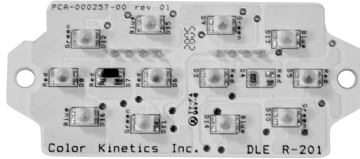


DLE R-201



Color Kinetics® DLE R-201 is designed for accent lighting applications. DLE R-201 provides product designers with a building block to integrate controllable lighting effects into any product or application. The DLE R-201 comes in two versions, narrow (48° beam angle) and wide (120° beam angle) optics.

DLE R-201 functions as any individually addressable node driven by the Color Kinetics' Chromasic® technology. The result is unparalleled design flexibility with power, communication, and control in one easy-to-implement package.

DLE R-201 SPECIFICATIONS

COLOR RANGE 64 billion (36-bit) additive RGB colors; continuously variable intensity
SOURCE 12 surface-mounted LEDs (4 red, 4 green, 4 blue)

COMMUNICATION SPECIFICATIONS

DATA INTERFACE Color Kinetics Chromasic data interface
CONTROL Color Kinetics full line of controllers or DMX 512 when using CK power/data supplies

ELECTRICAL SPECIFICATIONS (LIGHTS)

POWER REQUIREMENT 12VDC
POWER CONSUMPTION 2W Max. at full intensity (full RGB) per node
POWER SUPPLY Color Kinetics PDS-60ca 12V (Preprogrammed 109-000020-00, DMX 109-000020-01, and Ethernet 109-000020-02), or PDM-201 (118-000062-00), or PDM-202 (118-000063-00)

ENVIRONMENTAL SPECIFICATIONS

TEMPERATURE RANGE -4°F to 122°F (-20°C to 50°C) based on testing of specific product

CHROMACORE®
BY COLOR KINETICS

CHROMASIC®
BY COLOR KINETICS

DLE R-201 ITEM# 118-000076-00 (Narrow)
DLE R-201 ITEM# 118-000094-00 (Wide)

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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All other brand or product names are trademarks or registered trademarks of their respective owners.

BR0181 Rev 02

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

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.

DLE R-201 (NARROW)

PHOTOMETRIC PERFORMANCE

Photometric data is for the LED package, provided by the manufacturer.

SOURCE SPECIFICATIONS

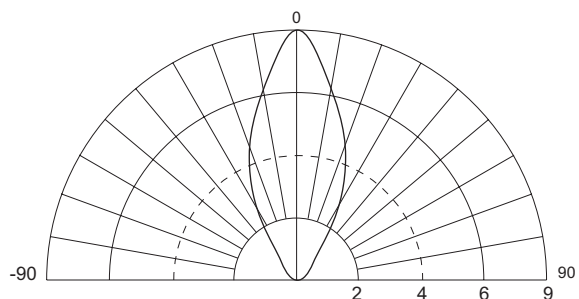
Source: 12 surface-mounted LEDs (4 red, 4 green, 4 blue)
 Beam Angle: 48°
 Distribution: Symmetric direct illumination
 CCT: Adjustable 1,000–10,000K
 CRI: Not measurable (CIE 13.3-1995)

ILLUMINANCE DISTRIBUTION

0.1 1.1	0.4 4.3	0.4 4.3	0.6 6.5	0.4 4.3	0.2 2.2	1.5'/0.5m
0.4 4.3	0.8 8.6	1.3 14.0	1.3 14.0	0.8 8.6	0.4 4.3	
0.6 6.5	1.3 14.0	2.1 22.6	1.9 20.5	1.3 14.0	0.6 6.5	0'/0m
0.4 4.3	1.3 14.0	1.9 20.5	2.1 22.6	1.3 14.0	0.4 4.3	
0.4 4.3	0.8 8.6	1.3 14.0	1.3 14.0	0.8 8.6	0.4 4.3	
0.2 2.2	0.4 4.3	0.4 4.3	0.6 6.5	0.4 4.3	0.2 2.2	1.5'/0.5m
1.5'/0.5m	0'/0m	0'/0m	0'/0m	0'/0m	1.5'/0.5m	

