



COLORBLAST 12 POWERCORE



ColorBlast® 12 Powercore is a marriage of Color Kinetics' popular ColorBlast 12 fixture and Powercore® technology. This product combines rich, saturated wall washing color and color changing effects with high-performance, operational efficiency, and simplified installation.

Powercore technology is a 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.

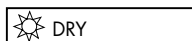
Projecting a soft-edge beam of light, ColorBlast 12 Powercore is a sealed product designed for both indoor and outdoor installations. The fixture is fully enclosed in a stylish and rugged die-cast aluminum housing and meets or exceeds specifications for use in wet locations. ColorBlast 12 Powercore has a single 4 conductor cable and attaches to standard junction boxes with 3.5" center-to-center hole spacing. The pre-assembled mounting base provides smooth, friction-free rotation. The base is designed to simplify installation by minimizing parts and allowing for after-installation rotation, eliminating the need for precise junction box positioning. With up to 350° rotation, the locking base swivel, along with 110° locking fixture rotation, offers a versatile range of light positioning. Four mounting screws ensure a water-tight, maximum longevity seal.

ColorBlast 12 Powercore receives data via Color Kinetics' Data Enabler—a data formatting device that accepts DMX or Color Kinetics® Light System Manager (LSM) Ethernet protocol. A ColorBlast 12 Powercore Installation Tool is available to calculate the number of fixtures per Data Enabler for specific installations. The following is a sample: In an installation using a 60 foot (18.3 m), 12AWG leader cable with 12AWG, 5 feet of cable between fixtures, each Data Enabler can support to 25 fixtures at 120VAC (15A), 34 fixtures at 120VAC (20A), or 60 fixtures at 240VAC (20A). ColorBlast 12 Powercore can be controlled by Color Kinetics' line of controllers, including Light System Manager, or a third-party DMX controller.

CHROMACORE®
BY COLOR KINETICS

POWERCORE®
BY COLOR KINETICS

OPTIBIN®
BY COLOR KINETICS



COLORBLAST 12 POWERCORE SPECIFICATIONS

COLOR RANGE	16.7 million (24bit) additive RGB colors; continuously variable intensity
SOURCE	36 High intensity RGB LEDs
BEAM ANGLE	10° clear lens, 23° ground lens
HOUSING	Die cast aluminum, powder coated
LENS	Soft-focus tempered glass or clear tempered glass
CONNECTORS	Unified power and data cable
LISTINGS	UL/cUL, CE

COMMUNICATION SPECIFICATIONS

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

ELECTRICAL SPECIFICATIONS

INPUT	100-240VAC, 50-60 Hz
POWER CONSUMPTION	50W @ 110-240VAC (60W @ 100VAC)
POWER FACTOR	0.95 or greater @ 120VAC

ENVIRONMENTAL SPECIFICATIONS

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
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 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.

- ITEM# 123-000005-00 (UL, White, Frosted Lens)
- 123-000005-01 (UL, Black, Frosted Lens)
- 123-000005-02 (EU, White, Frosted Lens)
- 123-000005-03 (EU, Black, Frosted Lens)
- 123-000005-04 (UL, White, Clear Lens)
- 123-000005-05 (UL, Black, Clear Lens)
- 123-000005-06 (EU, White, Clear Lens)
- 123-000005-07 (EU, Black, 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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BRO166 Rev 03

Specifications subject to change without notice. Refer to www.colorkinetics.com for the most recent data sheet versions.

COLORBLAST 12 POWERCORE - CLEAR LENS

PHOTOMETRIC PERFORMANCE

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

SOURCE SPECIFICATIONS

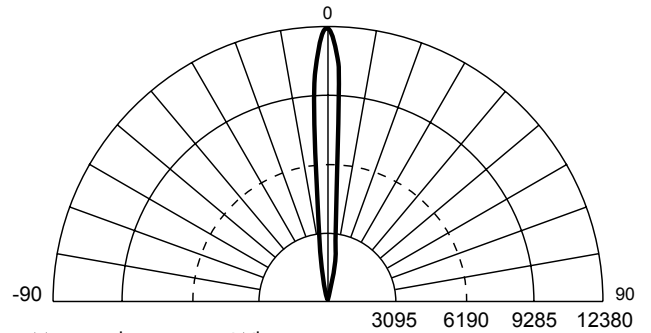
Optics: Clear tempered glass lens
 Source: 36 LEDs (12 Red, 12 Green, 12 Blue)
 Beam Angle: 10 degrees
 Distribution: Symmetric direct illumination

