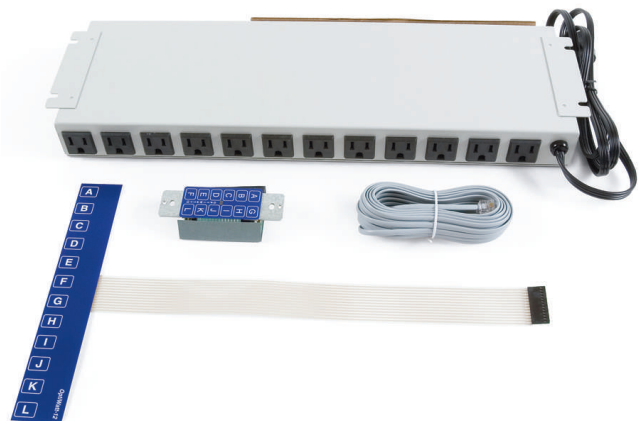




## OPTIWATT FACT SHEET

Each Grounded Main Controller is connected to a duplex receptacle by a three prong plug. The maximum load this controller will draw is 600 watts. The controller in turn has 12 circuits. Each circuit is limited to 600 watts and only one of the 12 circuits can be active at any one time. If the 600 watt limit is exceeded it will blow a small inexpensive fuse in the controller. (*Fuse AGC7.*)

The website [www.optiwatt.com](http://www.optiwatt.com) has very concise pictures of the product and how it works on the home page and under the "How it works" tab.



Following is a guide to the use and placement in a typical lighting showroom.

### Ceiling Grids

A typical grid would be 15 feet in length and 6 -7 feet wide. Suspended approximately 9 feet from the floor. Width is limited by the need to keep everything within an arms length from the side of the grid. The ability to change display fixtures and ease of access is key.

A single duplex receptacle installed fairly centrally on top of this grid on a 15 amp circuit will provide the power required. One or two controllers will lay flat on top of the grid plugged into the receptacle. If this free-standing grid is near a column or wall, the keypad can be mounted in a standard box on the wall or column. If nothing is nearby, a small column or raceway is required to bring the wire from the controller to the keypad.

### Island

Typically combines a ceiling grid with columns or a wall between the grid and the floor. Again a typical size may be 15 feet by 6 -7 feet. The top of the grid would again require a single duplex receptacle (max. two controllers).

Near the base of the columns or wall, 2 to 4 duplex receptacles are required to power portable lamps. These 2 to 4 receptacles can be on one 15 amp circuit. These columns or walls may also have a couple of octagon boxes for wall sconces. These should be wired back with a plug end into the Optiwatt controller. Also a data outlet is required to bring the wire from the controller to the keypad. The keypad can be mounted in a variety of places including a small podium.

Two controllers allows two keypads which can then be placed strategically so that customers and staff do not have to move as far between the fixture they are viewing and the keypad.

### Walls

Often the wall-mounted lights will be in 4-foot sections with hinged wall panels that allow rear access. Each 8-foot section of wall display will require a duplex receptacle. Two of these duplex receptacles would be on a 15 amp circuit. One controller will be mounted to the wall behind the hinged doors for each receptacle. The ribbon keypads work well for this application. The controller needs to be installed so the ribbon key pad is at a proper working height for ease of use. A narrow slit cut in the panel allows for a clean-looking installation of the ribbon keypad. Ribbon is 14 inches long.

### Beams

Often a showroom will have suspended beams for larger fixtures that require additional height. When possible they should be fed power from the Optiwatt controller on an adjacent grid or wall. When the beam placement makes this impractical, the beam will need its own receptacle and be connected to a convenient wall switch.



### Bulkheads

Typically you will have a number of defined areas for flush-mount and semi-flush fixtures. These will generally have individual ceiling boxes. The boxes should be wired directly to the Optiwatt controller. Typically 2 fixtures to each of the 12 circuits. *(A tip is to keep one of the 12 circuits as full off... no fixtures on that circuit).*

### Lighting Lab

Most modern showrooms incorporate some form of lighting lab that allows for a variety of recessed and other lighting fixtures and lamps to be effectively demonstrated. These various lighting effects can be very effectively demonstrated with Optiwatt, again lowering the electrical build-out costs. Each "look" can be hard wired back to the Optiwatt controller. For example each keypad letter can control a unique 4- fixture grid to show the effects of various recessed cans, trims, and lamp choices. Letter "L" can be left blank to have a full OFF so that other lighting lab choices can be demonstrated.

Estimated Savings Calculation – New Showroom  
Assumptions: 6,000 - 7,000 square foot showroom,  
electrical costs of \$0 .10 per khr.

Electrical Distribution	\$35,000
Air Conditioning Units	\$10,000
Electrical Consumption	\$30,000

Based on \$500 per month over 5 years

### Electrical Distribution

The electrical engineer and the electrician need to size the distribution system to maximum load. The load calculation for a lighting showroom must assume that every light will be turned on at its rated wattage. The number of 15 or 20 amp circuits required in the showroom are reduced 50% to 75% using Optiwatt.

The engineer, designer and electrician need the technical information to properly calculate the actual load when Optiwatt is being used. It dramatically reduces the electrical labour and material component costs of building or renovating a showroom. On a recent installation, using hard quoted numbers with and without Optiwatt, the savings were just over \$35,000.00 for a 7,000 sq foot showroom.

### Air Conditioning Sizing

Each 100 watts of incandescent lighting produces 341 BTU per hour of heat load. The cooling load created by a showroom can be tremendous. Again in hard numbers the savings on the cooling units for a 7,000 sq. foot showroom were approx. \$10,000.00. ( Reduced roof top units by a total of 10 ton at about \$1,000 per ton installed).

### Electrical Consumption

As the day progresses, both staff and customers will turn on many more lights in the showroom than they turn off. It is a fairly safe bet that at least one half of the fixtures will be on for most of the day. Depending on local utility costs and how much under lamping or CFLs are used the savings appear to be \$ 350.00 to \$ 600.00 per month. Based on actual electrical bills from Canadian showrooms.

### Fixture Hanging Tips

- Sales tags need marked with the letter that they are controlled by on the keypad.
- Use permanent marker to label the Optiwatt controller with "A" through "L" above each of the 12 plugs.
- Mark each "pig tail" near the bare end with the letter of it's Optiwatt plug letter. This helps you know what goes where as you merchandise , both initially and for years to come.
- Be aware and careful to limit what is on each circuit to 600 watts. The fuses are inexpensive but blowing a fuse is not necessary if you pay attention and label.
- Fuse is a AGC7. A small fuse available at any electrical wholesaler, etc.
- When possible leave one circuit (perhaps "L") without a fixture wired to it. This gives you a full OFF for that grid, area, etc.
- Many circuits can have two or more fixtures wired to one Optiwatt circuit (count the sockets and wattage). Either join pigtailed, use splitters or small power bars.
- For lighting labs. The effects you are trying to show need to be thought through with wiring matching the effect. i.e. Perhaps "A" needs to control a four-light recessed grouping. Perhaps a high-end trim grouping needs to be on a different Optiwatt controller than the economical trim grouping so that the two effects can be shown side by side (both ON).

A Unique Selective Switching System for the  
Lighting Showroom of Today!

www.optiwatt.com  
1.866.870-1292