

### Description

The Crestron Green Light® Power Pack is a standalone room controller designed to communicate with photocells, occupancy sensors, and control stations to automatically control lighting in any room. The entire Crestron Green Light Power Pack (GLPP) family provides cost-effective and powerful lighting control for classrooms, small offices, and open-plan offices. Ideal for new construction as well as retrofitting existing buildings, Crestron® GLPPs are designed to install and commission quickly and easily. Additionally, the GLPP can be connected to a central control system, enabling it to become an integral part of the building energy management system.

Models

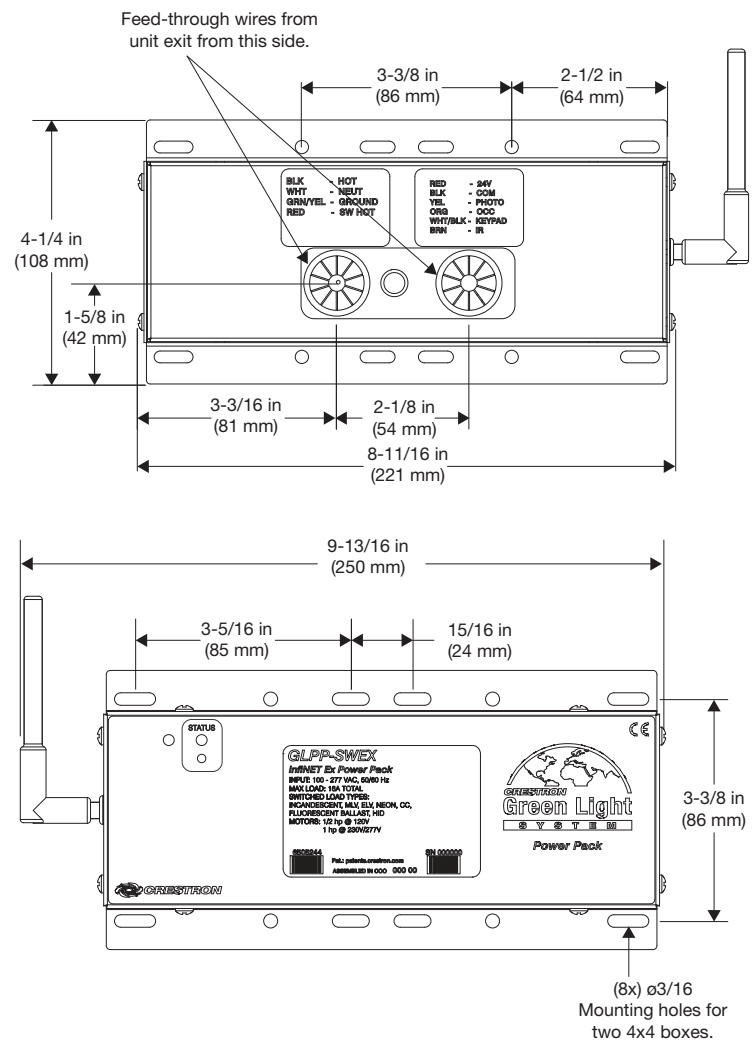
MODEL	DESCRIPTION
GLPP-SWEX	Crestron Green Light Power Pack, 1-Channel Switch with infiNET EX Control
GLPP-1SW2EX	Crestron Green Light Power Pack, 2-Channel Switch with infiNET EX Control
GLPP-1SW3EX	Crestron Green Light Power Pack, 3-Channel Switch with infiNET EX Control

**NOTE:** These models meet the requirements of UL® 2043 for installation in an environmental air-handling (plenum) space.

### Physical Description

This section provides information on the GLPP-SWEX series dimmers.

GLPP-SWEX Overall Dimensions (Flying Leads Not Shown)



**WARNING:** To avoid fire, shock, or death, turn off power at circuit breaker or fuse and test that power is off before wiring!

**NOTES:** Observe the following points.

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician should install this product.

**NOTE:** Before using the GLPP-SWEX, ensure the device is using the latest firmware. Check for the latest firmware for the GLPP-SWEX at [www.crestron.com/firmware](http://www.crestron.com/firmware). Firmware is loaded onto the device using Crestron Toolbox™ software.

