**vode** Adaptive Architectural Lighting Systems

**Spec Guide**

# RaceRail | Ceiling Cable | 107

Direct or indirect lighting for open office and ambient applications.

RaceRail: direct or indirect, infinite rotation.

## Benefits & Features

**Minimal Profile, Robust Design**
Round profile, Ø1.12 in.
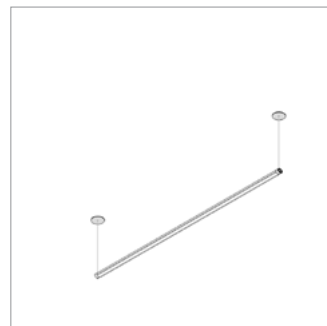
**Superior Light Quality & Performance**
Output up to 1507 lm/ft (HO), 132 lm/W (HO). 90 CRI static & tunable white 2200K - 5000K. Custom ranges available upon request.
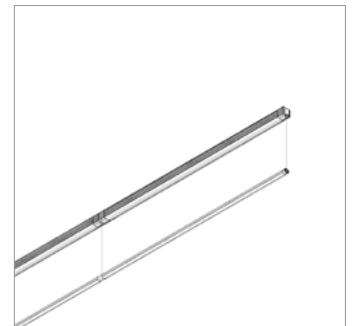
**High Performance Optics**
Break through Batwing lens designed for excellent fixture to fixture spacing.

**Better Optics & Beam Control Options**
Batwing, FlyWing, and diffuse lens available. Directional control with infinite rotation, angle gauge and lock.



Small Round Canopy



Integral Power

# Build Your Specification

| 107-RR | 01 | | | | CC | ▸▸ |
|---|---|---|---|---|---|---|
| System & Rail Type | Single/Double Rail | System Length | Rail Length | | Mounting | Cable Length |

**System & Rail Type**

**107-RR** RaceRail

**Single/Double Rail**

**01** Single Rail

**System Length**

Specify overall system length in ft/in or M/mm.

*Corner and Shapes Available*
**See Guide** *for details.*

**Rail Length**

| **24** | 24" (610mm) |
|---|---|
| **36** | 36" (914mm) |
| **48** | 48" (1219mm) |
| **60** | 60" (1524mm) |
| **72** | 72" (1829mm) |
| **ZZ** | Other rail length or layout (please specify) |

See **Rail Length Chart** for more details.

⚠ *Custom lengths may result in light gaps on the fixture. See* **Rail Length Chart** *for more details.*

**Mounting**

**CC** Ceiling Cable

**Cable Length**

*Field adjustable.*

| **48** | 48" cable (1219mm) |
|---|---|
| **96** | 96" cable (2438mm) |
| **ZZ** | Other (please specify) |

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| | | | | ▸▸ |
|---|---|---|---|---|
| Power Location | Power Type | | Voltage | Emergency Power |

**Power Location**

**Integral Power**

**IP** Integral Power

**Remote Power**

Specify mounting and harness length code example: **2R25, 4R25**...etc.

**Mounting Option**

**2R** Small Round Canopy
**4R** Large Round Canopy

**Wire Harness**

| **10** | 10' (3.048m) Wire Harness |
|---|---|
| **25** | 25' (7.62m) Wire Harness |
| **50** | 50' (15.24m) Wire Harness |
| **75** | 75' (22.86m) Wire Harness |
| **100** | 100' (30.48m) Wire Harness |

**Power Type**

**Flexible 1 to 1 Power**

| **AE** | 0-10v, 1.0% Dimming |
|---|---|
| **AT** | 0-10v, 0.1% Dimming |
| **AD** | DALI, 0.1% Dimming |
| **AX** | DMX, 100-0% Dimming |
| **AH** | Hi-lume 1% EcoSystem, Soft On / Fade to Black Technology, LDE[1] |
| **AH2** | ELV 1% 2-wire (Forward and Reverse Phase) [7] |

**Optimized Power**

Add 'O' to power type example: AE**O**, AT**O**...etc. [1]

**VodeNODE**

Add 'N' to power type for Flexible 1 to 1 Power
Add 'ON' to power type for Optimized Power
example: AE**N**, AT**N**, AE**ON**, AD**ON**...etc. [2]

