

iCOLOR ACCENT

INSTALLATION GUIDE



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iColor Accent
ITEM# 101-000008-00, (1-foot)
101-000008-01, (4-foot)
101-000008-02, (8-foot)
101-000008-03, (1-foot, Clear Lens)
101-000008-04, (4-foot, Clear Lens)
101-000008-05, (8-foot, Clear Lens)

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.



SCOPE OF THIS USER GUIDE

The goal of this user guide is to explain in an easily understood language the necessary steps to install iColor Accent 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, iColor Accent and PDS-500e power/data supply. Failure to adhere to these instructions will result in death or serious injury.

DANGER: iColor Accent and PDS-500e power/data supply 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 attempt to install or use iColor Accent or PDS-500e until you read and understand the installation instructions, and safety labels. Failure to adhere to these instructions could result in serious injury or property damage.

WARNING: Do not use iColor Accent 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 iColor Accent 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: Do not attempt to remove the rubber purge ports located on the end caps of the fixtures. Doing so will result in property damage and void the warranty.

CAUTION: iColor Accent has no serviceable parts. Do not attempt to open the fixture. Doing so will result in property damage and void the warranty.

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 supply is off before connecting or disconnecting fixtures. Hot swapping will result in property damage and void the warranty.

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 iColor Accent 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 iColor Accent installation requires in-depth planning to ensure timely, successful installation with minimal complications and down time.

PLANNING SUGGESTIONS

When planning iColor Accent installation, Color Kinetics suggests doing the following:

- Consult a Structural Engineer to design an installation scheme that is safe and viable.
- Consult an Electrical Inspector to approve all wiring plans.
- Refer to local and state codes for installation compliance.
- Create a Layout Plan drawing, per Lighting Designer and Structural Engineer.
- Create a Mapping Grid. Use this grid to record serial numbers for easy reference and addressing.
- Employ Color Kinetics Application Engineering Services.

INSTALLATION CONSIDERATIONS

When creating your installation plan, consider the following:

- Location of power/data supplies in relationship to lights. Each power/data supply supports two 50-foot leader cables, each with a 24-foot output light run. Therefore, the power/data supply must be located within 50 feet of the first fixture in a series.
- Location of fixture brackets and method of attaching. Mounting brackets can be installed using bolts suitable for the mounting surface or using studs.
- Orientation of fixture bracket. When installing the fixture bracket, ensure that the clamp screw is in an accessible position, and that access to the clamp screw is not blocked.
- Note the serial numbers and identify lights as you unpack the fixtures.
- Install and wire PDS-500e/PDS-500e-277 power/data supplies before installing iColor Accent fixtures. Refer to the PDS-500e/PDS-500e-277 Installation Guide.

STEPS TO A SUCCESSFUL INSTALLATION

1. Record serial numbers and identify fixtures as you unpack them. Note installation location on map.
2. Address the fixtures.
3. Install the power/data supplies.
4. Install fixture brackets and safety cables to mounting surface.
5. Attach fixtures to brackets.
6. Connect power and data.

RECORD SERIAL NUMBERS

1. As you unpack the fixtures record the serial numbers. Each foot of iColor Accent has its own processor, and each processor has a unique serial number programmed at the time of manufacture.
2. Write the serial numbers onto a Mapping Grid or use a bar code scanner and Color Kinetics Address Programmer software to record each serial number. Color Kinetics Address Programmer software and instruction are located at <http://support.colorkinetics.com>.
3. Using the Layout Plan, assign the fixture to a layout position in the installation.
4. Using a weatherproof label, identify the fixtures installation position. Place identifying label in an inconspicuous location.

ADDRESS THE FIXTURES

The iColor Accent fixtures are pre-addressed at the time of manufacture. The 1-foot fixtures are set to light number 1. The 4-foot fixtures are set in 1-foot increments to light numbers 1 through 4. The 8-foot fixtures are set in 1-foot increments to light numbers 1 through 8. Address each serial number with a new light number, as needed, using one of the follow methods.

ZAPI: Use Color Kinetics Zapi to reset the DMX address for each serial number. Refer to the Zapi User Guide for step-by-step addressing instructions.

SAS: When using a PC with iPlayer 2 or a PC with Smart Jack 3 to address the serial numbers, download the Serial Addressing Software and instructions from <http://support.colorkinetics.com>.

TO SET DMX ADDRESS:

1. With power disconnected, connect a single iColor Accent fixture or a series of fixtures to the PDS-500e/PDS-500e-277.
2. Attach the DMX interface (Zapi, iPlayer 2, or Smart Jack 3) to the DMX IN port on the PDS-500e/PDS-500e-277.
3. Connect power to the PDS-500e/PDS-500e-277.
4. Use Zapi or Serial Addressing Software (SAS) to set the light address for each serial number.
5. If addressing individual fixtures, disconnect power and then disconnect the addressed fixture. Repeat steps 1 through 5.

