

COLORBURST 6

USER GUIDE



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CHROMACORE®
BY COLOR KINETICS

OPTIBIN®
BY COLOR KINETICS

ITEM# 116-000014-00 (White, Frosted)
116-000014-01 (Black, Frosted)
116-000014-02 (White, Clear)
116-000014-03 (Black, Clear)
Base: 116-000005-00 (White)
116-000005-01 (Black)

This product is protected by one or more of the following U.S. Patents and their foreign counterparts: 6,016,038, 6,150,774, 6,292,901, 6,340,868, 6,777,891, 6,788,011, 6,806,659, 6,969,954, and 6,975,079. Other patents pending.

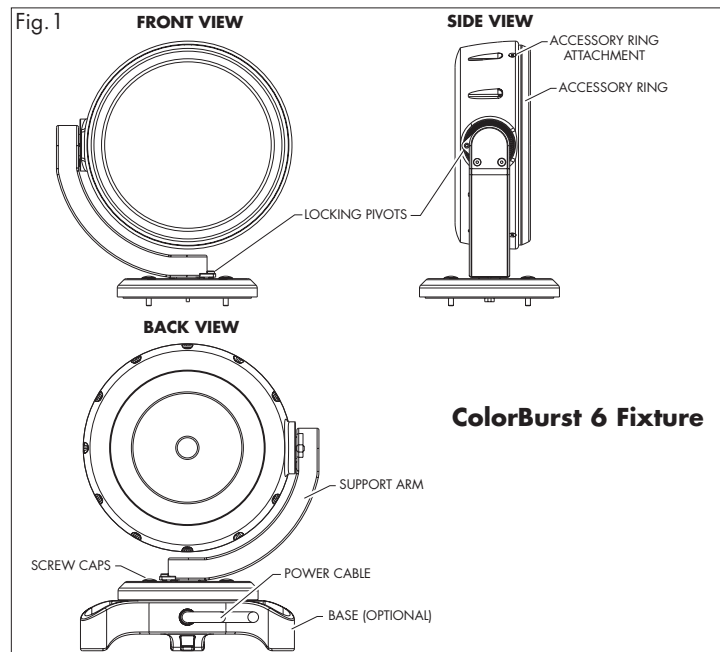
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INTRODUCTION

Welcome to a more colorful world brought to you by Color Kinetics. Chromacore®, our patented core technology, generates and controls millions of colors and a variety of lighting effects using a microprocessor to control LEDs. This User Guide contains important information about installing and operating your new ColorBurst® 6 fixture safely.



Included in This Box

- ColorBurst 6 with accessory attachment ring
- (1) Accessory attachment spring
- (4) Screws, Phillips, 8-32 standard with color matched screw caps for indoor junction box installations
- (4) Screws, Phillips pan head, 10-24, stainless steel, for outdoor junction box installations.
- (1) Gasket for outdoor junction box installations
- Hex key wrench
- User Guide

Additional Items Needed

- 4" Electrical junction box (rated for your application) with 3.5-inch center to center mounting, or ColorBurst base (Item# 116-000005) for indoor applications
- 18AWG, 3-conductor, stranded wire cable (when not using base)
- Wire nuts
- 24VDC power supply - PDS-150e (Item# 109-000008-01) or PDS-60 24V (Item # 109-000017-00/03)
- Controller - Color Kinetics DMX Controller or DMX compatible
- Color Kinetics Zapi (Item# 103-000005-00, US/103-000005-01, EU) or Serial Addressing Software (SAS)

Scope of This User Guide

The goal of this user guide is to explain in an easily understood language the necessary steps to install ColorBurst 6 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 provisions of a regulation or state and/or local code.

Identification and Warnings of Safety Hazards

In accordance with ANSI Z535.4 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 the main power supply is off before installing or wiring ColorBurst 6 and the power/data supply. Failure to adhere to these instructions will result in death or serious injury.

WARNING: ColorBurst 6 and the power/data supply must be installed by a qualified professional in accordance with NEC and relevant local codes. Failure to comply can result in death, serious injury, or property damage.