ILLUMINANCE DISTRIBUTION

2.1 22.6	3.4 36.6	4.2 45.2	3.8 40.9	2.7 29.1	1.8 19.4	6.0'/2.0m
2.8 30.1	8.3 89.3	13.3 143.2	9.8 105.5	4.4 47.4	2.3 24.8	5.0'/1.5m
3.6 38.8	27.8 299.2	54.3 584.5	36.8 396.1	9.6 103.3	2.9 31.2	4.0'/1.2m
3.7 39.8	29.8 320.8	75.9 817.0	74.7 804.1	28.6 307.9	3.6 38.8	3.0'/1.0m
3.0 32.3	11.0 118.4	40.9 440.2	58.5 629.7	29.3 315.4	3.8 40.9	2.0'/0.6m
2.6 28.0	4.7 50.6	11.7 125.9	16.5 177.6	9.9 106.6	3.0 32.3	1.0'/0.3m
3.0'/1.0m	0'/0m	0'/0m	0'/0m	3.0'/1.0m	3.0'/1.0m	

Units: Footcandles (top)/Lux (bottom)
 10.8 lux = 1 fc
 Measured on: All, reflectance model 80/50/20%
 Distance from surface: Bottom center of grid, 3' (1.0 m) from surface, light at a 45° angle off horizontal

CANDLE POWER DISTRIBUTION



Measured on: White
 Beam center: 12380 cd
 Thin dashed lined: Indicates 50% of peak
 Multipliers: 0.31 Red, 0.40 Green, 0.21 Blue

ILLUMINANCE

COLOR	3' 1m	6' 2m	9' 3m	15' 5m
WHITE	1369.0 14735.9	341.0 3670.5	151.0 1625.4	54.6 587.7
RED	424.4 4568.1	105.7 1137.9	46.8 503.9	16.9 182.2
GREEN	547.6 5894.4	136.4 1468.2	60.4 650.1	21.8 235.1
BLUE	287.5 3094.5	71.6 770.8	31.7 341.3	11.5 123.4

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	660	50.0	13.2
RED	204.6	15.6	13.1
GREEN	264.0	21.7	12.2
BLUE	138.6	21.7	6.4

COLORBLAST 12 POWERCORE - GROUND LENS

PHOTOMETRIC PERFORMANCE

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

SOURCE SPECIFICATIONS

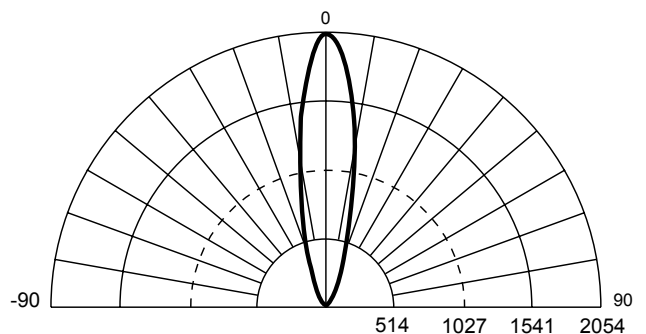
Optics: Soft-focus tempered glass lens
 Source: 36 LEDs (12 Red, 12 Green, 12 Blue)
 Beam Angle: 23 degrees
 Distribution: Symmetric direct illumination

