

# COLORCAST 14



Color Kinetics® ColorCast® 14 is a robust indoor/outdoor linear color changing fixture ideal for high output wall washing and large alcove and archway lighting. End-to-end fixture connections provides a continuous, uniform color wash up to 15 feet (4.6m) while maintaining a lighting ratio of 3:1 or 8:1 depending on the distance from, and type of, surface. When used for large alcove lighting, the continuous end-to-end mounting offers uniform lighting from a short distance above the fixture.

Designed to meet the rugged requirements of outdoor applications, ColorCast 14 is completely sealed and meets specifications for wet locations. The attached, two-point mounting plate simplifies installation and minimizes required tools. The over-molded, end-to-end locking connectors, capable of making 180° turns, make ColorCast 14 extremely versatile and easily adaptable for even the most challenging mounting environments.

ColorCast 14 incorporates patent-pending Powercore® digital power processing technology to drive LED systems, integrating power and data management directly into the fixture and eliminating the need for an external power supply. Powercore surpasses traditional power supply technology by streamlining multiple conversion and regulation stages into a single, flexible, microprocessor-controlled power stage that controls power output to LED systems directly from line voltage and significantly increases overall system efficiency. Built-in active power factor correction (PFC) yields higher system efficiencies and minimizes stress on building wiring making the installation and system more cost effective.

ColorCast 14 receives data via Color Kinetics Data Enabler—a data formatting device that accepts DMX or Color Kinetics Light System Manager (LSM) Ethernet protocol. Each Data Enabler can support up to 36 (120VAC) or 61 (240VAC) ColorCast 14 fixtures, using a 50-foot, field-cutable leader cable. The Data Enabler supports a slightly greater or fewer number of fixtures depending on customized installation parameters. One-foot (30 cm) and five-foot (152 cm) jumper cables are available for installations that require spacing between fixtures. ColorCast 14 can be controlled by Color Kinetics' line of controllers, including Color Kinetics Light System Manager, or a third-party DMX controller.

## COLORCAST 14 SPECIFICATIONS

<b>COLOR RANGE</b>	16.7 million (24bit) additive RGB colors; continuously variable intensity
<b>SOURCE</b>	High intensity, surface mount, power LEDs
<b>BEAM ANGLE</b>	90° (at 50% of peak illuminance)
<b>HOUSING</b>	Die cast aluminum 13.5" x 2.7" x 2.7" (34.3 cm) x (6.9 cm) x (6.9 cm)
<b>CONNECTORS</b>	Over-molded, integral male/female connectors
<b>LISTINGS</b>	C-UL US listed, CE certified

## COMMUNICATION SPECIFICATIONS

<b>DATA INTERFACE</b>	Color Kinetics Data Enabler
<b>CONTROL</b>	Color Kinetics full line of controllers including Light System Manager or other DMX512 (RS485) sources

## ELECTRICAL SPECIFICATIONS

<b>POWER REQUIREMENT</b>	100-240VAC, 50-60 Hz
<b>POWER CONSUMPTION</b>	30W at full output
<b>POWER FACTOR</b>	0.95 or greater at 120VAC

## ENVIRONMENTAL SPECIFICATIONS

<b>TEMPERATURE RANGE</b>	-40°F to 122°F (-40°C to 50°C) operating temperature -4°F to 122°F (-20°C to 50°C) starting temperature
<b>PROTECTION RATING</b>	IP66

## 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](http://www.colorkinetics.com/lifetime).

**CHROMACORE®**  
BY COLOR KINETICS

**POWERCORE®**  
BY COLOR KINETICS

**OPTIBIN®**  
BY COLOR KINETICS

 DRY

 DAMP

 WET

  LISTED  
13PE

ITEM# 123-000007-00 (White)  
123-000007-01 (Black)

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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BRO132 Rev 05

Specifications subject to change without notice. Refer to [www.colorkinetics.com](http://www.colorkinetics.com) for the most recent data sheet versions.

# COLORCAST 14

## PHOTOMETRIC PERFORMANCE

Photometric data is based on test results from an independent testing lab.

