



# COLOR ENGINE CIRCULAR LED LIGHT ENGINES



## FEATURES / BENEFITS

- ▲ Extremely long life of 50,000 hours at 55°C PCB temperature
- ▲ Durable F-Form optics holder allow for easy changing of 4 lens options (5, 15, 25 degree and 5X20 degree oval)\*
- ▲ Red, Blue and Green LEDs allow for infinite number of color combinations and dynamic color changing (appropriate colordriver controller required)
- ▲ Aluminum based PCB for easier heat dissipation and more efficient operation
- ▲ Available Color Kinetics pass through license, consult factory for details

## OPERATING CONDITIONS

- ▲ Recommended PCB temp=55°C (131°F)  
Maximum PCB temp = 105°C (221°F)
- ▲ LED Life @ 55°C PCB temp = 50,000 hours
- ▲ For maximum performance, all "Circular Color Engine" LED Light Engines should be screwed or affixed using thermal adhesive to an appropriate heat sink
- ▲ Thermal conductivity = 1.3W/m-k
- ▲ Breakdown voltage = 2kV

## APPLICATIONS

- ▲ Color washing
- ▲ Decorative effects
- ▲ Entertainment lighting
- ▲ Retail
- ▲ Landscape
- ▲ Night clubs, restaurants, bars
- ▲ Any application requiring color changing, efficiency, and long life in a circular pattern.

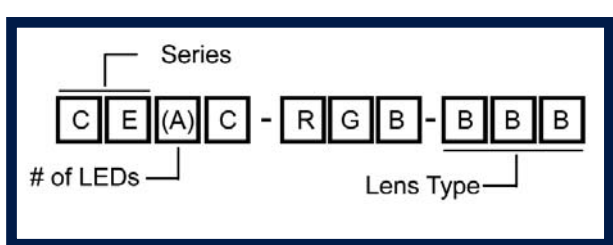
## MECHANICAL DIMENSIONS

Height (all models including lens) = 15.5mm (0.61")  
 Color engine3C, Diameter = 48mm (1.89")  
 Color engine6C, Diameter = 69mm (2.72")  
 Color engine12C, Diameter = 90mm (3.54")  
 Color engine18C, Diameter = 110mm (4.33")  
 Color engine36C, Diameter = 155mm (6.10")

## MATERIALS/FINISH

- ▲ LUXEON® I LEDs
- ▲ 1.6mm Aluminum clad PCB substrate
- ▲ Recommended accessories include Color driver 36 power supply, CDL-M3E Molex cable and other cabling accessories

## PART NUMBERS



| # of LEDs (A)   |
|---|
| 3 = Color engine3C (1 each of red, blue and green LEDs) |
| 6 = Color engine6C                                      |
| 12 = Color engine12C                                    |
| 18 = Color engine18C                                    |
| 36 = Color engine36C                                    |

| LENS Type (BBB)*    |
|---------------------|
| 005 = 5 Degree      |
| 015 = 15 Degree     |
| 025 = 25 Degree     |
| 520 = 5 X 20 Degree |
| XXX = no lens**     |

**Dialight-Lumidrives Ltd.**  
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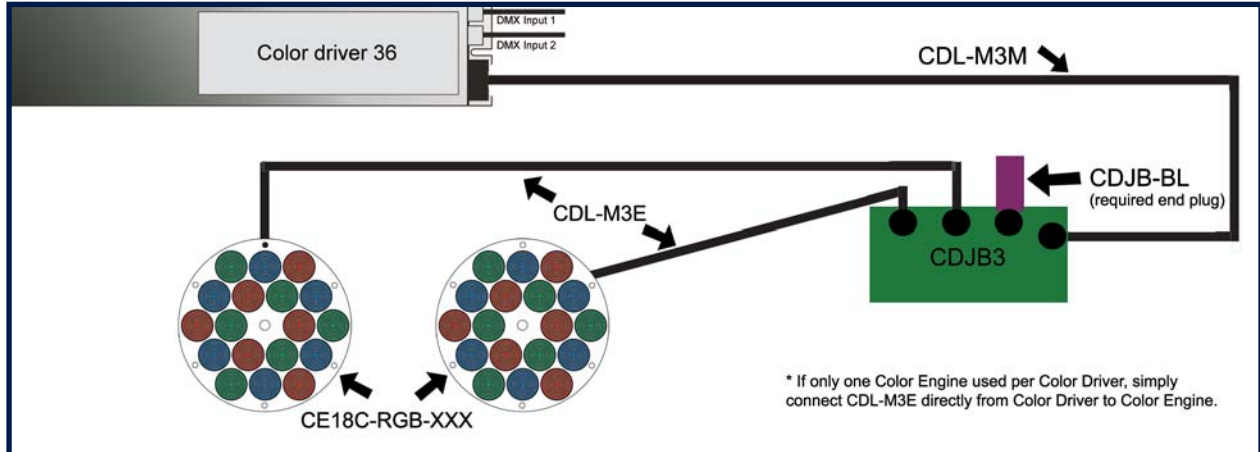
\* Half Divergence Angle  
 \*\* Lens to be purchased & installed separately

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## WIRING INFORMATION



CDL-M3E is equipped with 8 individual colored wires. Each wire to be soldered onto indicated solder pad on color engine. For CE3C-RGB, cut off brown and purple leads.

## TYPICAL LED PHOTOMETRIC DATA

| LED | Color      | Forward Voltage (Typ) | Max. Current (mA) | Max. Power (Watts) | Dom Wavelength / CCT |        |        | Min Luminous Flux (lm) / Radiometric Power (mW) | Typ Luminous Flux (lm) / Radiometric Power (mW) |
|-----|------------|-----------------------|-------------------|--------------------|----------------------|--------|--------|---|---|
|     |            |                       |                   |                    | Min                  | Typ    | Max    |   |   |
|     | Red        | 2.95                  | 350               | 1.03               | 620.5 nm             | 627 nm | 645 nm | 30.6 lm   | 44 lm   |
|     | Green      | 3.42                  | 350               | 1.20               | 520 nm               | 530 nm | 550 nm | 30.6 lm   | 53 lm   |
|     | Royal Blue | 3.42                  | 350               | 1.20               | 440 nm               | 455 nm | 460 nm | 145 mW  | 220 mW  |

Results are LED manufacturer's test data @ 25°C JTC'. Light output at 55°C PCB temperature will be approximately 15-20% lower. Elevated temperatures will result in further degradation of light output. For maximum performance use appropriate heat sinking.

Maximum current input 350mA  
 Maximum power consumption  
 1.2W per LED for Blue / Green,  
 1.0W per LED for Red.  
 Recommended min gauge wire,  
 AWG24

Dialight reserves the right to make changes at any time in order to supply the best product possible.

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