### GLPP-SWEX Series Specifications

SPECIFICATION	DETAILS
<b>Load Ratings</b>	
Switched Channels	1, 2, or 3 switched loads (depending on model)
Per Unit	16 A at 100–277 Vac, 50/60 Hz (20 A, de-rated to 80%)
Switch Load Types	Fluorescent ballast, incandescent, magnetic low-voltage, electronic low-voltage, neon/cold cathode, high-intensity discharge
<b>Power Requirements</b>	
Main Power	100–277 Vac, 50/60 Hz
Available Sensor Power	2.5 W at 24 Vdc (sufficient for powering multiple sensors)
<b>Enclosure</b>	20-gauge galvanized steel enclosure, designed for mounting to two (2) adjacent standard 4" square electrical junction boxes (some models may need a box extension to meet code requirements); 3-channel versions require a box depth of 2.125 in (54 mm)

### Additional Resources

Visit the product page on the Crestron website ([www.crestron.com](http://www.crestron.com)) for additional information and the latest firmware updates. Use a QR reader application on your mobile device to scan the QR image.



### Available Accessories

The GLPP-SWEX can be used with a variety of equipment.

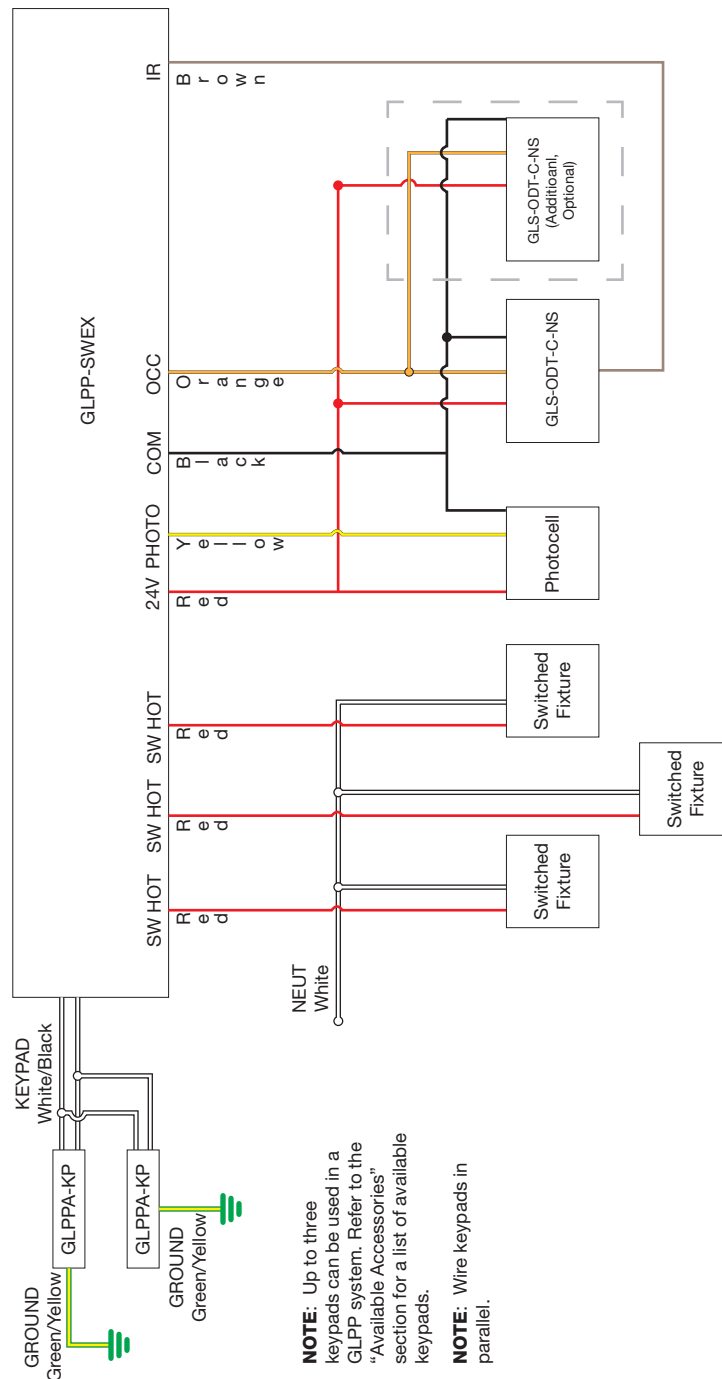
ACCESSORY	DESCRIPTION
GLPPA-KP	In-Wall Master Scene Keypad for GLPP
GLPPA-KP1	In-Wall Zone Keypad for GLPP, Channel 1 Control
GLPPA-KP2	In-Wall Zone Keypad for GLPP, Channel 2 Control
GLPPA-KP3	In-Wall Zone Keypad for GLPP, Channel 3 Control
GLPPA-KP4	In-Wall Zone Master Keypad for GLPP
GLS-OIR-C-NS	Passive Infrared Ceiling Mount Occupancy Sensor
GLS-ODT-C-NS	Dual-Technology Ceiling Mount Occupancy Sensor
GLS-LOL	Crestron Green Light Photosensor, Open-Loop
GLS-LCL	Crestron Green Light Photosensor, Closed-Loop
GLS-LEXT	Crestron Green Light Photosensor, Outdoor

### Wiring

**WARNING:** Turn off the power to the GLPP-SWEX before wiring. Wiring with the power on can result in serious personal injury and damage to the device.