NOTE: Serial addressing gives you the option of addressing multiple fixtures through a single power supply or multiple power supplies. Refer to the Zapi User Guide or SAS Instruction Guide for details.

INSTALL THE PDS-500e POWER SUPPLIES

Following the Layout Plan, install the PDS-500e/PDS-500e-277 power/data supplies according to state and local codes. Refer to the PDS-500e/PDS-500e-277 Installation Guide for complete instructions.

Things to remember:

- Consult a Electrical Inspector to approve all wiring plans.
- PDS-500e/PDS-500e-277 must be located within 50-feet of the first light in the power/data supply series.

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

CAUTION: Never lengthen the power/data supply leader cable. Doing so will result in property damage and void warranty.

INSTALL THE FIXTURE BRACKETS

LAYOUT: Following an installation layout plan, measure and mark the location for the fixture brackets carefully. The bracket hardware allows for only 1/2-inch variance after mounting.

The fixture brackets are the path of the lights, therefore positioning is very important. Refer to Fig. 1 for dimensions.

ALIGNMENT: The fixture brackets feature V-grooved guides that allow you to align and center them with chalk and/or plumb lines. Fixtures can be installed on a horizontal, vertical, or diagonal surface to accommodate the lighting environment.

PLACEMENT: Refer to the Table 1 for fixture bracket positioning.

FIXTURE	QTY PER FIXTURE	TYPE	LOCATION ON FIXTURE
1-foot	1	double	center of fixture, + 1-inch
4-foot	3 (min)	single	from ends, max. 1-foot (30.48 cm), min. 1-7/8 inches (4.76 cm) center of fixture, + 1-inch (2.54 cm)
8-foot	4 (min)	single	from ends, max. 1-foot (30.48 cm), min. 1-7/8 inches (4.76 cm) approx. 2-feet apart (60.96 cm) off center

WARNING: Use no less than the minimum number of recommended mounting feet per fixture. Using fewer can cause fixture mounting to fail resulting in death or serious injury.

GETTING STARTED

Welcome to a more colorful world brought to you by Color Kinetics iColor Accent.

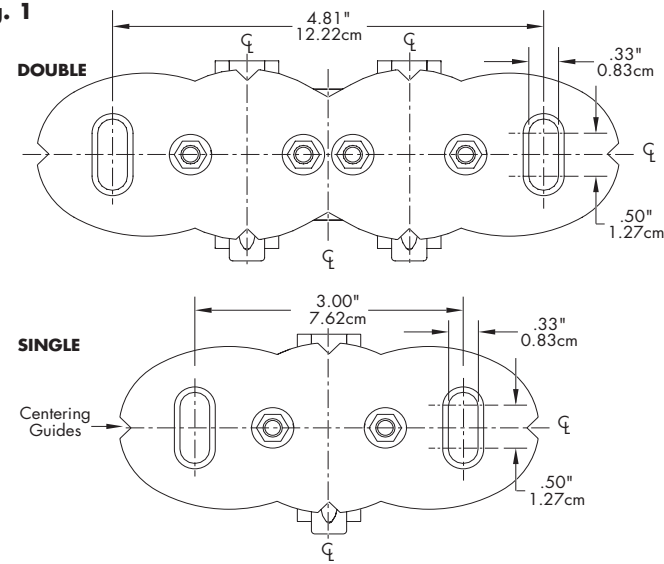
This guide contains important information on planning, installing, and operating your new iColor Accent. For your protection, read it carefully before embarking on your colorful adventure.

INCLUDED WITH EACH FIXTURE

- 1 double mounting bracket for each 1-foot fixture
- 3 single mounting brackets for each 4-foot fixture
- 4 single mounting brackets for each 8-foot fixture
- 1 safety cable bracket with 2 thread forming screws
- Installation Guide

ADDITIONAL ITEMS NEEDED

- Color Kinetics PDS-500e (ITEM #:109-000009-00) or PDS-500e-277 (ITEM #:109-000009-01) intelligent power supplies. One power/data supply is needed for every forty-eight feet of iColor Accent
- Color Kinetics iColor Accent 50-foot leader cable with terminator (ITEM #: 101-000008-03). Each power/data supply supports two leader cables.
- Special Tools: Torque wrench (Range: 13 lb·in (2.28 N·m) to 50 lb·in (8.75 N·m))
- Safety cables and mounting hardware (as dictated by a Structural Engineer and/or state or local codes)

Fig. 1

WARNING: Adhere to all torque specifications during installation. Failure to do so can result in mounting failure and result in death or serious injury.

INSTALLATION: There are two methods of attaching the fixture bracket to the installation surface – bolt and stud.

