

iW CAST 14 POWERCORE

INSTALLATION GUIDE



An INTELLIWHITE™ Product

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iW Cast 14 Powercore
ITEM# 501-000002-00, (White)
501-000002-01, (Black)
501-000002-02, (Aluminum)

This product is protected by one or more of the following patents: U.S. Patent Nos. 6,016,038, 6,150,774 and other patents listed at <http://colorkinetics.com/patents/>. Other patents pending.

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Specifications subject to change without notice.

GETTING STARTED

Color Kinetics® iW™ Cast 14 Powercore offers indoor/outdoor controllable white light wall washing, up to 15 feet, and large alcove lighting in a compact linear housing. Its patented Powercore™ technology makes it easy to install.

This guide contains important information on planning, installing, and operating your new iW Cast 14 Powercore. For your protection, read it carefully and save it for future reference.

INCLUDED IN THIS BOX

- 1 iW Cast 14 Powercore fixture
- Installation Guide
- Warranty and Registration cards

ADDITIONAL ITEMS NEEDED

- Color Kinetics iW Data Enabler (ITEM# 506-000003-06)
- Color Kinetics iW Scene Controller (ITEM# 503-000001-00/02)
- ColorCast 14 Leader Cable with terminator (ITEM# 108-000017-00 US or 108-000017-01 EU)
- #10 mounting screws (M5) and tools

OPTIONAL ITEMS NEEDED

- ColorCast 14 Jumper Cables (ITEM# 108-000016-00/01)
- 3/16" OD braided safety cable and hardware as required.

SCOPE OF THIS USER GUIDE

The goal of this user guide is to explain in an easily understandable language the necessary steps to install iW Cast 14 Powercore and assure peak performance. Its intended use is for reference only, by persons who are fully qualified. This document should never be considered a substitute for any provision of a regulation or state and/or local code.

IDENTIFICATION AND WARNINGS OF SAFETY HAZARDS

In accordance with ANSI Z535.4-2002 the following system of identifying the severity of the hazards associated with the products is used:

“DANGER” Imminently hazardous situation which, if not avoided, will result in death or serious injury.

“WARNING” Potentially hazardous situation that, if not avoided, could result in death or serious injury.

“CAUTION” Potentially hazardous situation that, if not avoided, may result in minor or moderate injury or property damage.

DANGER: Ensure that main power supply is off before installation or wiring, iW Cast 14 Powercore. Failure to adhere to these instructions will result in death or serious injury.

DANGER: iW Cast 14 Powercore must be installed by a qualified electrician in accordance with NEC and relevant local codes. Failure to comply will result in death, serious injury, or property damage.

WARNING: Do not install or use iW Cast 14 Powercore until you read and understand the installation instructions and safety labels. Failure to do so could result in serious injury or property damage.

WARNING: Do not use iW Cast 14 Powercore if the power cables are damaged. Doing so can result in death, serious injury, and property damage.

WARNING: As dictated by a Structural Engineer and/or local code, install safety cables to iW Cast 14 Powercore fixtures. Failure to do so can result in injuries or property damage.

WARNING: When using safety cables, ensure that they comply to the specifications given in this user guide. Failure to comply can result in injuries or property damage.

CAUTION: Use appropriate materials and mounting methods to support the fixture adequately. Failure to do so can result in property damage and void the warranty.

CAUTION: iW Cast 14 Powercore has no user serviceable parts. Do not attempt to open the fixture. Doing so will result in property damage and void the warranty.

CAUTION: Do not exceed the specified voltage and current input. Doing so will result in property damage and void the warranty.

CAUTION: Do not exceed the maximum number of specified fixtures in a light run. Doing so will result in current overload.

CAUTION: Do not use sharp tools near or on the fixture lens. Doing so will result in property damage and void the warranty.

CAUTION: Do not hot swap. Ensure that power to the fixture is off before connecting or disconnecting fixtures. Hot swapping will result in property damage and void the warranty.

