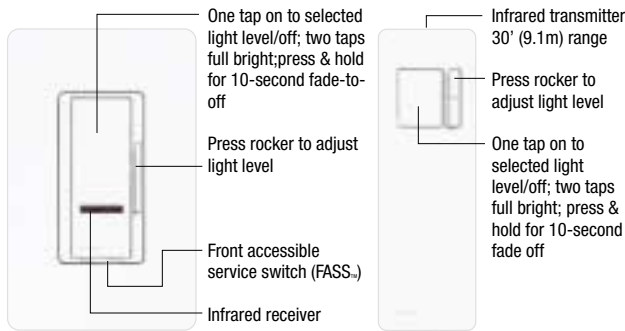


## The dimmer with remote control



### Infrared Dimmer and Remote Control

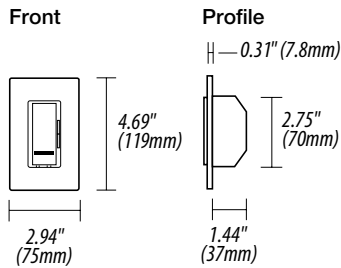
## PRODUCT FAMILY FEATURES

- The dimmer with infrared receiver and remote control for a standard designer wallplate opening
- 30' range on infrared wireless remote control
- Special Features! Two taps on the switch brings the lights on to full brightness; press and hold the switch to slowly fade lights to off over 10 seconds
- Multi-location dimming from up to 10 locations
- Uses standard single pole and 3-way wiring for easy installation in any home
- See Spacer® System™ for a multi-scene preset lighting control system with compatible Spacer styling

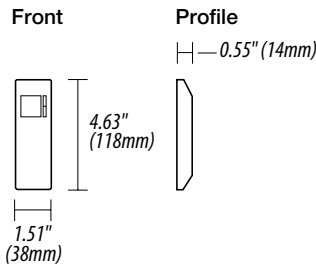
## DIMENSIONS

Including Claro® wallplates – Wallplates sold separately

### Dimmer

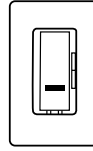


### Remote Control

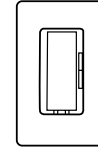


## CONTROLS AND ACCESSORIES <sup>1</sup>

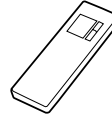
### Preset Dimmer with IR Receiver



### Accessory Dimmer



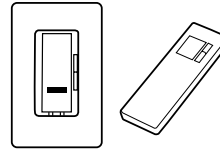
### Infrared Wireless Remote Control



<sup>1</sup> For a coordinated look, use Claro® accessories and wallplates.

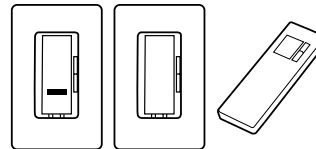
## SINGLE LOCATION PACKAGE

- Package includes: (1) Single-pole dimmer with infrared receiver  
 (1) Infrared wireless remote control  
 (1) Claro® single-gang wallplate



## MULTI- LOCATION PACKAGE

- Package includes: (1) Multi-location dimmer with infrared receiver  
 (1) Infrared wireless remote control  
 (1) Accessory dimmer  
 (1) Claro® single-gang wallplate



## SPECIFICATION SERIES STANDARD FEATURES

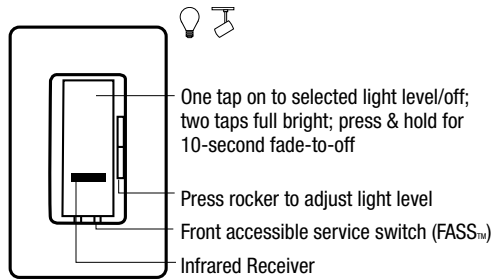


- Power-failure memory
- Precise color matching
- Front accessible service switch (FASS.™)
- Frequency compensation
- RFI suppression
- Electrostatic discharge tested

Lutron controls are rated at 120VAC, 60Hz unless otherwise noted.