WARNING: Do not attempt to install or use ColorBurst 6 or the power/data supply 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 ColorBurst 6 if the power cables are damaged. Doing so can result in death, serious injury, and property damage.

CAUTION: ColorBurst 6 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 the 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 ColorBurst 6 in such a manner as to comply with all state and local laws, ordinances, regulations, and the American Standard Institution Safety Code.

PLANNING THE INSTALLATION

The nature of a ColorBurst 6 installation requires planning to ensure a timely, successful installation with minimal complications and down time.

Planning Suggestions

When planning ColorBurst 6 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.
- Create a Mapping Grid. Use this grid to record serial numbers for easy reference and addressing.
- Create a Layout Plan drawing, per Lighting Designer or Architect.
- Employ Color Kinetics' Application Engineering Services.
- Get detailed wiring diagrams and additional support from <http://support.colorkinetics.com>.

Installation Considerations

When creating your installation plan, consider the following:

- Location of power/data supply in relationship to lights.
 - The maximum accumulated cable length for all ColorBurst 6 fixtures connected to a single PDS-150e is 400 feet. The maximum single cable run between PDS-150e and ColorBurst 6 is 150 feet.
 - The maximum cable length for a ColorBurst 6 fixture connected to PDS-60 is 150 feet. Therefore, PDS-60 must be located within 150 feet of the furthest supported fixture.
- ColorBurst 6 can be installed with an optional base or with a customer-provided junction box.
- Location of fixture and method of mounting. ColorBurst 6 can be installed indoors or outdoors on walls, ceilings, or floors. Junction boxes and mounting methods vary according to location.

INSTALLING COLORBURST 6

Steps to a Successful Installation

1. Record serial numbers and identify fixtures as you unpack them.
2. Address the fixtures.
3. Install the power/data supplies.
4. Make electrical connections to the power/data supply.
5. Install ColorBurst 6 fixtures.

Recording Serial Numbers

1. As you unpack the fixtures record the serial numbers. Each ColorBurst 6 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 along with Color Kinetics Serial Addressing Software (SAS) to record each serial number. SAS and instructions are located at www.colorkinetics.com/support/downloads.
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 based on the Layout Plan. Place the identifying label in an inconspicuous location noting the order or placement in the installation. This step not only minimizes installation mistakes, but aids in post-installation light show programming.

Addressing the Lights

IMPORTANT: Before you begin the installation, consider the scope of your lighting application and installation. Your ColorBurst 6 is set to DMX address one (1) at the factory. If your application requires other addresses, set the DMX addresses before installing ColorBurst 6 using one of the following addressing tools:

ZAPI: Use Color Kinetics' Zapi to set the DMX address for each fixture or set all fixtures to the same DMX address. Refer to the Zapi User Guide for step-by-step addressing instructions.

SAS (SERIAL ADDRESSING SOFTWARE): Use a PC with iPlayer 2, or a PC with Smart Jack 3 to address the fixtures. Download SAS and instructions from www.colorkinetics.com/support/downloads.

NOTE: For applications using multiple, daisy-chained power supplies, you can address all lights in the chain by attaching Zapi to the first power supply in the series.

NOTE: Multi-power supply setups are ideal for pre- and post-installation. For post-installation addressing, record all serial numbers and layout positions prior to installation.

Setting Individual Addresses

Using the Serial Number mode of Zapi 1.5 or SAS, address each fixture attached to a power supply or a series of connected power supplies individually.

1. With power disconnected, connect up to six ColorBurst 6 to the power/data supply.
2. Attach the DMX interface (Zapi, iPlayer 2, or Smart Jack 3) to the DMX IN port on the power/data supply.
3. Connect power to the power/data supply.
4. Use Zapi or SAS to set the light address of each fixture.
5. Disconnect power and then disconnect the addressed ColorBurst 6 fixture(s).
6. Repeat steps 1 through 5 for all remaining fixtures.
7. After all fixtures are addressed, disconnect the DMX interface.

Setting the Same Address to Multiple Lights

Using Zapi 1.5, address all fixtures attached to a power supply or multiple, daisy-chained power supplies.