CAUTION: iW Cast 14 Powercore is a Class 2 LED product with LED radiation. Do not stare into beam or view directly with optical instruments.

NOTE: The instructions and precautions set forth in this user guide are not necessarily all-inclusive, all conceivable, or relevant to all applications as Color Kinetics cannot anticipate all conceivable or unique situations.

OWNER/USER RESPONSIBILITIES

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate iW Cast 14 Powercore in such a manner as to comply with all state and local laws, ordinances, regulations, and the American National Standard Institute Safety Code.

PLAN THE INSTALLATION

The nature and complexity of iW Cast 14 Powercore installation requires in-depth planning to ensure timely, successful installation with minimal complications and down time.

PLANNING SUGGESTIONS

When planning iW Cast 14 Powercore installation, Color Kinetics suggests doing the following:

- Consult an Electrical Inspector to approve all wiring plans.
- Refer to local and state codes for installation compliance.
- Employ Color Kinetics Application Engineering Services.

INSTALLATION CONSIDERATIONS

When creating your installation plan, consider the following:

- Zones. iW Cast 14 Powercore fixtures are dimmable, color temperature adjustable fixtures that are controlled by zones. Using the iW Controller, you can set the brightness level and color temperature, from cool to warm, for all lights within a specified zone.

You create zones by internally designating each iW Data Enabler as a specific alphanumeric zone, 1-9 or A-F. All fixtures attached to that Data Enabler reside within the designated zone. For example, in an installation with two iW Data Enablers where the first Data Enabler is set to Zone 1 and the second is set to Zone 2, the lights attached to the first Data Enabler are in Zone 1 and the lights attached to the second Data Enabler are in Zone 2.

For installations where all lights are controlled in unison, set each iW Data Enabler in the installation to the same zone designator. For installations where groups of lights are controlled individually, set unique zone designators for each Data Enabler.

- Location of iW Data Enabler in relationship to lights. Each data enabler supports one Powercore product leader cable with up to 36 (120VAC) or 61 (240VAC) Powercore fixtures run in series, using a 50-foot, field-cutttable leader cable. The leader cable can be cut to a desired length. Shortening the leader cable increases the number of fixtures that the iW Data Enabler will support. The leader cable can be lengthened when the distance between the data enabler and the first fixture in the series is greater than 50 feet (15m). Lengthening the leader cable decreases the number of fixtures that the iW Data Enabler will support. A junction box will be required for the leader extension connections.

NOTE: Adhere to all state and local wiring codes when making the leader extension connections.

- Calculate the number of fixtures per iW Data Enabler. Use the *Configuration Calculator* located at www.colorkinetics.com/support to calculate the number of fixtures you can put on a data enabler. The fixtures to iW Data Enabler ratio is determined by the parameters of your installation. Installation parameters include all or part of the following: line voltage, fixture type, leader length, jumper lengths, and wire gauge.

- Location of the fixture and method of attaching. Mounting hardware is dictated by the mounting surface. Ensure that the hardware used is appropriate for the mounting surface.

- Install and wire the iW Data Enabler before installing iW Cast 14 Powercore fixtures. Refer to the iW Data Enabler Installation Guide.