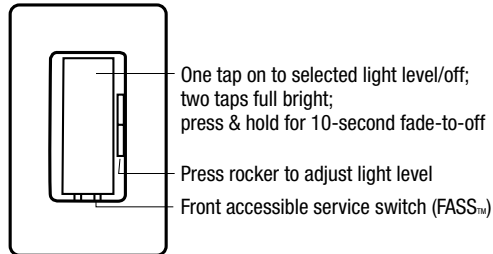
JOB NAME	AREA CONTROLLED
LOCATION	JOB NUMBER
TITLE	PAGE NO.

**DIMMERS WITH INFRARED RECEIVER**

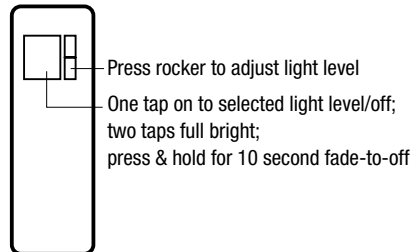


**ACCESSORY DIMMERS**

For use in multi-location dimming only – use up to nine accessory dimmers with only one Spacer multi-location dimmer with infrared receiver

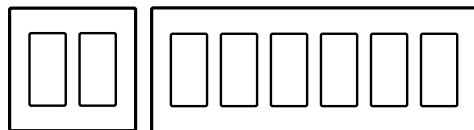


**FAVORITE SCENE™ INFRARED (IR) WIRELESS REMOTE CONTROLS**



**CLARO® COORDINATED ACCESSORIES AND WALLPLATES**

Switches, Receptacles, GFCI REceptacles, Telephone Jacks, Cable TV Jacks, and 1- to 6-Gang Wallplates Available.



Description	Maximum Capacity <sup>1</sup>	Model #
-------------	-------------------------------	---------

**PACKAGES**

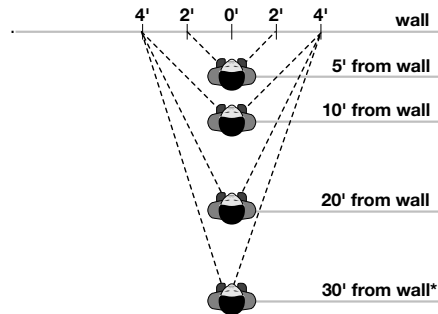
**Incandescent**

**Single-Location Dimming Package**  
 Package includes: 600W SP-600-HTH-  
 (1) Single-pole dimmer with infrared (IR) receiver  
 (1) IR wireless remote control (white)  
 (1) Claro® single-gang wallplate  
 Note: IR wireless remote control available in white only. Minimum load is 40W.

**Multi-Location Dimming Package**  
 Package includes: 600W SP-603-HTH-  
 (1) Multi-location dimmer with infrared (IR) receiver  
 (1) IR wireless remote control (white)  
 (1) Accessory dimmer  
 (1) Claro® single-gang wallplate  
 Note: To dim from additional locations, use Spacer Accessory dimmers, AD-. IR wireless remote control available in white only. Not for use with mechanical 3-way or 4-way switches. Minimum load is 40W.

<sup>1</sup> For capabilities in multigang installations, see derating.

**INFRARED TRANSMITTER PHOTOMETRICS**



Description	Maximum Capacity <sup>1</sup>	Model #
-------------	-------------------------------	---------

### DIMMERS (Wallplates ordered separately)

Incandescent		
<i>Dimmers with IR Receiver</i>		
Single-location	600W	SP-600-
Single-location	1000W	SP-1000-
Multi-location	600W	SP-600M-
Multi-location	1000W	SP-1000M-

Note: For multi-location dimming, use a multi-location dimmer with Spacer accessory dimmers, AD-. Not for use with mechanical 3-way or 4-way switches. Minimum load is 40W.