1. With power disconnected, connect up to six ColorBurst 6 fixtures to the power/data supply.
2. Attach the Zapi to the DMX IN port on the power/data supply.
3. Connect power to the power/data supply.
4. Use Zapi to set the light addresses. All ColorBurst 6 fixtures connected to the power/data supply are addressed simultaneously.
NOTE: If you are using SAS, you must input each serial number (address) separately.
5. Disconnect the DMX interface.

Installing the Power/Data Supply

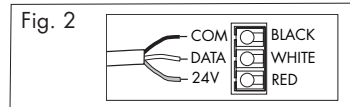
Following the Layout Plan, install the power/data supply according to state and local codes. Refer to the PDS-150e or PDS-60 24V Installation Guides for complete instructions.

Making Electrical Connections to the Power/Data Supply

After installing the power/data supply, make the electrical connections to it.

1. Pull the 3-conductor cable from the optional base or the 18 AWG, 3-conductor, stranded wire cable from the junction box to the power/data supply. When using the ColorBurst base, pull the base cable from the fixture location to the data/power supply.

- Pull the cable through the knock-outs in the side of the power/data supply.
- Wire the red, white, and black wires of each fixture to a provided connector, then snap connectors into the connector terminals located in the power/data supply. (See Fig. 2.)



Connecting Power

Follow the instructions in the PDS-150e or PDS-60 Installation Guide to connect from a 100 to 240VAC power source.

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

CAUTION: Do not overload the power/data supply. Doing so will result in property damage and void the warranty.

NOTE: Each ColorBurst 6 receives power directly from a power supply.

CAUTION: When not using the base, you must provide an 18 AWG, 3-conductor, stranded copper cable. Failure to provide the proper cabling can result in damage to the fixture and void the warranty.