Units: Footcandles (top)/Lux (bottom)
 10.8 lux = 1 fc
 Measured on: All, reflectance model 50%
 Distance from surface: Bottom of grid, 1' (0.3 m) from surface, light at perpendicular to surface

CANDLE POWER DISTRIBUTION



Measured on: White
 Beam center: 8.6 cd
 Thin dashed line: Indicates 50% of peak
 Multipliers: 0.33 Red, 0.64 Green, 0.05 Blue

ILLUMINANCE

COLOR	1' 0.3m	2' 0.6m	3' 1m	4' 1.2m
WHITE	22.0 236.8	3.3 35.5	1.2 12.9	0.7 7.5
RED	7.3 78.1	1.1 11.7	0.4 4.3	0.2 2.5
GREEN	14.1 151.6	2.1 22.7	0.8 8.3	0.4 4.8
BLUE	1.1 11.8	0.2 1.8	0.1 0.6	0.0 0.4

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	7	1.8	3.9
RED	2.3	0.6	3.9
GREEN	4.5	0.6	7.5
BLUE	0.4	0.6	0.6

DLE R-201 (WIDE)

PHOTOMETRIC PERFORMANCE

Photometric data is for the LED package, provided by the manufacturer.

SOURCE SPECIFICATIONS

Source:	12 surface-mounted LEDs (4 red, 4 green, 4 blue)
Beam Angle:	120°
Distribution:	Symmetric direct illumination
CCT:	Adjustable 1,000–10,000K
CRI:	Not measurable (CIE 13.3-1995)

ILLUMINANCE DISTRIBUTION

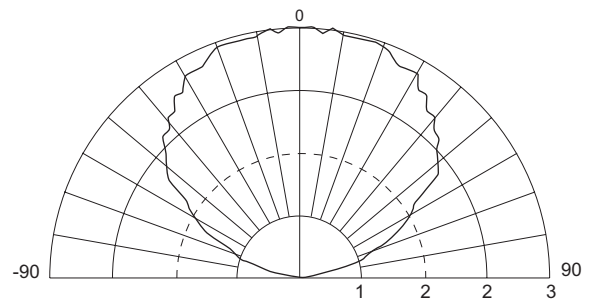
0.5 5.4	0.7 7.5	0.8 8.6	0.9 9.7	0.7 7.5	0.5 5.4	1.5'/0.5m
0.7 7.5	1.0 10.8	1.3 14.0	1.3 14.0	1.0 10.8	0.7 7.5	
0.9 9.7	1.3 14.0	1.7 18.3	1.6 17.2	1.3 14.0	0.9 9.7	0'/0m
0.8 8.6	1.3 14.0	1.6 17.2	1.7 18.3	1.3 14.0	0.8 8.6	1.5'/0.5m
0.7 7.5	1.0 10.8	1.3 14.0	1.3 14.0	1.0 10.8	0.7 7.5	
0.5 5.4	0.7 7.5	0.8 8.6	0.9 9.7	0.7 7.5	0.5 5.4	1.5'/0.5m

Units: Footcandles (top)/Lux (bottom)
10.8 lux = 1 fc

Measured on: All, reflectance model 50%

Distance from surface: Center of grid, 1' (0.3 m) from surface, light at perpendicular to surface

CANDLE POWER DISTRIBUTION



Measured on: White
Beam center: 3.2 cd
Thin dashed line: Indicates 50% of peak
Multipliers: 0.26 Red, 0.58 Green, 0.16 Blue

ILLUMINANCE

COLOR	1' 0.3m	2' 0.6m	3' 1m	4' 1.2m
WHITE	3.3 35.5	0.8 8.6	0.4 4.3	0.2 2.2
RED	0.9 9.2	0.2 2.2	0.1 1.1	0.1 0.6
GREEN	1.9 20.6	0.5 5.0	0.2 2.5	0.1 1.2
BLUE	0.5 5.7	0.1 1.4	0.1 0.7	0.0 0.3