Magnetic Low Voltage		
<i>Dimmers with IR Receiver</i>		
Single-location	600VA (450W <sup>2</sup> )	SPLV-600-
Multi-location	600VA (450W <sup>2</sup> )	SPLV-600M-

Note: For multi-location dimming, use a multi-location dimmer with Spacer accessory dimmers, AD-. Not for use with mechanical 3-way or 4-way switches. Minimum load is 40W.

### HI-POWER 2•4•6™ DIMMING MODULES

To increase load capacity up to 30,000W/VA in most popular sources, use one SP-600- or SP-600M- and add up to five dimming modules. Cannot be used with 0-10VDC ballast.

### ACCESSORY DIMMERS

#### Provide Multi-Location Dimming from Up to Nine Additional Locations

<i>Dimmers</i>	
Accessory Dimmer	AD-

Note: For 120V multi-location dimming, use up to nine Spacer dimmers (AD-) with only one of the following Spacer multi-location dimmers: SP-600M-, SP-1000M- or SPLV-600M-. Not for use with mechanical 3-way or 4-way switches. No derating required if ganged.

1 For capacities in multigang installations, see derating.  
2. Actual lamp wattage.

Description	Maximum Capacity	Model #
-------------	------------------	---------

### REMOTE CONTROLS

Infrared Wireless Remote Controls		
Use with SP-600-, SP-1000-, SP-600M-, SP-1000M- SPLV-600-, SPLV-600M-		
Note: Includes two AAA batteries. Infrared wireless remote control available in matte white only. Use with Spacer dimmers only. Works with most universal remote controls. Range is 30' (11.8m) line of sight to receiver. 1.51" W (38mm) x 4.63" H (118mm) x 0.55" D (14mm)		

### CLARO SWITCHES

General Purpose Switching of All Sources and Motor Loads			
	Single-pole, 120/277V	15A	CA-1PSH-
	3-way, 120/277V	15A	CA-3PSH-
	4-way, 120/277V	15A	CA-4PSH-
Note: No derating required if ganged.			

### CLARO ACCESSORIES

Receptacles		
	<i>Receptacle</i>	15A, 125V CAR-15H-
	<i>GFCI Receptacle</i>	15A, 125V CAR-15-GFCIH-

Telephone and Cable Television Jacks		
A physical barrier (partition) must exist when ganging with line-voltage products.		
	<i>Single Telephone Jack</i>	6-conductor, RJ11 CA-PJH-
	Note: Also accepts most 4-conductor plugs.	
	<i>Cable TV Jack</i>	F-style, 75-Ohm, coaxial cable CA-CJH-

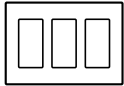
## CLARO WALLPLATES



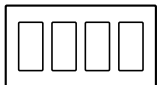
**1-Gang**  
2.94"W (75mm) x 4.69" H(119mm) x 0.30"D (7.6mm)  
CW-1-



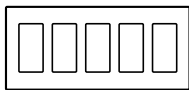
**2-Gang**  
4.75"W (121mm) x 4.69" H(119mm) x 0.30"D (7.6mm)  
CW-2-



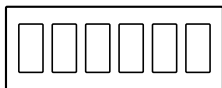
**3-Gang**  
6.56"W (167mm) x 4.69" H(119mm) x 0.30"D (7.6mm)  
CW-3-



**4-Gang**  
8.37"W (213mm) x 4.69" H(119mm) x  
0.30"D (7.6mm) CW-4-



**5-Gang**  
10.18"W (259mm) x 4.69" H(119mm) x  
0.30"D (7.6mm) CW-5-



**6-Gang**  
12.00"W (305mm) x 4.69" H(119mm) x  
0.30"D (7.6mm) CW-6-

## STANDARD COLORS/FINISHES

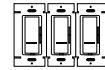
### Gloss Finishes (Ships in 48 hours)

Add color/finish suffix to model number to order.