Installing ColorBurst 6

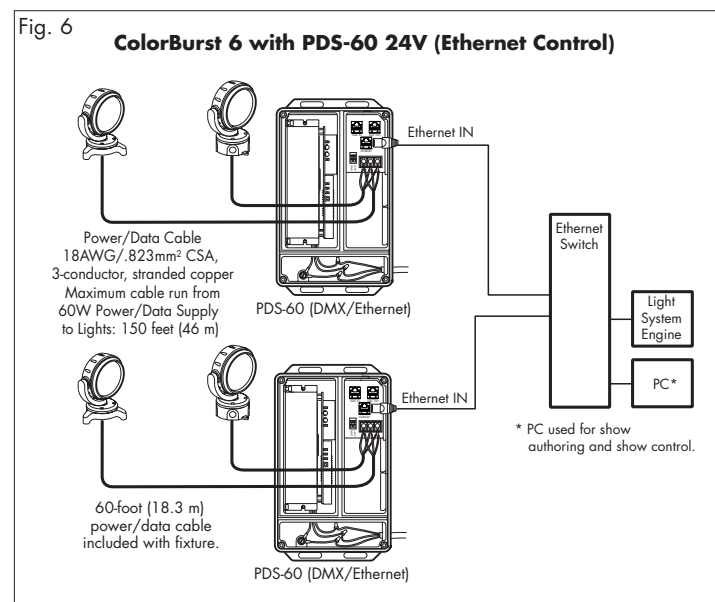
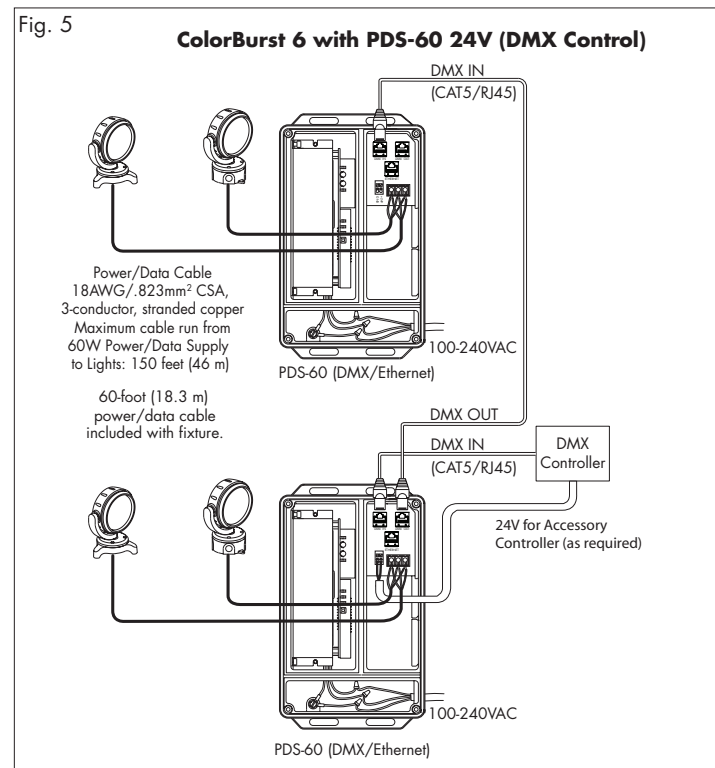
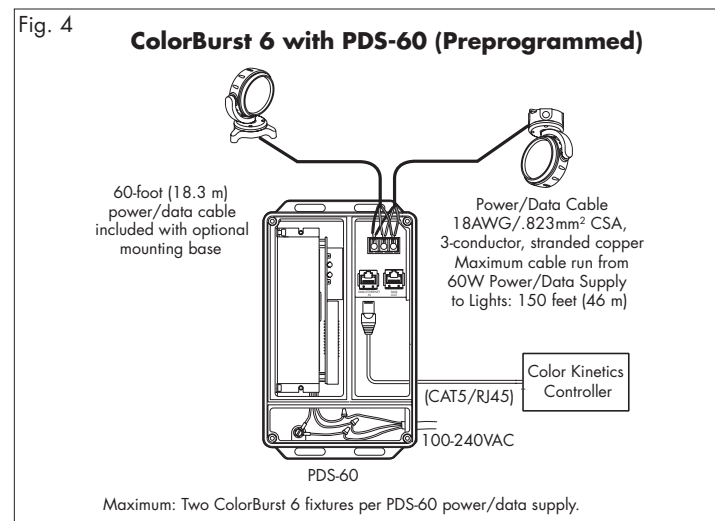
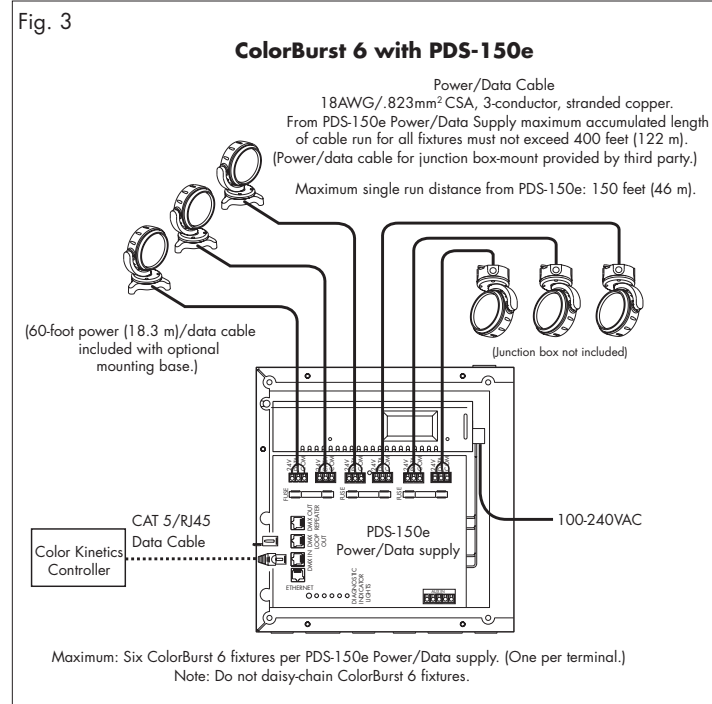
This fixture shall be installed by a qualified professional in accordance with NEC and relevant local codes for Class 2 power sources.

WARNING: Power must be off before installing ColorBurst 6.

ColorBurst 6 can be installed indoors or outdoors. Use an electrical junction box rated for your application for wall and ceiling mounts.