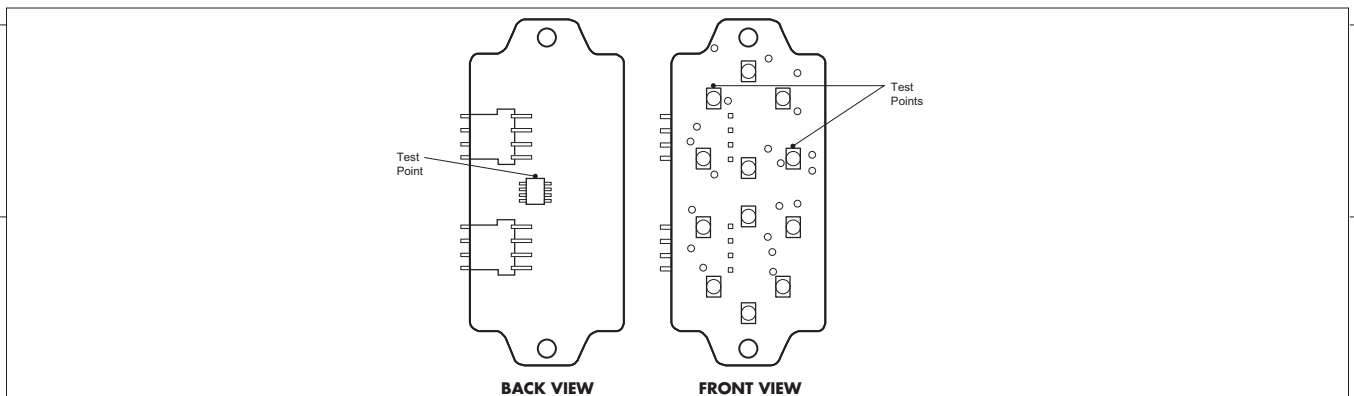
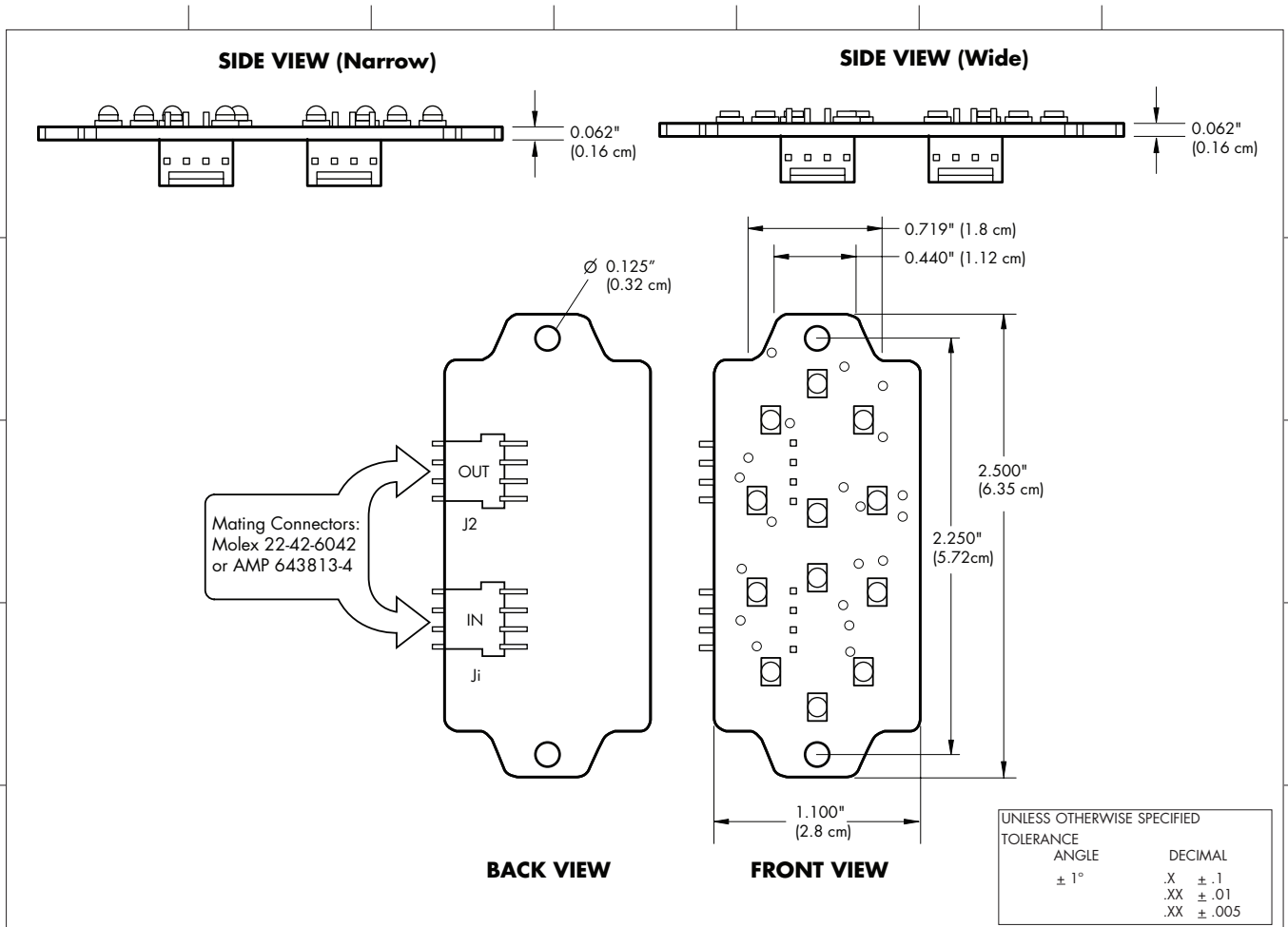
Measured in Footcandles (top)/Lux (bottom) on axis.
Measured on: All, reflectance 0.