ILLUMINANCE DISTRIBUTION

3.3 35.5	5.2 56.0	6.4 68.9	5.9 63.5	4.3 46.3	2.8 30.1	6.0'/2.0m
4.6 49.5	9.7 104.4	14.0 150.7	11.9 128.1	7.0 75.3	3.8 40.9	5.0'/1.5m
6.0 64.6	17.5 188.4	29.0 312.2	24.5 263.7	12.0 129.2	4.9 52.7	4.0'/1.2m
6.3 67.8	21.0 226.0	39.9 429.5	38.1 410.1	18.9 203.4	6.1 65.7	3.0'/1.0m
5.0 53.8	15.1 162.5	32.2 346.6	36.2 389.7	20.0 215.3	6.1 65.7	2.0'/0.6m
3.3 35.5	7.6 81.8	16.0 172.2	19.9 214.2	12.5 134.6	4.4 47.4	1.0'/0.3m
3.0'/1.0m		0'/0m		3.0'/1.0m		

Units: Footcandles (top)/Lux (bottom)
 10.8 lux = 1 fc
 Measured on: All, reflectance model 80/50/20%
 Distance from surface: Bottom center of grid, 3' (1.0 m) from surface, light at a 45° angle off horizontal

CANDLE POWER DISTRIBUTION



Measured on: White
 Beam center: 2054 cd
 Thin dashed lined: Indicates 50% of peak
 Multipliers: 0.30 Red, 0.50 Green, 0.20 Blue

ILLUMINANCE

COLOR	3' 1m	6' 2m	9' 3m	15' 5m
WHITE	225.0 2421.9	57.1 614.6	25.3 272.3	9.1 98.0
RED	67.5 726.6	17.1 184.4	7.6 81.7	2.7 29.4
GREEN	112.5 1211.0	28.6 307.3	12.7 136.2	4.6 49.0
BLUE	45.0 484.4	11.4 122.9	5.1 54.5	1.8 19.6

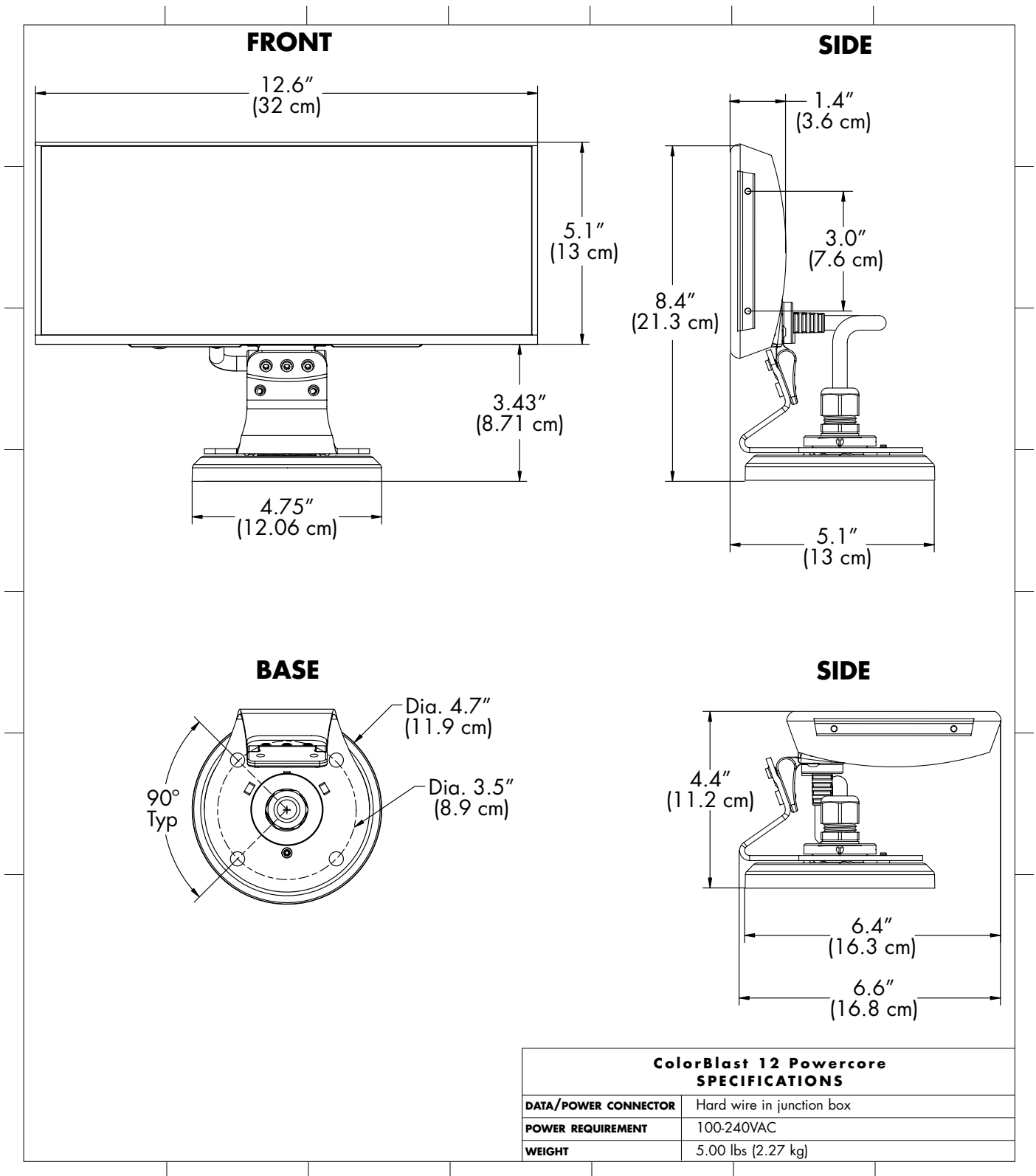
Measured in Footcandles (top)/Lux (bottom) on axis.
 Measured on: All, reflectance 0.