**CAUTION:** This product must be installed with 14 AWG (2.5 mm<sup>2</sup>) and 18 AWG (0.75 mm<sup>2</sup>) wires that comply with local electrical codes.

Typical Wiring Diagram



**NOTE:** Up to three keypads can be used in a GLPP system. Refer to the "Available Accessories" section for a list of available keypads.

**NOTE:** Wire keypads in parallel.

### Commissioning

The GLPP-SWEX must be commissioned before it can be used. During commissioning, the scene selections are configured along with the daylighting levels. The actions of the occupancy sensors are also configured.

#### Scene Settings

The following table shows the default scene settings.

Default Scene Settings

SCENE	LOAD STATE (LOADS 1/2/3)
1	On/On/On
2	On/Off/On
3	Off/On/Off
4	On/Off/Off
5	Off/Off/On
6	Off/On/On
7	On/On/Off
8	Off/Off/Off

#### Change Scene Settings

The scene settings can be changed to accommodate the needs of the room or occupants. The scenes are changed using the GLPPA-REMOTE-PROG, the GLPPA-REMOTE-USER, or the GLPPA-KP (all sold separately).

#### Edit Scenes Using a Remote

Use the GLPPA-REMOTE-PROG or the GLPPA-REMOTE-USER to change the default settings for scenes 1 through 8.

1. Use LOAD 1 ON OFF buttons to set the load to the desired level. Repeat this process for the other connected loads. Alternatively, use the MASTER ON OFF buttons to set the levels of all the connected loads.
2. Press and hold the appropriate SCENE 1 through SCENE 8 button for 2 seconds to save the scene. The GLPP beeps when the scene is saved.

**NOTE:** Only Scene 1 enables daylighting.

3. Repeat the steps above for all scenes that need to be configured.

#### Edit Scenes Using a 2-Wire Keypad

Use the GLPPA-KP as another means of editing the scenes if using the 4-button keypad setup. Follow the procedure below to edit the scenes using the keypad.

1. Press and hold the ALL ON and ALL OFF buttons on the keypad for 3 seconds to put the GLPP into Program mode. The LED on the keypad blinks to indicate that the device is in Program mode.
  - Program mode exits without saving after 30 seconds of button inactivity.
  - Program mode immediately exits without saving when the ALL OFF button is pressed.
2. Press the ALL ON, SCENE 1, or SCENE 2 buttons to toggle the loads between full on and full off (no fade time). The buttons are used to control loads 1 through 3; the ALL ON button toggles load 1, the SCENE 1 button toggles load 2, and the SCENE 2 button toggles load 3. When a button is pressed, the load turns full on if the load is currently off.

**NOTE:** All connected loads must be assigned a load level for each scene.

3. To save the current light levels to a scene, press and hold the ALL OFF button while pressing the SCENE 1 or SCENE 2 button. The keypad exits Program mode immediately upon saving, resetting a scene, or after 1 minute.

To reset a scene to its factory default levels, press and hold the ALL OFF button while holding a desired scene button for 5 seconds.

## Set Up Daylighting

Daylighting, also known as daylight harvesting, continuously uses sunlight information from the photocell to control the electric artificial lighting level. Daylighting ensures adequate environment lighting while saving as much energy possible. Set points, known as the “day” and “night” points, are used to determine when the load should be turned on.

**NOTE:** Pay careful attention when commissioning open-loop daylighting. Accidentally pressing the wrong buttons on the GLPPA-REMOTE-PROG may clear set points and follow the wrong slope or curve. (e.g., pressing DAY when setting up the NIGHT level.)

For proper operation of daylighting, commission during the day while the outdoor conditions are constant. Avoid commissioning when clouds are rapidly exposing and then hiding the sun.

### Set Up the Open-Loop Daylighting Levels

In open-loop daylighting, each channel is assigned a day and night set point and allows each channel to turn on independently.

To commission open-loop daylighting, follow the procedure outlined below.