**ZZ** Other (please specify)

See **Power Guide** *for driver features & limitations.*

**Voltage**

| **1** | 120V |
|---|---|
| **2** | 120V - 277V |
| **X** | Not Yet Specified |

**Emergency Power**

| **0** | No Emergency Power |
|---|---|
| **ZZ** | Emergency Power *(specify requirements)* |

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| ▸▸ | Z | | | |
|---|---|---|---|---|
| | LED Type | Lumen Output | Color Temperature | Optics |

**LED Type**

**Z** Zipper Board

**Lumen Output**

| **LO** | Low Output |
|---|---|
| **SO** | Standard Output |
| **HO** | High Output |
| **ZZ** | Other (please specify) |

See **IES Files** *page for details.*
See **Power Guide** *for driver features & limitations.*

**Color Temperature**

**90+ CRI**

| **27** | 2700K |
|---|---|
| **30** | 3000K |
| **35** | 3500K |
| **40** | 4000K |
| **ZZ** | Tunable White Available |

**See Guide** *for details.*

**Optics**

**Zipper Board (Z)**

| **2** | Diffuse, round |
|---|---|
| **G1** | 120° Batwing |
| **G2** | 120° FlyWing |

**Sensors [6]**

| **0** | None |
|---|---|
| **WSC** | Canopy with integrated Legrand Wattstopper sensor [5] |
| **LAC** | Canopy with integrated Lutron Athena sensor [5] |
| **ZZ** | Other (please specify) |

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| ▸▸ | |
|---|---|
| Finish | Options |

**Finish**

| **AL** | Clear Anodized |
|---|---|
| **WH** | White Powder Coat |
| **BL** | Black Anodized |
| **ZZ** | Other (please specify) |

**Options**

| **0** | None |
|---|---|
| **9** | 9' 18/3 Cord and Plug |
| **CPP** | Chicago Plenum Power |
| **LLLC** | Luminaire Level Lighting Controls |

**NOTES & LIMITATIONS**

[1] *Optimized Power is not available with Hi-lume 1% EcoSystem (AHO) Power Type.*

[2] *VodeNODE enclosure is not available with ELV 1% 2-wire (AH2) Power Type.*

[3] *9' 18/3 Cord and Plug only available with Remote Power (RP).*

[4] *Chicago Plenum not applicable for wall arm mounting.*

[5] *Rotating fixture as an uplight will interfere with sensor operation.*

[6] *Sensors, drivers and control units that are integrated into Vode fixtures are discrete components that communicate with network lighting controls. For more information about each network lighting control system, visit the manufacturer's website for additional system information and technical data sheets.*

[7] *Lengths of 24" and shorter are not supported due to driver limitations. Daisy chaining multiple fixtures to achieve minimum load is permitted but may introduce installation complexity—consult factory for layout guidance.*

*For general information about network lighting controls, consult the DesignLights Consortium® (DLC)* **Networked Lighting Control Qualified Product List**.

Listed to UL standards for damp location by a Nationally Recognized Testing Laboratory (NRTL) recognized by OSHA. Certain limitations exist for each Certification. Contact factory for verification.
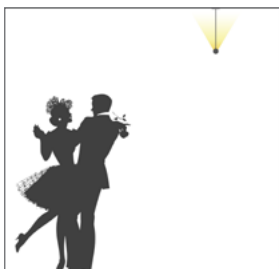
## Applications

### General Interior and Open Office





Square Inc, San Francisco, CA





Nektar Therapeutics Offices, San Francisco, CA





California Academy of Science, Terrace Cafe, San Francisco, CA

Sustainability & Certifications

# DECLARE

**International Living Future Institute (ILFI)**



All Vode Lighting linear light fixtures proudly carry the Red List Approved designation.