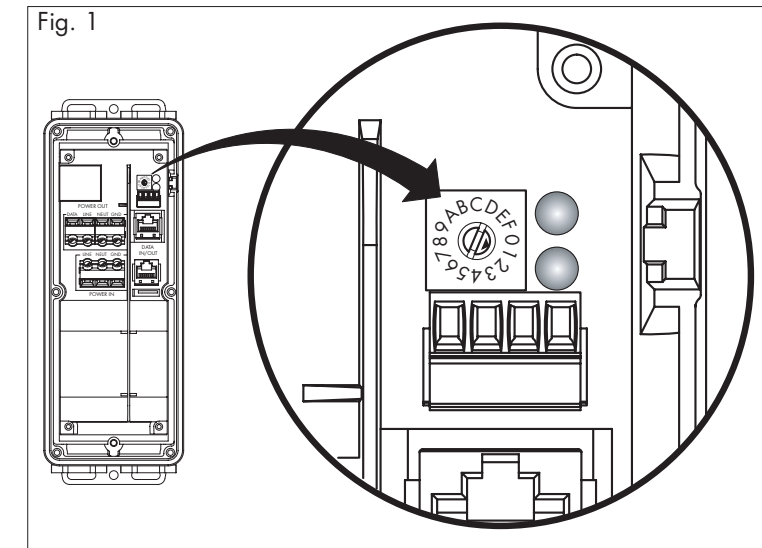
STEPS TO A SUCCESSFUL INSTALLATION

1. Set the zone(s) for the iW Data Enablers
2. Install the iW Data Enablers.
3. Install fixtures.
4. Install iW Controller.
5. Connect power and data from the iW Data Enabler to the fixtures.

SET THE iW DATA ENABLER ZONE

To minimize installation time and effort, set the zone for each iW Data Enabler prior to installing. Zones can be set or changed after installing the Data Enabler; however, any settings or changes made after power is engaged requires a power cycle to recognize the change.

Using a small, flat-head screw driver, set the zone for the iW Data Enabler by rotating the zone switch, located next to the LED indicators, to a specific designator—1 to 9 or A to F. The designator zero (0) is reserved for future features. See Fig. 1.



INSTALL THE iW DATA ENABLER

Determine a location for the iW Data Enabler. One iW Data Enabler can support as many as 36 (120VAC) to 61 (240VAC) iW Cast 14 fixtures in a single zone. Use the *Configuration Calculator* located at www.colorkinetics.com/support to determine the exact number of allowed fixtures per iW Data Enabler for your application. Multiple iW Data Enablers are needed for installation that require multiple zones or that exceed the calculated number of fixtures allowed in a single zone.

Things to remember:

- Install the iW Data Enabler according to state and local codes.
- Consult a Electrical Inspector to approve all wiring plans.

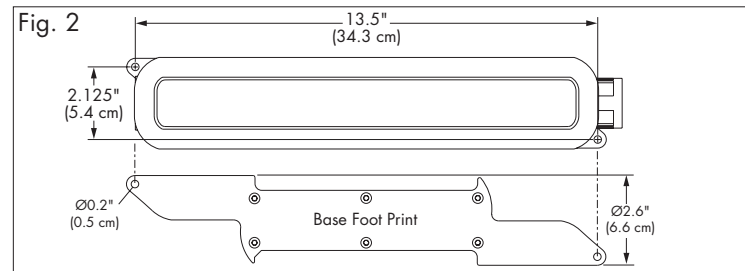
Refer to the iW Data Enabler Installation Guide for complete installation, wiring and zone setting instructions. After running power and data to the iW Data Enabler and setting the zone, you are ready to attach the iW Cast 14 Powercore fixtures.

DANGER: Ensure that the power source is off before wiring the Data Enabler or connecting fixtures. Failure to do so can result in serious injuries or death.

INSTALL THE FIXTURE

iW Cast 14 Powercore fixtures are installed in series. The in-line connectors provide an end-to-end fixture butt for the best visual effects. Jumper cables are available to add space between the fixtures when needed.

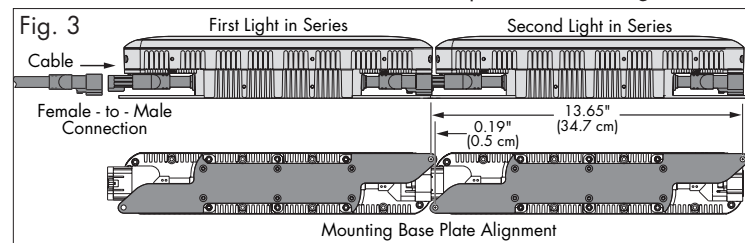
Mount fixtures by using the two mounting holes located on the base. Use hardware suitable for the mounting surface. See Fig. 2.