### SOURCE SPECIFICATIONS

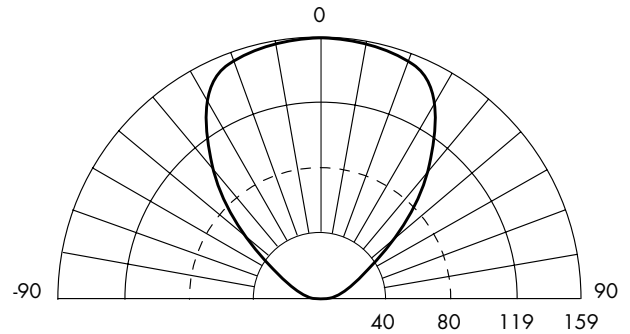
Optics:	Tempered soft focus glass diffuser
Source:	18 LEDs (6 Red, 6 Green, 6 Blue)
Beam Angle:	90° (at 50% of peak illuminance)
Distribution:	Symmetric direct illumination
CCT:	Adjustable 1,000–10,000K
CRI:	Not measurable (CIE 13.3-1995)

### ILLUMINANCE DISTRIBUTION

2.3 24.8	5.7 61.4	9.8 105.5	10.1 108.7	6.5 70.0	2.8 30.1	1.0'/0.3m
3.9 42.0	7.8 84.0	11.9 128.1	12.2 131.3	8.0 86.1	3.6 38.8	2.0'/0.6m
3.7 39.8	6.6 71.0	9.6 103.3	10.6 114.1	8.0 86.1	4.3 46.3	3.0'/1.0m
3.0 32.3	4.6 49.5	5.9 63.5	6.3 67.8	5.3 57.0	3.5 37.7	4.0'/1.2m
2.3 24.8	3.0 32.3	3.5 37.7	3.6 38.8	3.3 35.5	2.6 28.0	5.0'/1.5m
1.8 19.4	2.1 22.6	2.3 24.8	2.3 24.8	2.2 23.7	1.9 20.5	6.0'/2.0m

3.0'/1.0m      0'/0m      3.0'/1.0m  
 Units: Footcandles (top)/Lux (bottom)  
 Measured on: All, reflectance model 80/50/20%  
 Distance from surface: 2'/0.6m (from top of grid with light at a 60° angle off horizontal)  
 Multipliers: 0.39 Red, 0.45 Green, 0.18 Blue

### CANDLE POWER DISTRIBUTION



Measured on: White  
 Beam center: 159 cd  
 Thin dashed lined: Indicates 50% of peak  
 Multipliers: 0.39 Red, 0.45 Green, 0.18 Blue

### ILLUMINANCE

COLOR	3' 1m	6' 2m	9' 3m	15' 5m
WHITE	15.9 171.1	4.2 45.2	1.9 20.5	0.7 7.5
RED	6.2 66.7	1.6 17.6	0.7 8.0	0.3 2.9
GREEN	7.2 77.0	1.9 20.3	0.9 9.2	0.3 3.4
BLUE	2.9 30.8	0.8 8.1	0.3 3.7	0.1 1.4