**Declare.** ℠

**Vode Adaptive Architectural Lighting Systems**
**Vode Lighting LLC**

**Final Assembly:** Sonoma, California, US
**Life Expectancy:** 10+ Year(s)
**End of Life Options:** Recyclable (100%)

**Ingredients:**

Steel; Anodized Aluminum (6063-T5 Alloy); Small Electrical Component (RoHS); Copper; Fluorinated Ethylene Propylene (masterbatch); Polymethyl methacrylate (PMMA); Stainless Steel; Polyoxymethylene Copolymer (POM); Styrene-butadiene polymer, hydrogenated; Poly(methyl methacrylate/butyl acrylate/styrene) (PMMA/BA/S); Styrene/butadiene copolymer; Distillates; Polypropylene; Calcium carbonate; Polycarbonate; EVA Copolymer; Methyl methacrylate (MMA); Polyphenylene Oxide; Brass; Tin, Organic

**Living Building Challenge Criteria:** Compliant

**I-13 Red List:**
☐ LBC Red List Free          % Disclosed: 100% at 100ppm
■ LBC Red List Approved      VOC Content: Not Applicable
☐ Declared

**I-10 Interior Performance:** Not Applicable
**I-14 Responsible Sourcing:** Not Applicable

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MANUFACTURER RESPONSIBLE FOR LABEL ACCURACY
INTERNATIONAL LIVING FUTURE INSTITUTE™ living-future.org/declare

# BAA X BABA

**Buy American Act / Build America
& Buy America Act Compliance**

Vode is dedicated to supporting domestic manufacturing and ensuring compliance with BAA and BABA requirements.

Given the complexity of our products, we recommend reaching out to **vodecares@vode.com** for confirmation regarding compliance for your specific project.



Click here to learn more: *US Department of Commerce*
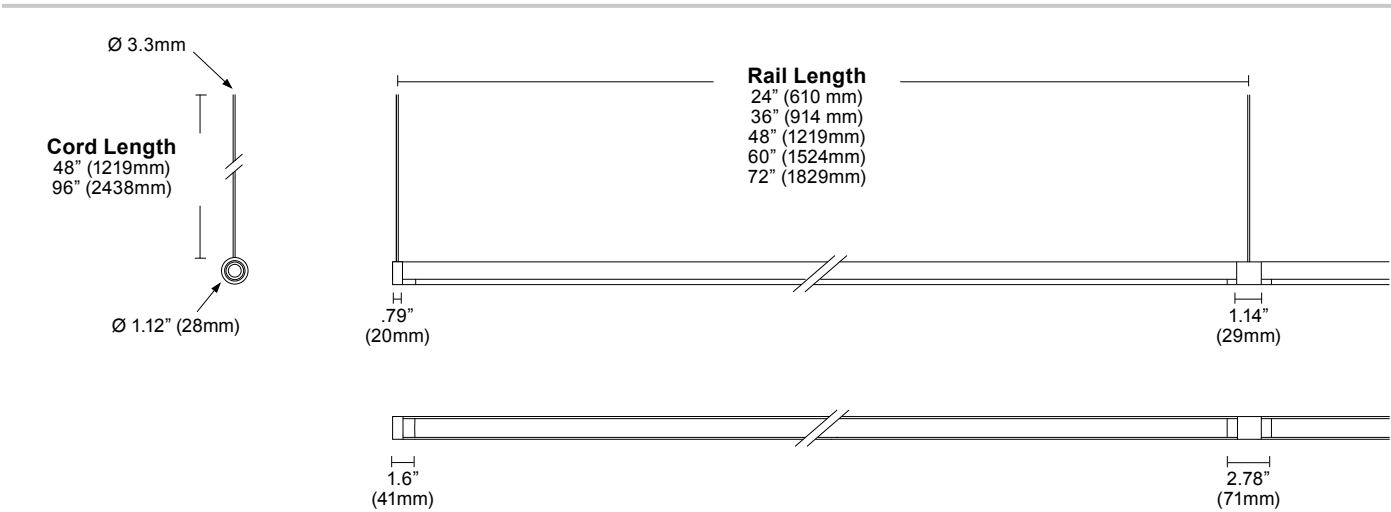
## Structure