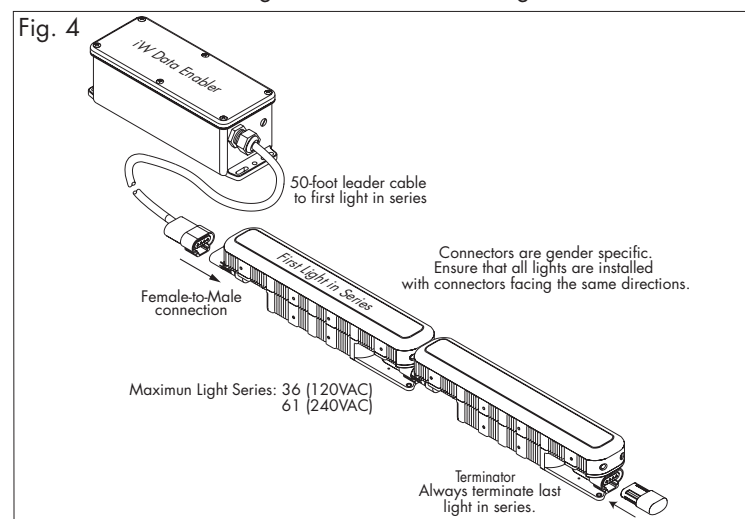
NOTE: The iW Cast 14 Powercore fixture can be used as a template when pre-drilled pilot holes are required. Hold the fixture in place and mark the two screw holes.

1. Position the first fixture in a series and attach with two #10 mounting screws suitable for the mounting surface. Ensure that the male connector is in position to receive data and power from the leader cable. See Fig. 3.
2. Position the next fixture in the series, matching the male connector end to the female connector of the previously mounted fixture. Attach the fixture to the surface. See Fig. 3.

The flexible connector cables allow for up to 180° turning radius.



3. Continue mounting the fixtures, making power/data connections as you go, until all lights in the series are mounted.
4. Once all fixtures are mounted and connected, connect the leader cable from the iW Data Enabler to the first fixture in the series. Ensure power is off when making this connection.
5. Insert the terminator into the last fixture of each light series.
6. Repeat Steps 1 through 5 for each iW Data Enabler in the installation until all lights are installed. See Fig. 4.



CAUTION: Ensure terminator is inserted into last fixture of each series. Failure to do so can result in product failure and void the warranty.

INSTALL IW CONTROLLER

All lights connected to an iW Data Enabler reside in the zone designated on the data enabler. The iW Controller allows you to control all lights within specified zones. With the iW Controller you can adjust the temperature of the lights from warm to cool and set the brightness level for all lights within a zone.

After installing the iW Data Enablers and attaching lights, install the iW Controller. Simply plug one end of the 4-pin, 50-foot cable into the plug located on the back of the iW Controller, and the other end into the controller plug located next to the zone rotary switch located within the iW Data Enabler. The iW Controller fits into a standard single-gang wall box and must be located within 50 feet of the iW Data Enabler.

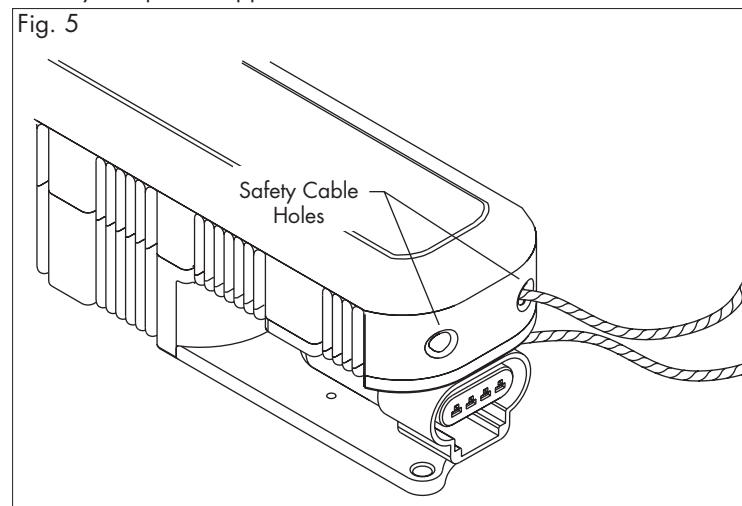
Refer to the iW Data Enabler and iW Controller Installation Guides for complete installation, wiring, and operation instructions.