Example: SP-600-**WH**

WH	White
IV	Ivory
AL	Almond
LA	Light Almond
GR	Gray
BR	Brown
BL	Black

## DERATING/MAXIMUM CAPACITY <sup>1</sup>



No fins/side  
sections  
removed  
**(Full Capacity)**

One fin/side  
section removed  
from each control  
**(End Units)**

Two fin/side  
sections removed  
from center control  
**(Middle Unit)**

### Incandescent Dimmers <sup>2</sup>

600W 1000W	500W 800W	400W 650W
---------------	--------------	--------------

### Magnetic Low Voltage Dimmers <sup>2</sup>

600VA (450W <sup>3</sup> )	500VA (375W <sup>3</sup> )	300VA (300W <sup>3</sup> )
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<sup>1</sup> Accessory dimmers / accessory switches for Spacer do not require derating.

<sup>2</sup> Minimum load: 40W.

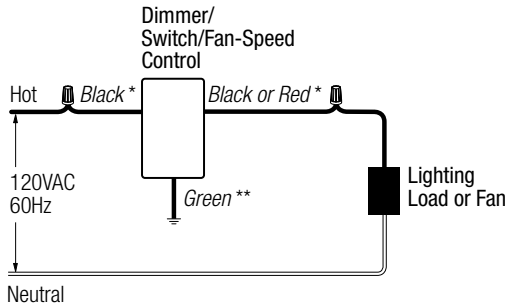
<sup>3</sup> Actual lamp wattage.