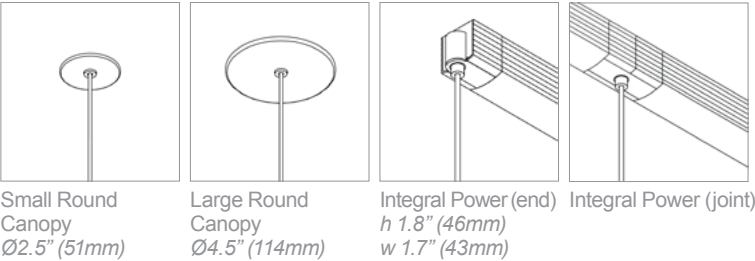| | |
|---|---|
| Rail Lengths | 24" (610mm) - 72" (1829mm). Modified lengths available. *See **Rail Length Chart** for more details.* |
| Rail Dimensions | Ø1.12" (28mm) x length. |
| Construction | Extruded and machined 6063 aluminum. |
| Mounting | Ceiling mount to jbox or driver housing. |
| Cable Length | 48" (1219mm) and 96" (2438mm) available. Field adjustable. Non-standard cable lengths available. |
| System Run Length | 24" (610mm) minimum. Unlimited maximum length. |
| Operating Temperature | 32°F to 104°F (0°C to 40°C). |
| Humidity | 0-85%, non-condensing. |
| System Weight | 0.65lbs per ft (0.29kg per 305mm) Power supply and housing not included. |

## Materials

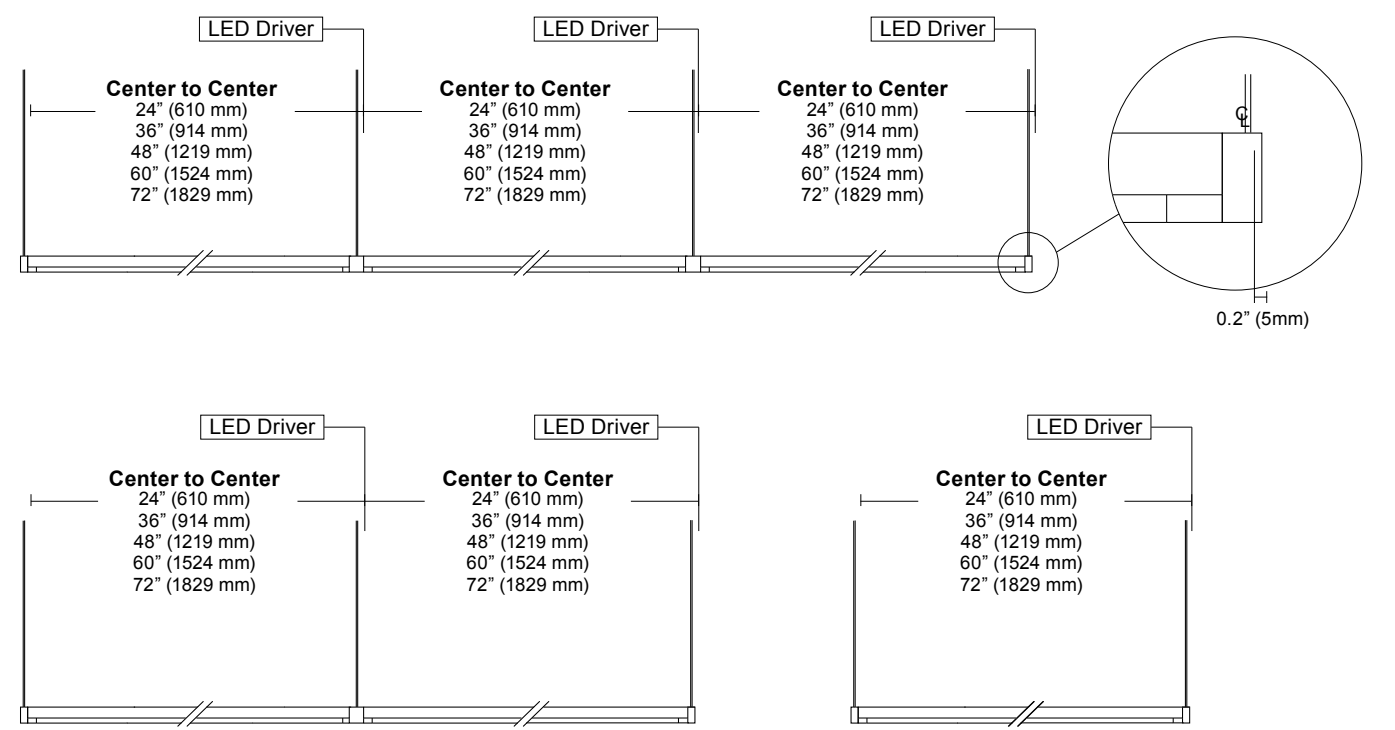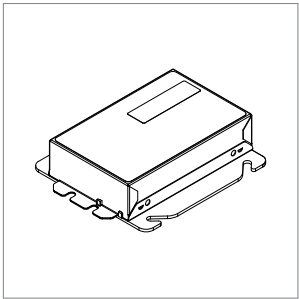| | |
|---|---|
| LED Board Construction | Aluminum core PCB, black LCP connectors, RoHS compliant. |
| Lens | High-impact extruded acrylic glass (PMMA). |
| Baffle | 6063 aluminum, RoHS compliant painted finish. |
| Suspension Cable | Ø3.3mm, 22/2 AWG, PVC or TPE and RoHS compliant, Red List Approved. |
| Power Cable | Ø4mm, 18/2 AWG, Plenum (CMP) rated semi-rigid PVC or FEP, flame tested UL-910, Red List Approved. |
| Cable Connectors | Unfilled black nylon, rated UL 94 V-0, halogen free, PVC or FEP overmold, RoHS compliant, Red List Approved. |
| Remote Linear Power Housing (RLP) | 20.7" x 2.375" x 2.53", 0.054" formed Galvanized Steel. |
| Remote Brick Power Housing (RBP) | 4.32" x 3.37" x .078" Galvanized Steel mounting plate. |