BOLT METHOD

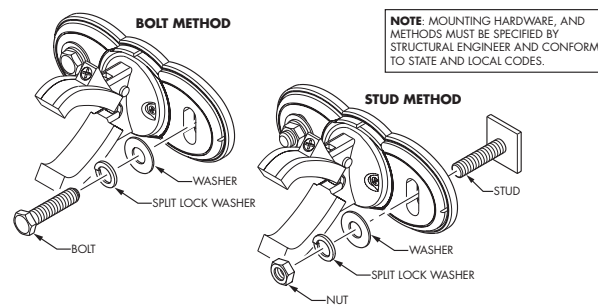
- Attach the fixture brackets to the installation surface using two 5/16-inch thread bolts, flat washers, and split lock washers. Tighten to 50 lb_f-in (8.75 N-mm) torque using a calibrated wrench. See Fig. 2 for details.

STUD METHOD

- Attach the fixture brackets to the pre-studded installation surface using two 5/16-inch thread bolts, flat washers, and split lock washers. Tighten to 50 lb_f-in (8.75 N-mm) torque using a calibrated wrench. See Fig. 2 for details.

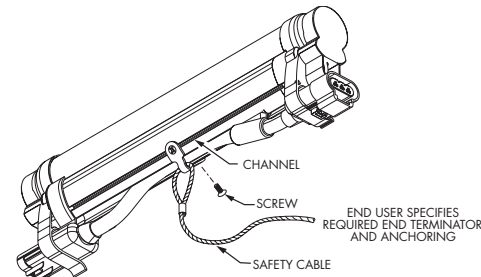
NOTE: The above mounting details are based on general mounting methods. The exact method of installing the fixture brackets, and hardware used, varies depending on the mounting surface material and local codes. It is the responsibility of the owner/Structural Engineer to determine the best mounting method for the fixture brackets.

ATTACHING SAFETY CABLE

Fig. 2

Each fixture comes with a safety cable bracket and two thread-forming screws. When dictated by local or state code, or by a Structural Engineer, attach a safety cable from the fixture to the mounting surface.

- Loop the safety cable over the cable bracket.
- Using the provided thread-forming screws, attach the cable bracket to the bottom of the fixture housing.
Center the bracket on the fixture housing and insert the screws into the channels. See Fig. 3 for details.
- Tighten screws to 13 lb_f-in (2.28 N-mm) torque using a calibrated wrench.

Fig. 3

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 1/4-inch (0.25-inch diameter).

CONSTRUCTION: 7 x 7 (49 wires) performed stranded

END TERMINATIONS: Determined by installer and/or owner

MOUNTING METHOD: Determined by installer or owner

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

ATTACHING FIXTURES

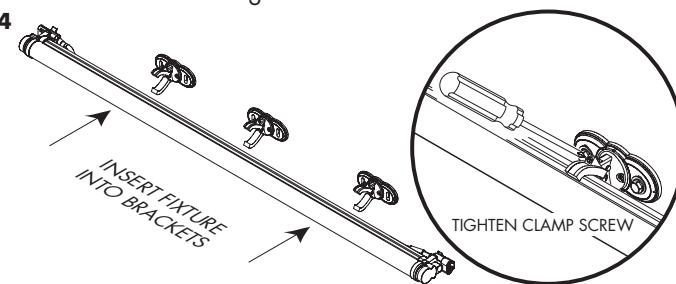
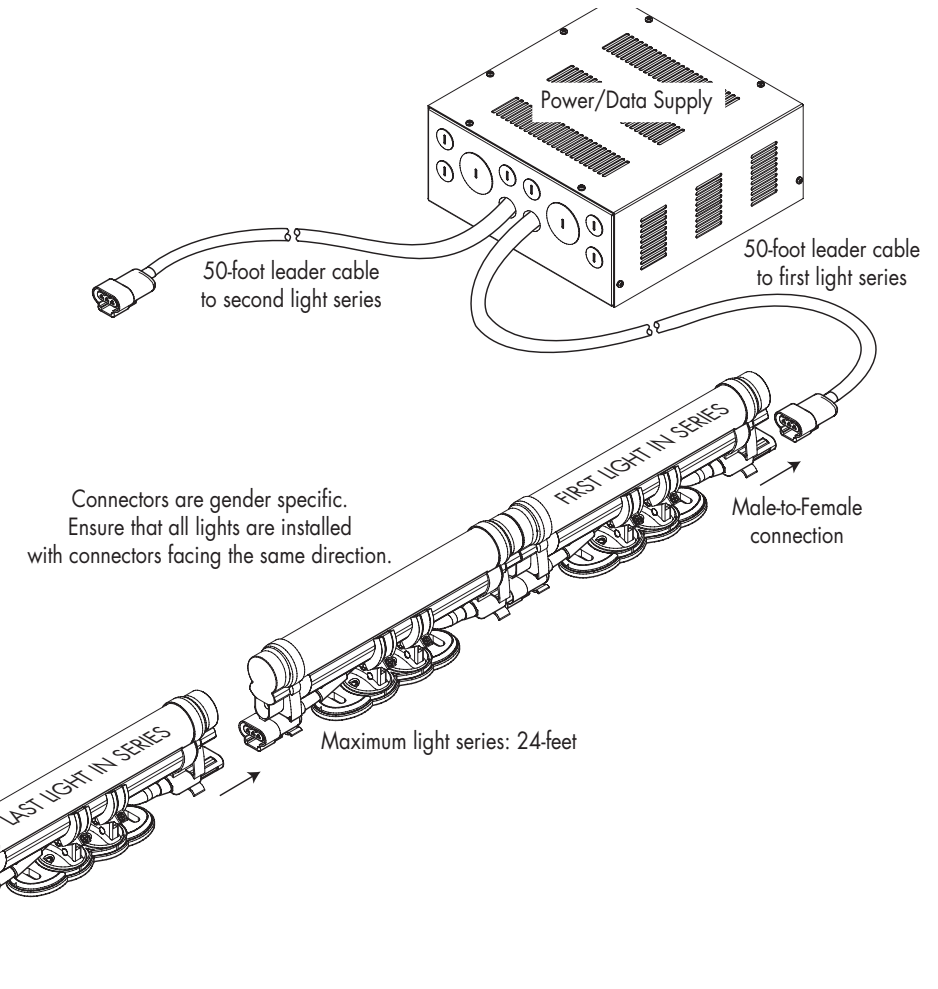
After power/data is run, fixture brackets mounted, and the safety cables attached to fixtures, you are ready to attach the iColor Accent fixtures.