**WIRING DIAGRAMS**

**Wiring Diagram 1  
Single-Pole Wiring**

**Model #**

CA-1PSH-  
SP-600-  
SP-1000-  
SPLV-600-



Ground

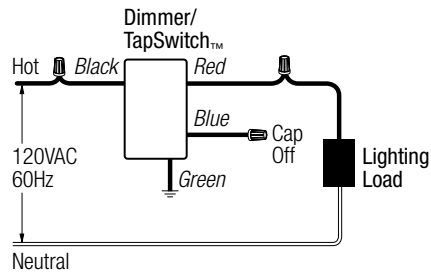
Wire Connectors

\* or Brass screw terminal  
\*\* or Green screw terminal

**Wiring Diagram 2  
Single-Location Wiring**

**Model #**

SP-600M-  
SP-1000M-  
SPLV-600M-



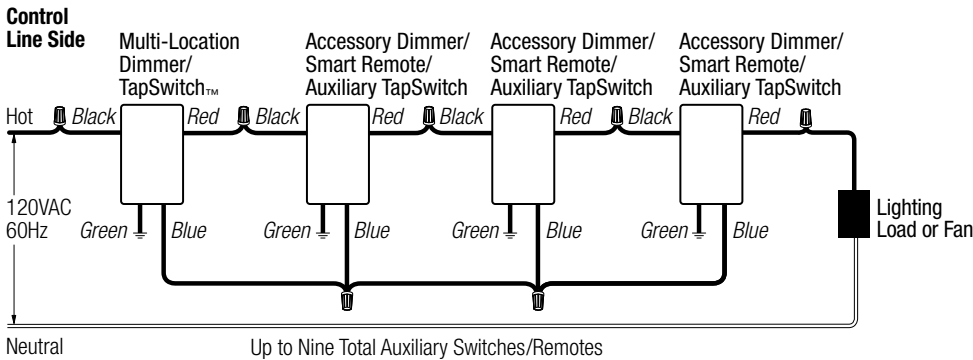
Ground

Wire Connectors

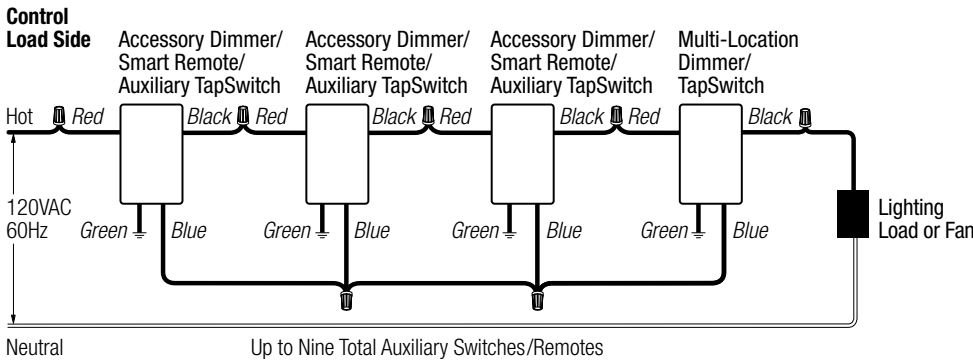
**Wiring Diagram 3  
Multi-Location Wiring**

**Model #**

AD-  
SP-600M-  
SP-1000M-  
SPLV-600M-



OR



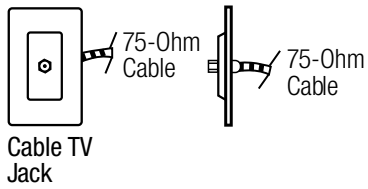
Ground

Wire Connectors

**WIRING DIAGRAMS**

**Wiring Diagram 4  
Cable TV Jack Wiring**

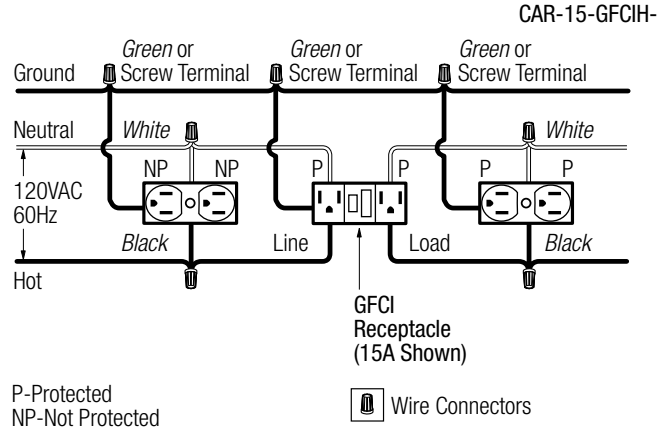
**Model #**



CA-CJH-

**Wiring Diagram 7  
GFCI Receptacle Wiring**

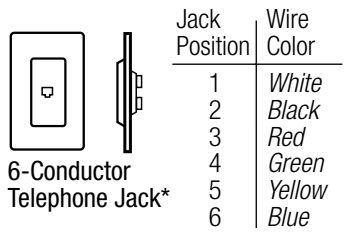
**Model #**



CAR-15-GFCIH-

**Wiring Diagram 5  
Telephone Jack Wiring**

**Model #**

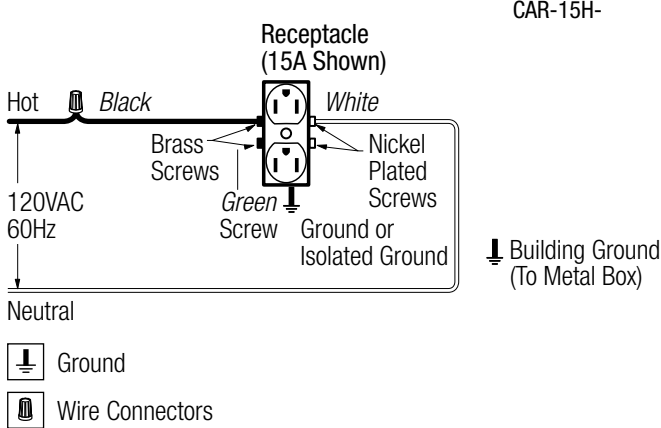


CA-PJH-

\*accepts most 4-conductor jacks.

**Wiring Diagram 6  
Receptacle Wiring**

**Model #**



CAR-15H-

## SPACER CONTROLS AND ACCESSORIES

### PART 1 – GENERAL

#### 1.01 SUMMARY

- A. Scope: Provide, install and test all switches, dimmers and related devices as specified herein for the areas indicated on the drawings, specifications, and load schedules.
- B. Related Sections: Section 16580 (Ballasts), Section 16570 (Dimming Systems).