## Dimensions

Ø 3.3mm

**Cord Length**
48" (1219mm)
96" (2438mm)

Ø 1.12" (28mm)

**Rail Length**
24" (610 mm)
36" (914 mm)
48" (1219mm)
60" (1524mm)
72" (1829mm)

.79"
(20mm)

1.14"
(29mm)

1.6"
(41mm)

2.78"
(71mm)

## Mounting Options

Small Round
Canopy
Ø2.5" (51mm)

Large Round
Canopy
Ø4.5" (114mm)

Integral Power (end)
h 1.8" (46mm)
w 1.7" (43mm)

Integral Power (joint)

## Layout



| LED Driver |
| **Center to Center** |
| 24" (610 mm) |
| 36" (914 mm) |
| 48" (1219 mm) |
| 60" (1524 mm) |
| 72" (1829 mm) |

0.2" (5mm)

Corner and Shapes Available (Square, Rectangle, L-Shape, U-Shape, ZigZag) **See Guide** for details.

## Power and Controls

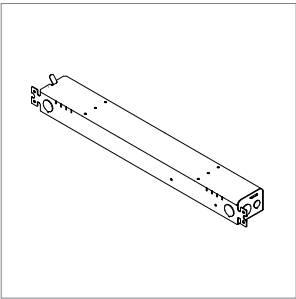| | |
|---|---|
| Power Type | Class 2 (<60V output) constant current driver. |
| Dimming Controls | Dimming (0.1%, 1%), 0-10V, DALI, DMX, Hi-lume 1% are available. See **Power Guide** for details. |
| Input Voltage | 120V - 277V, 50/60hz. |
| Power Location | Integral or remote power. Maximum remote distance up to 100' (30.5m) *depending* on driver selection. See **Power Guide** for details. |

Vode power locations fall into two categories: integral and remote. Remote power is locating the power supply away from the fixture. Remote power comes in two housing styles: brick style and linear style. Consult **Power Guide** to determine which type you will receive. Integral power is locating the power supply into the lighting fixture or mounting.
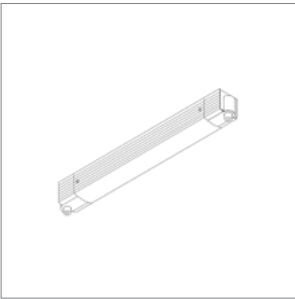
### Remote Brick Power Housing



Supplied for some remote power applications. One remote power supply housing is supplied for each rail. Provided driver mounting plate fits standard 4" metal, square J-Boxes with a minimum volume of 21 in³ (J-Box not provided).
See **Tech Sheet** for details.
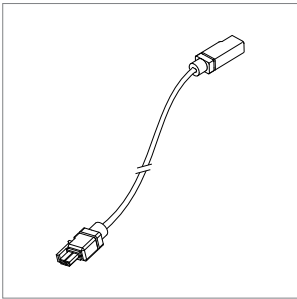
### Remote Linear Power Housing



One remote power supply housing is supplied with each power supply. All Vode linear remote drivers come in a 0.054" (0.8mm) formed galvanized steel power supply housing with five (5) knockouts: (4) 1-1/8", (1) 7/8" and (1) 9/16". Accommodates standard linear remote power supplies.
See **Tech Sheet** for details.