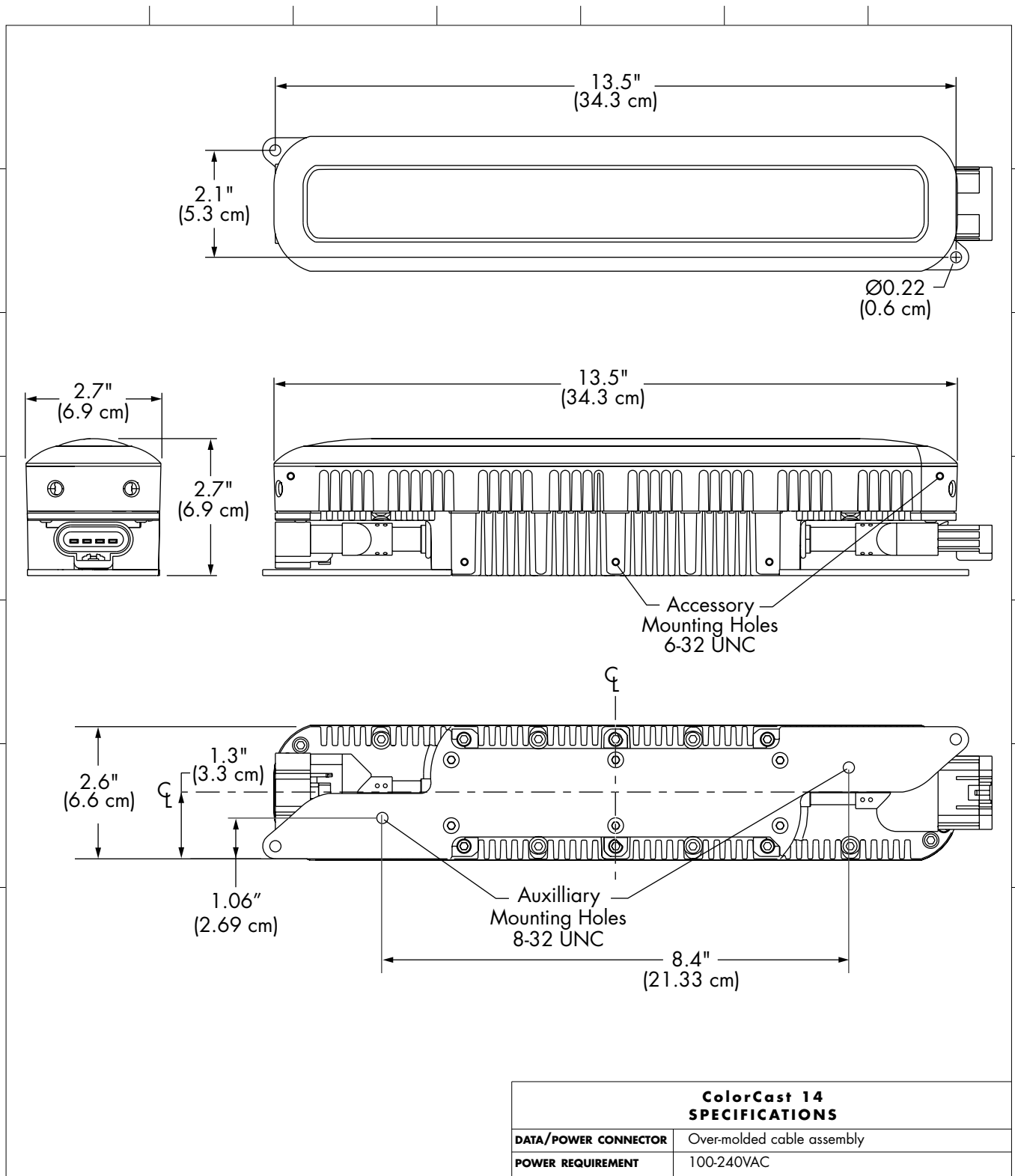
Measured in Footcandles (top)/Lux (bottom) on axis.  
 Measured on: All, reflectance: 0

### LIGHT OUTPUT

COLOR	TOTAL OUTPUT (LUMENS)	POWER (WATTS)	EFFICACY (lm/w)
WHITE	315	33.0	9.5
RED	122.9	12.9	9.5
GREEN	141.8	14.9	9.5
BLUE	56.7	5.9	9.5