The ColorBurst 6 fixture can be connected using either the optional base or a junction box. For details on installing the fixtures with the optional base, see the ColorBurst Base Installation Guide.

Fig. 3 shows the ColorBurst fixtures connected to the PDS-150e. Fig. 4 shows fixtures connected to the PDS-60 with Preprogrammed control. Fig. 5 shows fixtures connected to the PDS-60 24V with DMX control. Fig. 6 shows fixtures connected to the PDS-60 24V with Ethernet control.



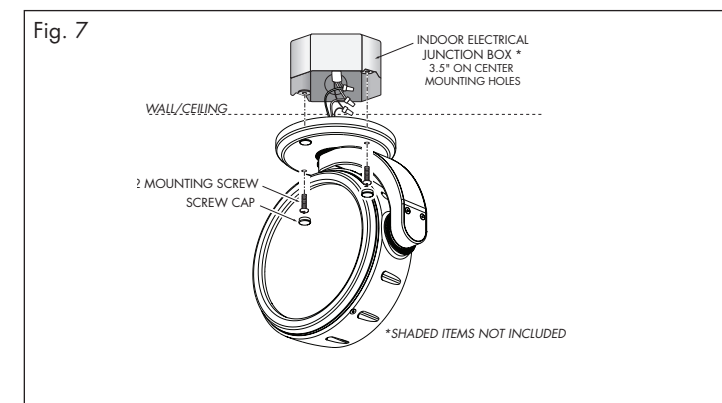
Connecting the Fixtures using a Junction Box

After pulling the 3-conductor, stranded wire cable from the power/data supply to the indoor rated junction box, connect wire leads from the fixture to the junction box using medium wire nuts. Connect the red wire to the +24VDC, white wire to Data, and black wire to Common.

NOTE: The fixture wire leads are 6-inches long and can be trimmed as necessary. The color connections must correspond to color connections on the power/data supply.

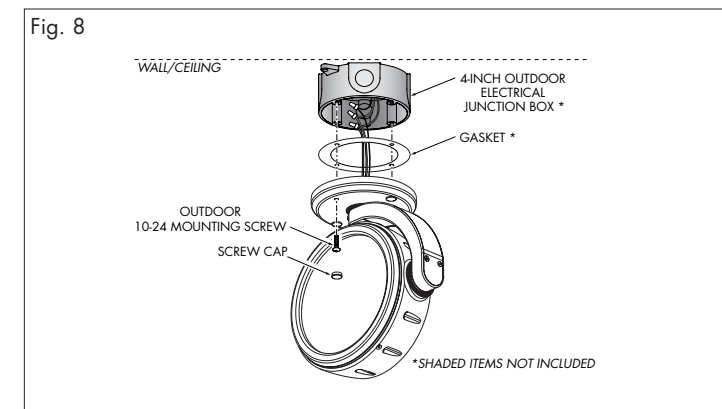
Indoor: Junction Box Mount

- After wiring the fixtures, neatly tuck the conductors into the junction box.
- Insert two fastening screws included with ColorBurst 6 through the holes in the canopy assembly, then through the mounting holes in junction box, and tighten. (See Fig. 7.)
- Cover screw heads and open canopy holes with screw caps.



Outdoor: Junction Box Mount

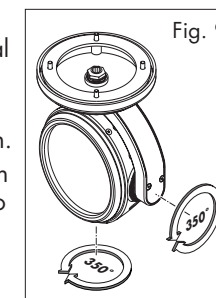
- After wiring the fixtures, neatly tuck the conductors into the junction box.
- Insert four fastening screws through the holes in the canopy assembly, then through gasket, into the mounting holes in junction box, and tighten. (See Fig. 8.)
- Cover screw heads with screw caps.



AIMING THE FIXTURE

Positioning ColorBurst 6 is simple with the dual swivel, aim-and-lock feature. (See Fig. 9.)

- After installing and energizing the light, rotate the fixture arm to the desired position.
- Using the provided Hex key wrench, tighten the locking set screw located on the base to lock the arm in place.



- Rotate the fixture and lock it into place by tightening the set screw located on the arm.