### Integral Power



Houses integral power supply. Direct conduit feed is recommended, but integral power supply housing will mount to any standard North America 4" j-box. Mounts to most surfaces. Blocking is recommended at all arm junctions.
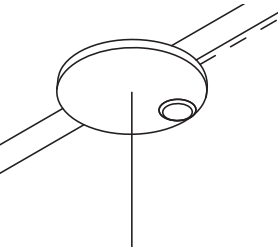See **Tech Sheet** for details.

### Wire Harness



Wire harness connects driver to rail section. Lengths of 10' (3.0m) & 25' (7.6m) with snap-lock connectors for quick and easy installation. Multiple harnesses may be combined for lengths up to 100' (30.5m).
See **Tech Sheet** for details.

# vodeCONNECT Sensors
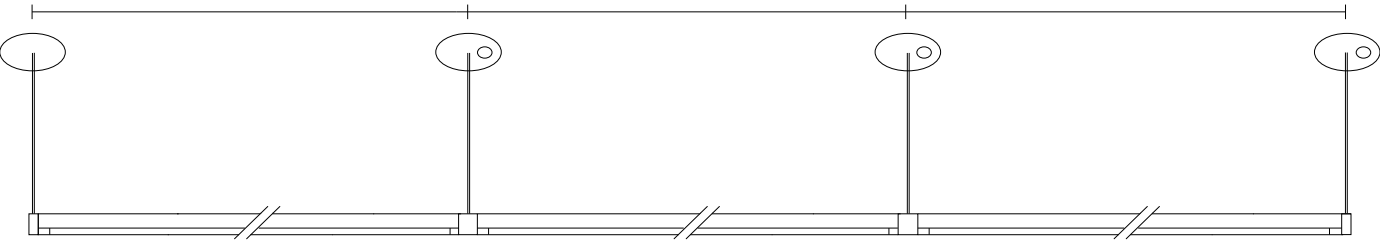
## Canopy with integrated sensor

## Sensor partners

## Integrated canopy sensor layout [1]

*1 sensor per fixture. See **vodeCONNECT brochure** for more details.*
**NOTES**: 1. Available with Large Round Canopy only.
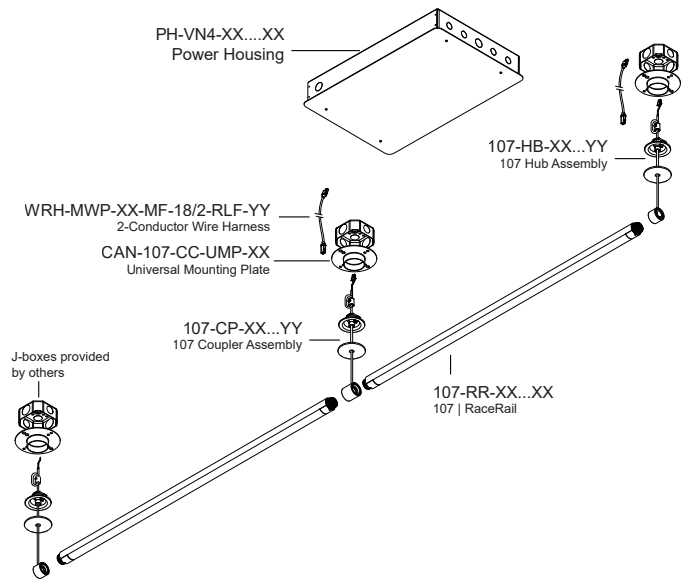
## Compatible sensors