Refer to your layout drawing and attach fixtures to the mounting brackets beginning with the first fixture in a power/data supply series. Make power connections as you go.

- Position the first fixture in a series into the mounting bracket with the male connector matched to the female power/data supply lead connector. Beginning at the male connector end of the fixture, serial numbers increment low to high.
- Tighten clamp screw loosely. Clamps should be tight enough to hold fixture in place, yet loose enough to allow connection and alignment movement.
- Make the power/data connection.
- Tighten the clamp screw to 15 lb_f-in (2.63 N-mm) torque using a calibrated wrench.
- Position the next fixture in the series, matching the male connector end to the female connector of the previously mounted fixture.
- Tighten loosely as in Step 2.
- Connect power/data to the previously attached fixture, then tighten clamp screw to 15 lb_f-in (2.63 N-mm) torque using a calibrated wrench.
- Repeat Steps 5 and 7 until all fixtures for the power/data supply are attached and connected.
- Insert the terminator into the last fixture of each power/data supply series.

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

- Repeat Steps 1 through 8 for each power/data supply series in the installation. Refer to Fig. 5.

Fig. 4**Fig. 5**

iCOLOR ACCENT SPECIFICATIONS

COLOR RANGE	16.7 million (24bit) additive RGB colors; continuously variable intensity output range
SOURCE	High intensity, surface mount, colored LEDs +250°
VIEW ANGLE	Sealed polycarbonate, UV stabilized, with extruded aluminum support
HOUSING	Over-molded, integral male/female connectors
CONNECTORS	UL, CE, IP66
LISTINGS	

COMMUNICATION SPECIFICATIONS

DATA INTERFACE Color Kinetics full line of controller products

ELECTRICAL SPECIFICATIONS

REQUIREMENT	24VDC
CONSUMPTION	Maximum: 7.2W (1-foot), 28.8W (4-foot), 57.6W (8-foot)
POWER SUPPLY	PDS-500e intelligent power/data supply (ITEM# 109-000009-00) for 100V to 240V input PDS-500e-277 intelligent power/data supply (ITEM# 109-000009-01) for 277V input

ENVIRONMENTAL SPECIFICATIONS

TEMPERATURE RANGE	-20°F to 122°F (-29°C to 50°C)
PROTECTION RATING	IP66 (NEMA 4X) protected against dust and low pressure jets of water from all directions.

Temperature Monitoring

For protection from extreme temperatures, the iColor Accent has been designed with a temperature monitoring feature. If operating temperatures rise to an unsafe level, a compensation circuit is triggered and the iColor Accent operation is interrupted causing the lights to turn dull red.

To prevent additional power shut-downs, determine the cause of the overheating and correct the problem. Power-cycle the system to return to full intensity.

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 50% of original light output. When the fixture is running at room temperature using a color wash effect, the range of lifetime is in the range of 30,000-50,000 hours. This is LED manufacturers' test data. 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.