LIGHT OUTPUT

COLOR	TOTAL OUTPUT (lumens)	POWER (Watt)	EFFICACY (Lm/W)
WHITE	597	50.0	11.9
RED	179.1	15.6	11.5
GREEN	298.5	21.7	13.8
BLUE	119.5	21.7	5.5

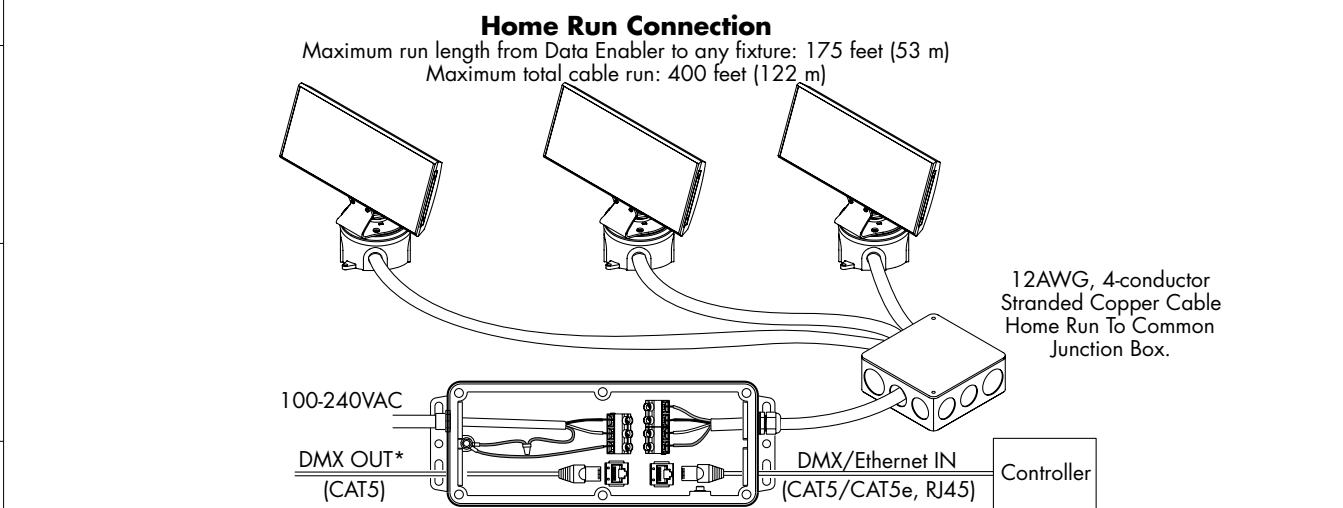
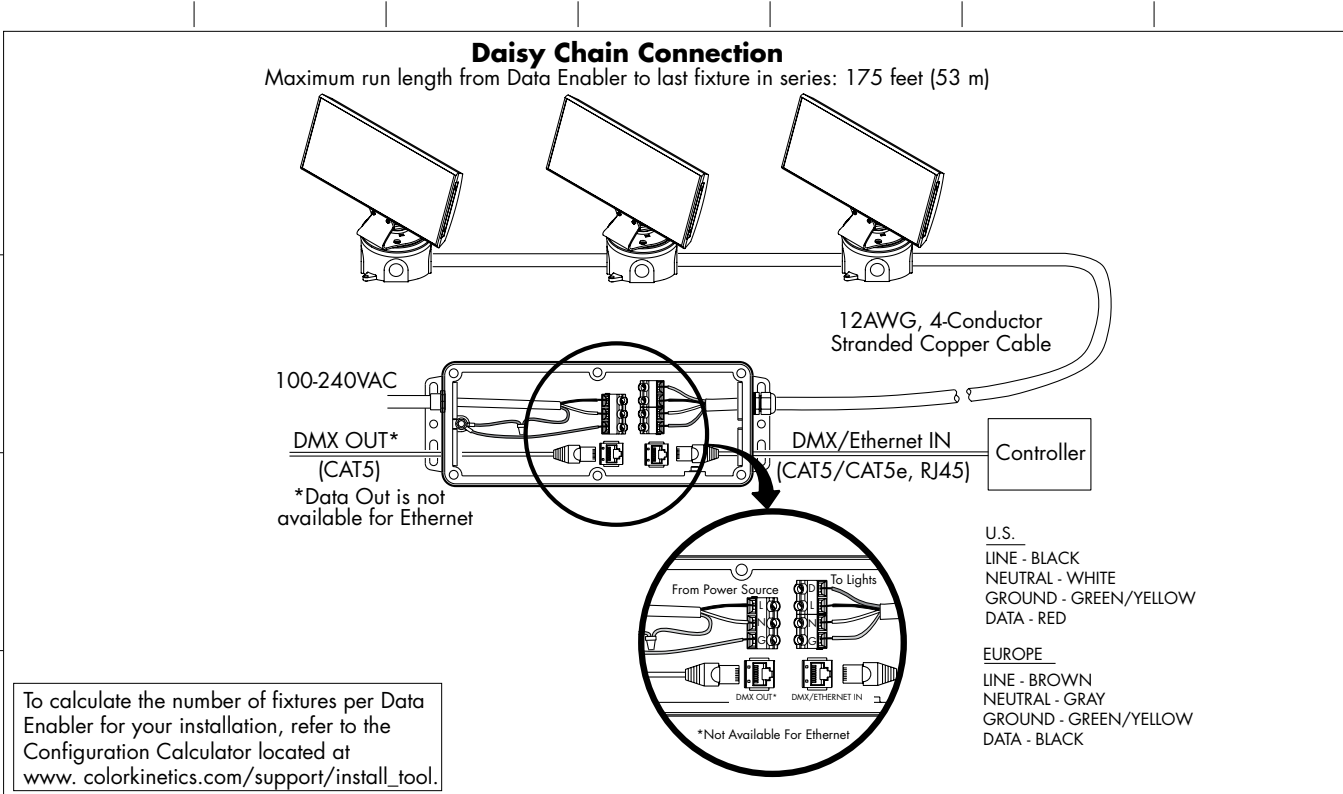
COLORBLAST 12 POWERCORE

PHYSICAL DIMENSIONS



COLORBLAST 12 POWERCORE

FUNCTIONAL FLOW DIAGRAM



For complete installation instructions and safety precautions, refer to the ColorBlast 12 Powercore User Guide and wiring diagrams located at www.colorkinetics.com/support.

Additional Items	
Data Device	Data Enabler (ITEM# 106-000003)
Controller	Any Color Kinetics controller or DMX512 compatible controller
Address Unit	Serial Addressing Software (SAS) or Zapi (ITEM# 103-000005-00/01)

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.