Lutron Athena

Legrand Wattstopper
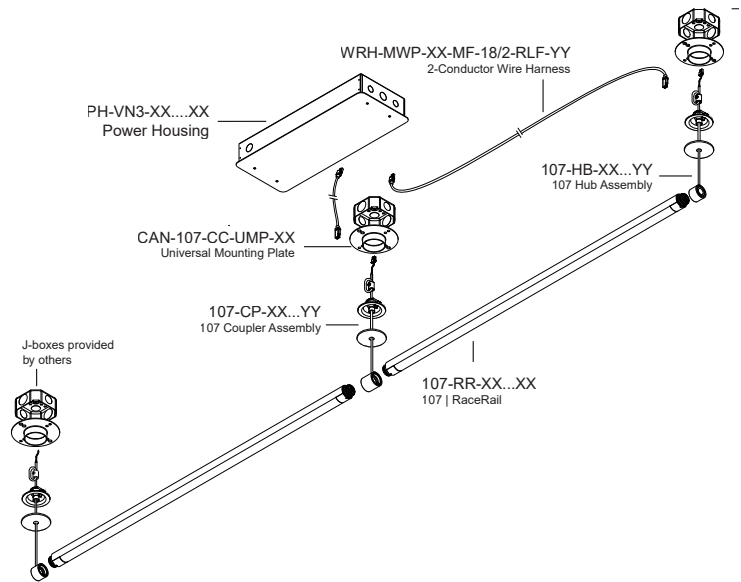
## Power and Controls

### Flexible 1 to 1 power

For Flexible 1 to 1 Power, Vode supplies one single output driver per fixture, allowing each fixture to be controlled independently. Direct/Indirect fixtures are supplied with two single output drivers, allowing the direct and indirect lighting to be controlled independently. Consult **Power Guide** to determine which type you will receive.

PH-VN4-XX....XX
Power Housing

107-HB-XX...YY
107 Hub Assembly

WRH-MWP-XX-MF-18/2-RLF-YY
2-Conductor Wire Harness

CAN-107-CC-UMP-XX
Universal Mounting Plate

107-CP-XX...YY
107 Coupler Assembly

J-boxes provided
by others

107-RR-XX...XX
107 | RaceRail

### Optimized Power

To optimize power, Vode configures specifications with drivers that have 2 or 4 outputs. Depending on system configurations and power requirements, up to 4 fixtures can be powered from a 4-output driver. Consult **Power Guide** to determine which type you will receive.

IMPORTANT: Each fixture will still require individual wire harnesses, as shown below.

WRH-MWP-XX-MF-18/2-RLF-YY
2-Conductor Wire Harness

PH-VN3-XX....XX
Power Housing

107-HB-XX...YY
107 Hub Assembly

CAN-107-CC-UMP-XX
Universal Mounting Plate

107-CP-XX...YY
107 Coupler Assembly

J-boxes provided
by others

107-RR-XX...XX
107 | RaceRail

Note: Drawings not to scale, for reference only.

# Finish

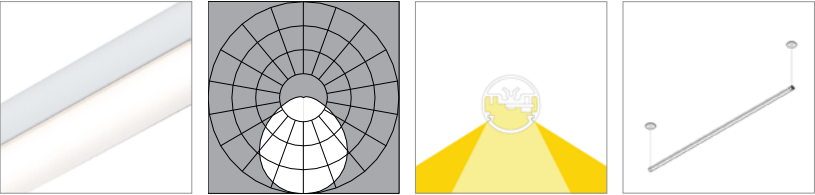| Clear Anodized Finish | White Powder Coat Finish | Black Anodized Finish |
|---|---|---|
|  |  |  |
| Clear Anodized Rail, White Canopy/Clear Anodized Integral Power, White Cable | White Rail, White Canopy/Integral Power, White Cable | Black Rail, Black Canopy/Integral Power, Black Cable |

# Performance | Zipper Board Optics

Zipper Board Optics design has 72 diodes per foot (305mm).
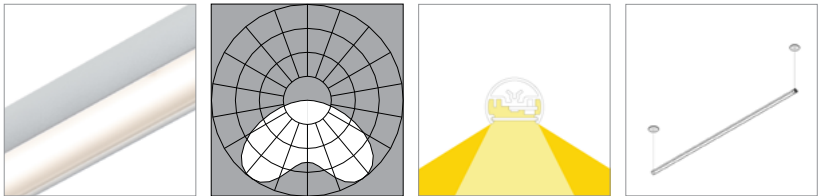
**Diffuse, round (2)**