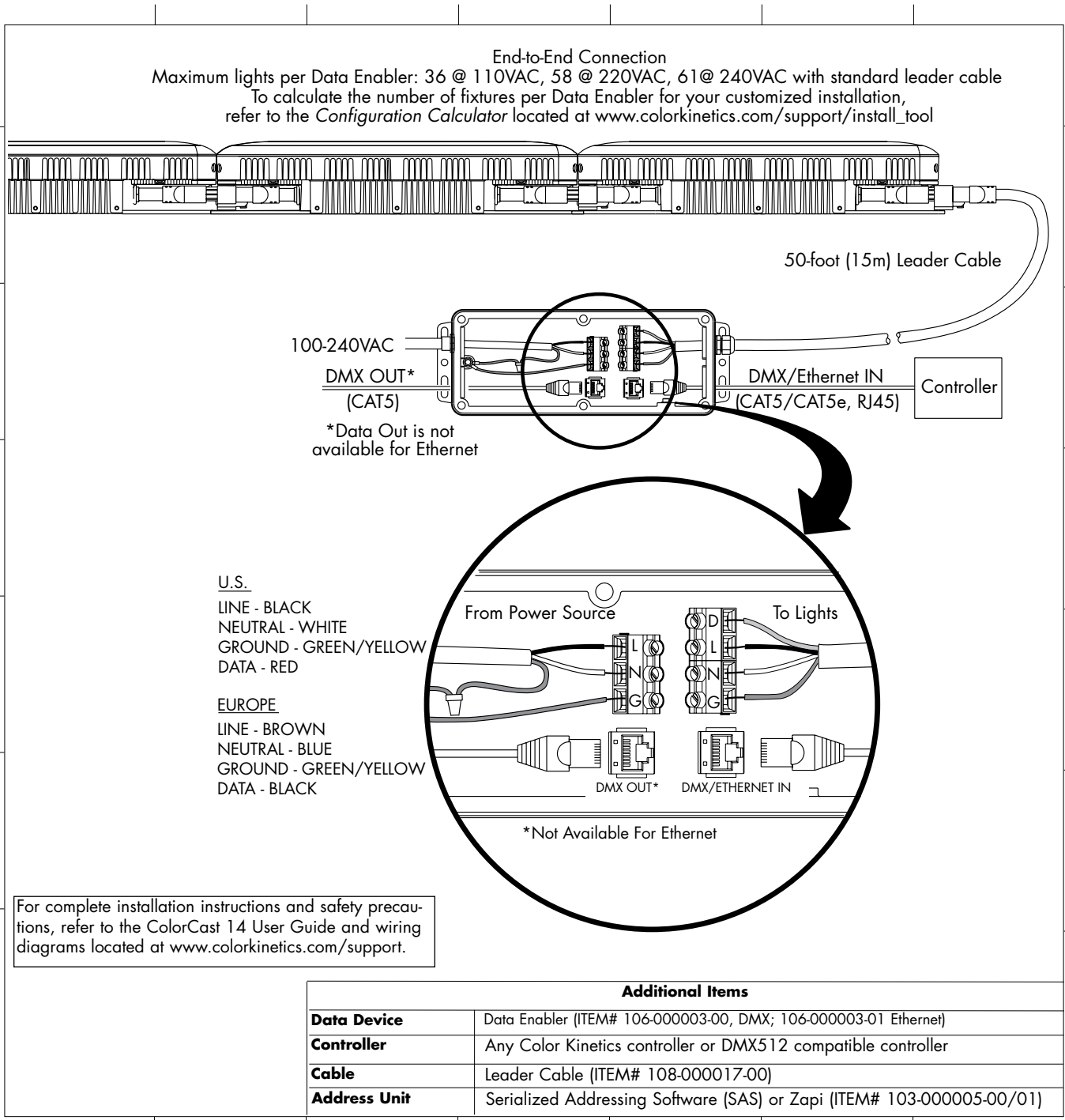
# COLORCAST 14

## PHYSICAL DIMENSIONS



# COLORCAST 14

## FUNCTIONAL FLOW DIAGRAM



### OPTIBIN®

There are inherent variations in the fabrication processes of all semiconductor materials. For LEDs, this variance results in differences in the color and intensity of light output as well as electrical characteristics. Due to these differences, LED manufacturers sort production into "bins," but insuring the availability of a single bin is very difficult. To minimize this issue and achieve optimal color consistency in its products, Color Kinetics has developed and uses a proprietary technology called Optibin. Optibin is an advanced production binning optimization process that minimizes the effects of LED variance for the best possible output uniformity in the final product. Color Kinetics Optibin technology gives the most consistent control of color and intensity from product to product.