



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.

York House • Wetherby Road • Long Marston, York, YO26 7NH
 Tel: +44(0) 1904 739150 • Fax: +44(0) 1904 737926 • www.dialight.com

* Half Divergence Angle
 ** Lens to be purchased & installed separately

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1501 Route 34 South • Farmingdale, NJ 07727 USA
 Tel: (1) 732-919-3119 • Fax: (1) 732-751-5778 • www.dialight.com



MDEXLUMCLENGC_E

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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