L90 >100,000 hours

| **90 CRI** (90min., 96 avg.) | | | | |
|---|---|---|---|---|
| **Low Output (LO)** | 2700K | 3000K | 3500K | 4000K |
| Efficacy - Lumens per Watt | 109 | 112 | 114 | 115 |
| Lumens per foot (305mm) | 373 | 385 | 392 | 396 |
| Watts per foot (305mm) | 3.5 | 3.5 | 3.5 | 3.5 |
| | | | | |
| **Standard Output (SO)** | 2700K | 3000K | 3500K | 4000K |
| Efficacy - Lumens per Watt | 125 | 129 | 132 | 133 |
| Lumens per foot (305mm) | 746 | 769 | 785 | 793 |
| Watts per foot (305mm) | 6.0 | 6.0 | 6.0 | 6.0 |
| | | | | |
| **High Output (HO)** | 2700K | 3000K | 3500K | 4000K |
| Efficacy - Lumens per Watt | 116 | 120 | 122 | 123 |
| Lumens per foot (305mm) | 1416 | 1461 | 1491 | 1506 |
| Watts per foot (305mm) | 12.3 | 12.3 | 12.3 | 12.3 |

# Performance | Zipper Board Optics

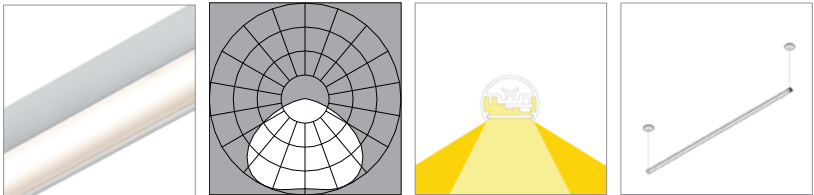Zipper Board Optics design has 72 diodes per foot (305mm).

## 120° Batwing (G1)



L90 >100,000 hours

**90 CRI** (90min., 96 avg.)

| Low Output (LO) | 2700K | 3000K | 3500K | 4000K |
|---|---|---|---|---|
| Efficacy - Lumens per Watt | 85 | 87 | 89 | 90 |
| Lumens per foot (305mm) | 315 | 325 | 332 | 335 |
| Watts per foot (305mm) | 3.8 | 3.8 | 3.8 | 3.8 |

| Standard Output (SO) | 2700K | 3000K | 3500K | 4000K |
|---|---|---|---|---|
| Efficacy - Lumens per Watt | 106 | 109 | 111 | 112 |
| Lumens per foot (305mm) | 630 | 650 | 663 | 670 |
| Watts per foot (305mm) | 6.0 | 6.0 | 6.0 | 6.0 |

| High Output (HO) | 2700K | 3000K | 3500K | 4000K |
|---|---|---|---|---|
| Efficacy - Lumens per Watt | 98 | 101 | 103 | 104 |
| Lumens per foot (305mm) | 1197 | 1235 | 1260 | 1273 |
| Watts per foot (305mm) | 12.4 | 12.4 | 12.4 | 12.4 |

## 120° FlyWing (G2)



L90 >100,000 hours

**90 CRI** (90min., 96 avg.)

| Low Output (LO) | 2700K | 3000K | 3500K | 4000K |
|---|---|---|---|---|
| Efficacy - Lumens per Watt | 93 | 96 | 98 | 99 |
| Lumens per foot (305mm) | 319 | 329 | 336 | 339 |
| Watts per foot (305mm) | 3.5 | 3.5 | 3.5 | 3.5 |

| Standard Output (SO) | 2700K | 3000K | 3500K | 4000K |
|---|---|---|---|---|
| Efficacy - Lumens per Watt | 107 | 110 | 113 | 114 |
| Lumens per foot (305mm) | 639 | 659 | 672 | 679 |
| Watts per foot (305mm) | 6.0 | 6.0 | 6.0 | 6.0 |

| High Output (HO) | 2700K | 3000K | 3500K | 4000K |
|---|---|---|---|---|
| Efficacy - Lumens per Watt | 99 | 103 | 105 | 106 |
| Lumens per foot (305mm) | 1213 | 1252 | 1277 | 1290 |
| Watts per foot (305mm) | 12.3 | 12.3 | 12.3 | 12.3 |

## Patent Marking

This website (https://www.lmpg.com/patents-trademarks) is provided to satisfy the virtual patent marking provisions of applicable jurisdictions. Some products listed may be covered by additional patents not referenced here. To learn more, visit https://www.vode.com/about/legal

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