ATTACH SAFETY CABLE

Each fixture is designed for use with a safety cable. When dictated by local or state code, or by a Structural Engineer, attach a safety cable from the fixture to the mounting surface.

1. Locate the four cable holes are designed into each fixture—two at each end of the fixture. See Fig. 5.
2. Thread a cable through one of the cable holes.
3. Attach the safety cable to the mounting surface.

For the proper mounting method of the safety cable to the installation surface, refer to a Structural Engineer or applicable standards for your specific application.



The safety cables used in the installation should meet the following minimal requirements:

- MATERIAL:** 316 Stainless Steel
- SIZE:** 5/64-inch (0.78-inch nominal diameter) or larger, minimum break load must be greater than 400 pounds. Maximum diameter is 3/16-inch.
- CONSTRUCTION:** 7 x 7 (49 wires) preformed stranded
- END TERMINATIONS:** Determined by installer and/or owner
- MOUNTING METHOD:** Determined by installer or owner

iW CAST 14 POWERCORE SPECIFICATIONS

COLOR TEMPERATURE	Approximately 3000 K to 6000 K
HOUSING	Die cast aluminum, powder coated
CONNECTORS	Over-molded, integral male/female connectors
LISTINGS	C-UL US, CE
COMMUNICATION SPECIFICATIONS	
SOURCE	Color Kinetics iW Data Enabler and iW Controller
ELECTRICAL SPECIFICATIONS	
INPUT	100-240VAC, 50-60 Hz
OUTPUT	100-240VAC, 50-60 Hz
POWER SUPPLY	Powercore™
ENVIRONMENTAL SPECIFICATIONS	
TEMPERATURE RANGE	-4°F to 122°F (-20°C to 50°C)
PROTECTION RATING	IP66 (Suitable for wet locations)

LED SOURCE LIFE

In traditional lamp sources, lifetime is defined as the point at which 50% of the lamps fail. This is also termed Mean Time Between Failure [MTBF]. LEDs are semiconductor devices and have a much longer MTBF than conventional sources. However, MTBF is not the only consideration in determining useful life. Color Kinetics uses the concept of useful light output for rating source lifetimes. Like traditional sources, LED output degrades over time (lumen depreciation) and this is the metric for SSL lifetime.

LED lumen depreciation is affected by numerous environmental conditions such as ambient temperature, humidity, and ventilation. Lumen depreciation is also affected by means of control, thermal management, current levels, and a host of other electrical design considerations. Color Kinetics systems are expertly engineered to optimize LED life when used under normal operating conditions. Lumen depreciation information is based on LED manufacturers' source life data as well as other third party testing. Low temperatures and controlled effects have a beneficial effect on lumen depreciation. Overall system lifetime could vary substantially based on usage and the environment in which the system is installed.

Temperature and effects will affect lifetime. Color Kinetics rates product lifetime using lumen depreciation to 70% of original light output. When the fixture is running on warm or cool, at room temperature, the LED lifetime is in the range 50,000 – 70,000 hours. This is LED manufacturers' test data. High output is defined as any LED device that is 1/2 watt or above. For more detailed information on source life, please see www.colorkinetics.com/lifetime.

WARRANTY

This product is sold pursuant to CK's Standard Terms and Conditions (the "T&Cs") which may be found at <http://colorkinetics.com/howtobuy/buy/terms> and which contain important provisions, including, among others, Limited Warranty, exclusions and limitations on CK's liability for damages, and restrictions on the remedies that are available to you.