1. Establish the day set point.
  - a. Enter the room during a time when there is enough natural light and no artificial light is required.
  - b. Turn load 1 off.
  - b. Press and hold the LOAD 1 DAY button on the GLPPA-REMOTE-PROG for 2 seconds to start recording the levels for load 1. The GLPP beeps to indicate that the recording process has started. The lights turn on and then off. At this point, the GLPP calculates and saves the night set point. If daylighting was set up successfully, the GLPP emits one long beep. If there is an error, the GLPP emits three short beeps.
  - c. Repeat for all connected loads.
2. Establish the night set point (optional).

**NOTE:** When the day set point is established, the night set point is automatically calculated and saved. However, a custom night set point can be saved.

- a. Return to the location at night, when the natural light is starting to decrease and when the artificial lights should be turned on.
- b. Turn load 1 on.

**NOTE:** For the night set point, the sensor must detect less light than the established day set point. If it detects more light, setting the night set point will fail.

- c. Press and hold the LOAD 1 NIGHT button on the GLPPA-REMOTE-PROG for 2 seconds to set the night level. The GLPP beeps to indicate that the recording process has started. The lights turn off and then on. The GLPP emits one long beep to confirm that the night set point is saved.
- d. Repeat for all connected loads.

### Clear Daylighting

To remove daylighting for a particular channel, using the GLPPA-REMOTE-PROG, press and hold the Load 1, Load 2, or Load 3 DAY button until a short beep sounds. A long beep signifies process completion. Within 5 seconds, press and hold LOAD 1, LOAD 2, or LOAD 3 NITE button for the same channel until a short beep sounds. Daylighting has now been cleared for this channel.

## Set Up the Occupancy Sensor

To set up the occupancy sensor and the desired recalled scene upon entry or exit of the room, follow the procedure below. The GLPP beeps once the scene selection is saved.

1. Press and hold the desired ENTRY button on the GLPPA-REMOTE-PROG.
  - ENTRY NONE: The loads are not turned on upon entering the room.
  - ENTRY SCENE 1: Scene 1 is recalled upon entering the room.
  - ENTRY SCENE 6: Scene 6 is recalled upon entering the room.
  - ENTRY SCENE 7: Scene 7 is recalled upon entering the room.
2. Press and hold the desired EXIT button on the GLPPA-REMOTE-PROG.
  - EXIT OFF: The loads are turned off upon exiting the room.
  - EXIT SCENE 8: Scene 8 is recalled upon exiting the room.

## Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The device does not function.	The switch is not receiving line power.	Verify that the switch is properly connected to the HOT and NEU power lines and that the circuit breaker is closed.
The switch powers up, but the load does not turn on.	The lamps are burned out.	Check the lamp.
	There is an open circuit.	Check the wiring.
	A short circuit exists on the switch output and the protection circuit has activated.	Check the wiring.

This product is Listed to applicable UL Standards and requirements by Underwriters Laboratories Inc.



### Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions:(1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### Industry Canada (IC) Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This radio transmitter, IC: 5683C-CWD7191, has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Antenna Type: Dipole, Maximum permissible antenna gain: 2.5 dBi, Impedance: 50 Ohms

### Industrie Canada (IC) Déclaration de conformité

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Le présent émetteur radio , IC: 5683C-CWD7191, a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Type d'antenne: Dipole, Gain admissible maximal: 2.5 dBi, Impédance: 50 Ohms

To satisfy RF exposure requirements, this device and its antenna must operate with a separation distance of at least 20 centimeters from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

The product warranty can be found at [www.crestron.com/warranty](http://www.crestron.com/warranty).

The specific patents that cover Crestron products are listed at [patents.crestron.com](http://patents.crestron.com).

Certain Crestron products contain open source software. For specific information, please visit [www.crestron.com/opensource](http://www.crestron.com/opensource).

Crestron, the Crestron logo, Crestron Green Light, Crestron Toolbox, infiNET EX, and the infiNET EX logo are either trademarks or registered trademarks of Crestron Electronics, Inc. in the United States and/or other countries. UL and the UL logo are either trademarks or registered trademarks of Underwriters Laboratories, Inc. in the United States and/or other countries. Other trademarks, registered trademarks, and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Crestron disclaims any proprietary interest in the marks and names of others. Crestron is not responsible for errors in typography or photography.

This document was written by the Technical Publications department at Crestron.

©2016 Crestron Electronics, Inc.

### Crestron Electronics, Inc.

15 Volvo Drive Rockleigh, NJ 07647  
Tel: 888.CRESTRON  
Fax: 201.767.7576  
[www.crestron.com](http://www.crestron.com)

### Installation Guide - DOC. 7209C

(2036185)

06.16

Specifications subject to change without notice.