ampere circuit breaker or time delay fuse.

OPTION 1 - USING 2-WAY CONNECTOR
Attach the supplied green/yellow ground wire from the LED Driver to a grounded metal portion of the door frame. Connect the original Line and neutral wires (or Line 1 and Line 2 wires for 240 nominal VAC) to the 3-way connector for the LED Driver input wires using the appropriate mating connector (Molex P/N 39-01-4030).

OPTION 2 - USING TWIST-ON WIRE CONNECTORS
Attach the supplied green/yellow ground wire from the LED Driver to a grounded metal portion of the door frame. Remove the 3-way connector from the LED Driver by cutting the wires near the connector and strip the input wires. Connect the original Line and neutral wires (or Line 1 and Line 2 wires for 240 nominal VAC) to the LED Driver leads using twist lock wire connectors or other connection method approved for low temperature usage and stranded cable.

(6) Connect Dimming Contacts – Output (Optional)

- To enable dimming operation, connect leads from occupancy sensor or control system (normally open contact) to the purple and gray leads of the power supply. Other methods, such as using occupancy sensors to switch the LED driver on and off is not recommended and will void the product warranty.

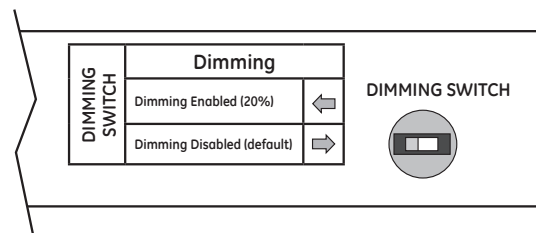- Make output (contact closure) connections using one of the two options below:

OPTION 1 - USING 4-WAY CONNECTOR
Connect the LED Driver dimming output leads to the occupancy sensor or control system using the appropriate mating connector (Molex P/N 39-01-4046). Terminals installed should be crimped using approved tooling and process per Molex specifications.

OPTION 2 - USING TWIST-ON WIRE CONNECTORS
Remove the 4-way connector from the LED Driver by cutting the wires near the connector and strip the output leads. Connect the LED Driver dimming output leads to the occupancy sensor or control system using wire connectors or other connection method approved for low temperature usage and stranded cable.
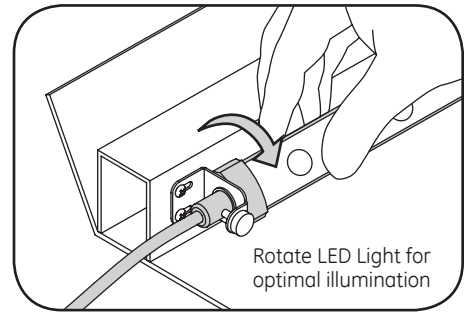
- The **GEPS6000NCMUL-SY**, **GEPS6100NCCON-SY** and **GEPS6500NCMUL-SY** LED Drivers are capable of step dimming from 100% to 20% power when used with a normally open contact closure occupancy sensor system.

- **When using the GEPS6000NCMUL-SY or GEPS6500NCMUL-SY for dimming applications,** the slider switch setting must be set to the right to disable the dimming feature and achieve 100% illumination.

- When using the **GEPS6100NCCON-SY** for dimming, please refer to driver installation guide for dimming enable process and wiring.

DIMMING SWITCH	Dimming	
	Dimming Enabled (20%)	⇦
	Dimming Disabled (default)	⇨

DIMMING SWITCH

(7) Prepare for LED Light Positioning

- If installing in the undershelf position, reinstall shelves back into case.
- Clean away any debris from case.
- Reconnect power to case.
- Gently rotate LED Light until optimal light coverage is achieved.
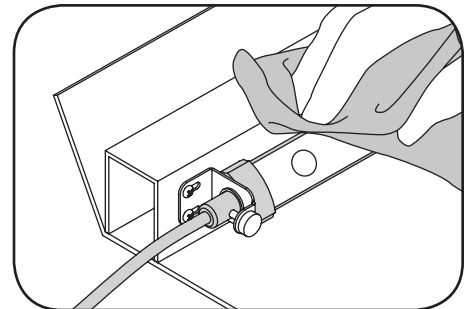- Firmly tighten thumb screw to secure the LED light into final position.

Rotate LED Light for optimal illumination

⚠ WARNING/AVERTISSEMENT

Risk of electrical shock. Disconnect power to LED Lights before any cleaning operation.
Risque de choc électrique. Débranchez l'alimentation des éclairages à LED avant toute opération de nettoyage.

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(8) Cleaning Instructions

- The LED Light may be dusted as needed with a dry, clean, soft cloth.
- Do not use chemical cleaners on the system.
- Do not wipe with a soiled dishcloth or wet towel–these may leave a residue that can damage the finish.
- Do not use scouring pads, powdered cleaning products, bleach or cleaners containing bleach because these products can scratch and damage the finish.

This product is intended solely for the use of commercial refrigerated, display or case lighting and is not intended for use in any other application.