NOTE: Each swivel provides a 350° turning radius with hard stops to prevent over rotation.

CAUTION: Do not force hard stops to over rotate. Doing so will damage the fixture and void the warranty.

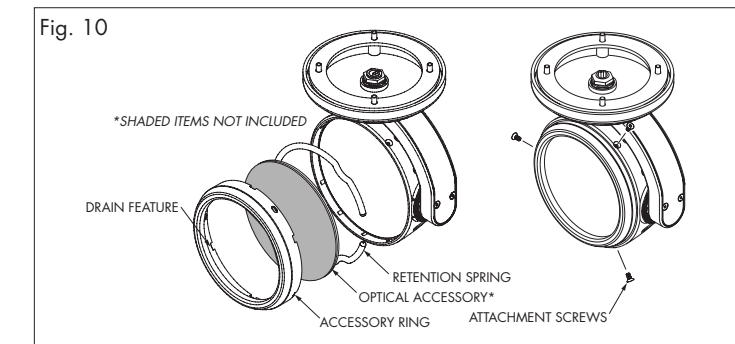
CAUTION: Do not over tighten set screws.

USING ACCESSORY LENSES

ColorBurst 6 is designed to accommodate louvers, filters, and lenses with a maximum 6-inch outer diameter and up to 3/16-inch thick.

To install accessory louvers, filters, or lenses:

- Remove the three attachment screws from the fixture housing. The attachment ring will separate from the fixture housing.
- A retention spring retains the accessory securely to the accessory ring. Squeeze the spring to remove it from the ring.
- Place the accessory into the ring.
- Replace the spring to hold the accessory in place while reattaching the ring to the housing.
- Align the through holes on the accessory ring with the screw holes on the fixture housing, ensuring the drain features align. Replace the attachment screws. (See Fig. 10.)



IMPORTANT INFORMATION

Strobe Warning

There is some anecdotal evidence that strobe lighting may induce epileptic symptoms in certain susceptible individuals, although no associated product warnings have been issued by United States government according to the Food and Drug Administration.

If strobe lights are used, some international regulatory agencies¹ recommend keeping flicker rates at or below four flashes per second (as less of the flicker-sensitive population will then be at risk of an attack). This flicker rate applies only to the overall output of any group of lights in direct view. However, when more than one strobe light is used, the flashes should be synchronized. End users should also consider issuing a warning, alerting audience or viewers to the presence of strobe lighting.

Temperature Monitoring

For protection from extreme temperatures, ColorBurst 6 has been designed with a temperature monitoring feature. If operating temperatures rise to an unsafe level, a compensation circuit is triggered and the ColorBurst 6 operation is interrupted causing the lights to turn dull red. After 30 minutes the lights will auto-cycle and return to full intensity.

To prevent additional power shut-downs, determine the cause of the overheating and correct the problem.

If any problems occur during usage, unplug the product immediately and call or email:

Color Kinetics Technical Support Group:
1-888-FULL RGB or 617-423-9999 or support@colorkinetics.com

¹ Guide to Health, Safety and Welfare at Pop Concerts and Similar Events, HMSO Publications (UK)

COLORBURST 6 SPECIFICATIONS

COLOR RANGE	16.7 million (24bit) additive RGB colors; continuously variable intensity output range
SOURCE	High intensity power LEDs
BEAM ANGLE	12° clear lens, 22° ground lens
PACKAGING	Die cast aluminum in black and white finish
CONNECTORS	Unified power and data cable
LISTINGS	UL/cUL Listed, CE
PROTECTION RATING	IP66
DATA INTERFACE	Color Kinetics data interface system
CONTROL	Color Kinetics full line of controllers or DMX512 (RS485) compatible when using Color Kinetics power/data supply
POWER REQUIREMENT	24VDC
POWER CONSUMPTION	25W Max. at full intensity (full RGB)
POWER SUPPLY	PDS-150e - Maximum of six fixtures per supply PDS-60 24V - Maximum of two fixtures per supply
TEMPERATURE RANGE	-40°F to 122°F (-40°C to 50°C) operating temperature -4°F to 122°F (-20°C to 50°C) starting temperature

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 80,000-100,000 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.