LIGHT OUTPUT

COLOR	TOTAL OUTPUT (lumens)	POWER (Watts)	EFFICACY (Lm/W)
WHITE	10	1.8	5.6
RED	2.6	0.6	4.3
GREEN	5.8	0.6	9.7
BLUE	1.6	0.6	2.7

DLE R-201

PHYSICAL DIMENSIONS



Thermal Measurement

DLE R-201 generates a maximum amount of heat when set to white (full red, green, and blue). With the DLE installed into the final OEM product configuration (e.g. housing), set the board to full white and allow everything to warm up and stabilize before testing. Thermal tests must be performed at the system's highest rated operating temperature. For elevated ambient temperatures, test the system in an environmental chamber or similar test apparatus that can maintain the desired ambient temperature for the duration of the test.

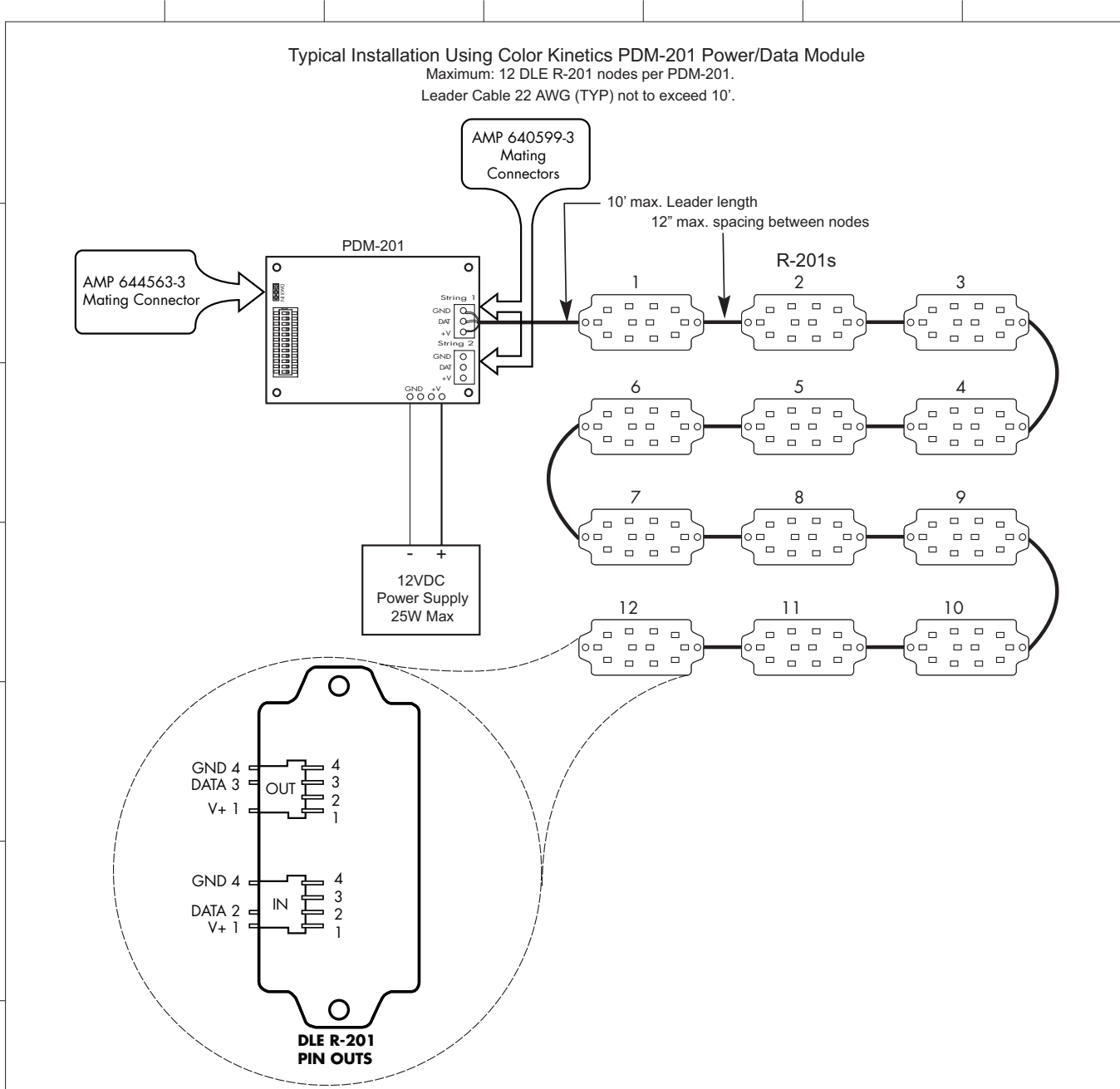
Using a thermocouple, measure the DLE R-201 at the locations shown above and ensure they are below the maximum temperature:

FRONT AND BACK • 85°C

Note: Refer to the Integration Guide for complete instructions and warnings.

DLE R-201

FUNCTIONAL FLOW DIAGRAM



Please consult Color Kinetics for other possible combinations of leader length, node spacing, and node quantities.

For complete installation instructions and safety precautions, refer to the DLE Integration Guide and wiring diagrams located at www.colorkinetics.com/support.

Additional Items	
POWER/DATA SUPPLY	PDS-60ca 12V (109-000020-00/-01/-02), PDM-201 (118-000062-00), or PDM-202 (118-0000063-00)
CONTROLLER	iPlayer 2 [®] (103-000007-00/-01) Light System Manager (103-000015-00)