#### 1.02 REFERENCES

- A. UL 20, UL 1472, CSA, NOM, ISO 9001

#### 1.03 SYSTEM DESCRIPTION AND OPERATION

- A. Permanently installed, wallbox mounted switches and dimmers
- B. Permanently installed, wallbox mounted fan-speed controls
- C. Permanently installed, wallbox mounted receptacles
- D. Permanently installed, wallbox mounted data, voice and cable jacks
- E. Screwless, seamless wallplates

#### 1.04 SUBMITTALS

- A. Submit manufacturer's standard catalog data giving all application, wiring, and installation information on basic components and wallplate kits. Provide test data and/or samples as required to demonstrate conformance with PART 2 of this specification.

#### 1.05 QUALITY ASSURANCE

- A. Manufacturer shall have a minimum of 10 years continuous experience in manufacturing wallbox dimming products.
- B. Dimmers, switches and Fan-speed controls shall be UL listed, CSA and NOM approved specifically for each required load (i.e., tungsten, electronic low-voltage transformer, magnetic low-voltage transformer, and fluorescent). Manufacturer shall provide file card or certificate upon request. Universal load-type dimmers shall not be acceptable.
- C. Manufacturer shall maintain ISO 9001 certification and provide a copy of the certificate upon request.

#### 1.06 WARRANTY

- A. All devices shall be covered by a minimum one-year warranty.

### PART 2 – EQUIPMENT

#### 2.01 ACCEPTABLE MANUFACTURERS

- A. Lutron Electronics Co., Inc.
- B. Unless otherwise noted, all basic components (dimmer, fan-speed control, switch, receptacle, telephone jack and cable TV jack) and wallplate kits shall be provided by one manufacturer.

#### 2.02 EQUIPMENT

- A. Controls Lutron Spacer Style
  - 1. Performance
    - a. Dimmers shall provide full-range, continuously variable control of light intensity.
    - b. Wall controls shall fit a decorator wallplate opening with a flush tap switch. Dimmers and accessory dimmers shall have a small, raised rocker to the right of the tap switch. Dimmers shall have an infrared receiver built into the tap switch. Tap switches shall remain flush in both the on and off state. Controls shall have a gloss finish.

- c. A single tap of the tap switch shall raise lights from off to the preset light level, or fade light to off. The raise/fade rate shall travel the dimming range in 3 seconds. A rapid double tap of the tap switch shall raise lights to full-on in 1.5 seconds. Pressing and holding the tap switch for 3 seconds shall cause the lights to slowly fade to off over 10 seconds.
- d. The rocker on dimmers and accessory dimmers shall raise and lower the light level; this new light level becomes the preset. The rocker shall be able to raise the lights from off to low end and up, and shall lower the lights to low-end, not to off.
- e. An actuator accessible from the front of the unit, with the wallplate attached, shall activate a mechanical air-gap switch disconnecting power from the load during "safety off" condition; no leakage current shall be present at the fixture(s). This front accessible safety switch (FASS<sub>m</sub>) shall be separate from the tap switch and raise/lower rocker.
- f. All actuators shall be captured internally to the control.
- g. Dimmer shall be capable of on/off, raise/lower and mechanical air-gap "safety off" from up to 9 additional locations using aesthetically coordinated accessory dimmers.
- h. Within rated capacity, dimmers shall be available for direct control of incandescent and magnetic low-voltage.
- i. Controls shall be capable of operating at the rated capacity; this includes modified capacities for ganging configurations which require the removal of fins. Operation at rated capacity shall be possible across the full ambient temperature range, without shortening design lifetime.
- j. Color variation of any gloss finish control shall not exceed a change in E of 1, CIE L\*a\*b\* color units.
- k. Controls shall meet the applicable requirements of UL 20 and UL 1472 referring to the inclusion of a visible, accessible air-gap off switch and the limited short circuit test.
- l. Controls shall meet ANSI/IEEE Std. C62.41-1980, tested to withstand voltage surges of up to 6000V and current surges of up to 200A without damage.
- m. Dimmers shall be designed to reduce interference with radio, audio, and video equipment.
- n. Controls shall incorporate power-failure memory. Should power be interrupted and subsequently returned, the lights or fans will come back on to the same levels set prior to the power interruption. Restoration to some other default level is not acceptable.
- o. Controls shall not be susceptible to damage or loss of memory due to static discharge.
- p. All dimmers shall be designed to minimize effects of changing line frequency.
- q. Controls shall operate in an ambient temperature range of 0°C (32°F) to 40°C (104°F).
- r. Accessory dimmers shall wire using conventional 3-way and 4-way wire runs.
- s. Contractors shall install all backboxes with a minimum wallbox depth of 2.5 inches.

2. Incandescent Dimmers
  - a. Provide incandescent dimmers for direct control of up to 1000 watts.
  - b. Dimmers shall have a high-end of no less than 95% of line voltage.
  - c. Dimmer shall be capable of operating in either 3-way switch location.
3. Magnetic Low-Voltage (MLV) Transformer Dimmers
  - a. Provide MLV dimmers for direct control of up to 600VA of magnetic low-voltage load.
  - b. Dimmers shall contain circuitry specifically designed to control and provide a symmetrical AC waveform to the input of magnetic low-voltage transformers per UL1472 section 5.11.
  - c. Dimmers shall not cause a magnetic low-voltage transformer to operate above the transformers rated operating current or temperature.
  - d. Dimmers shall have a high-end of no less than 95% of line voltage.
  - e. Dimmer shall be capable of operating in either 3-way switch location.
4. Remote dimming modules for high power loads
  - a. Where lighting loads exceed the full rated capacity of single dimmers, provide a Spacer incandescent dimmer driving high power modules. High power module and dimmer shall be from the same manufacturer to ensure compatibility.
  - b. High power modules shall be remotely mounted.
  - c. High power module shall be rated and UL listed for control of incandescent, magnetic low-voltage, electronic low-voltage, fluorescent, and neon/cold cathode loads in increments of 2,000 Watts up to 30,000 Watts.
5. Accessory Dimmers
  - a. Accessory Dimmers shall provide multi-location control and mechanical air-gap switch. All tap switch and rocker functions shall operate from each Accessory Dimmer. Up to 9 Accessory Dimmers may be used with a Spacer dimmer
  - b. Accessory Dimmers shall not have an infrared receiver.
6. Infrared Transmitters
  - a. Infrared hand-held remote controls shall be capable of activating the dimmer from up to 30 feet line of sight.
  - b. A hand-held transmitter shall provide a tap switch and raise/lower rocker. All tap switch and rocker functions shall operate from the hand-held transmitter.

#### 2.03 SOURCE QUALITY CONTROL

- A. All dimming controls shall be 100% function tested at the time of manufacture. Statistical sampling plan shall not be acceptable.

## PART 3 – EXECUTION

### 3.01 INSTALLATION

- A. Contractor shall furnish all devices (dimmers, accessories, & wallplate kits), labor and other services necessary for the proper installation of the devices as indicated on the drawings and specified herein.
- B. Contractor shall be responsible for derating dimmer capacity if side sections are removed.
- C. Contractor shall run separate neutral wires in 120/208 VAC installations.
- D. Devices shall be installed utilizing manufacturer's recommended application, wiring and installation instructions.
- E. Contractor to provide seamless wallplate covers per specification 2.02 for all devices ganged in a common box. Contractor shall provide barriers within the box where required by code.

### 3.02 FIELD QUALITY CONTROL

- A. Twenty-four hours a day, seven days a week, global customer service and technical hotline available.
- B. Supplemental information shall be provided by manufacturer's Internet site.