

VRB2C-LED Round Bollard

DUAL FUNCTION, VANDAL-RESISTANT, CONCRETE SHAFT

Type:
Job:
Catalog number:

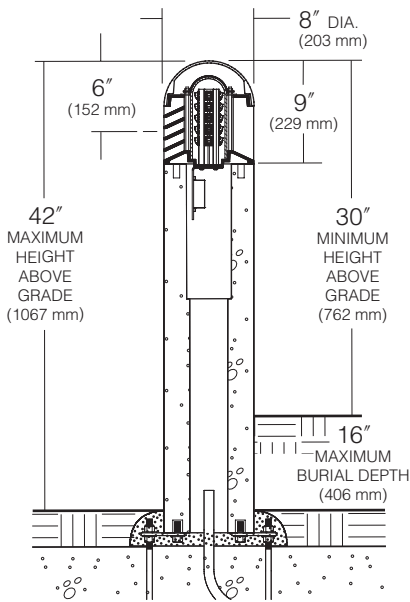
Approvals:

VRB2C	/	/	/	/
Fixture	Electrical Module	Top Cap Finish	Concrete Shaft Finish	Option
See page 2				

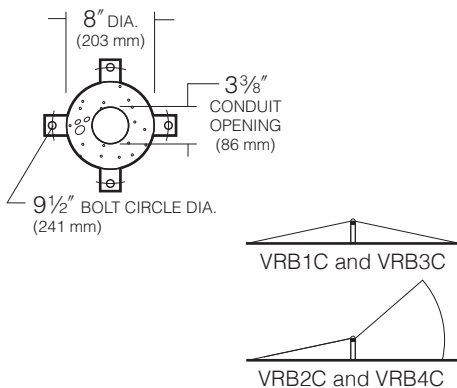
Specifications

VRB-LED Models
 10 - 20 Diodes

VRB2C - Dual Function Luminaire (Concrete Shaft)
 Maximum weight: 115 lb



**BASE PLAN
 VRB
 CONCRETE SHAFT**



Domed Top Cap: Aluminum die-cast secured to louvers by concealed allen screws in keyhole slots. For relamping access, allen screws shall not require complete removal.

Louvers: One-piece, sand-cast with horizontal and vertical blades. Horizontal louvers shall provide 210° of downlighting with source cutoff above horizontal. Vertical louvers shall provide 150° of non-cutoff lighting. Horizontal louver blades shall have a 1 3/4" depth with a 65° upward pitch from horizontal. Vertical louver blades shall have a 1 3/4" depth with a 30° spacing. Louver assembly shall be secured to shaft by four internal tie rods.

Lamp Enclosure: One-piece tempered molded glass with internal flutes and full gasketing at bottom edge.

Fixture Head: Allows flow-through ventilation around and above the lamp enclosure.

Electronic Module: All electrical components are either UL or ETL recognized, mounted on a single plate and factory prewired with quick disconnect plugs. Driver is rated for -40°F starting and has a 0-10V dimming interface for multi-level illumination options.

Optical Module: Each LED equipped with a directional optic for maximum beam angle projecting through louver stack spacings. LED boards to be mounted to an anodized inter-locking heat sink extrusion. (Type I) two 5-LED boards for a total of 10-LED. (Type III) three 5-LED boards for a total of 15-LED. (Type V) four 5-LED boards for a total of 20-LED. Available in 580nm Amber, 3000K, 4200K and 5100K color temperatures.

Anchor Bolts: Four C" x 10" + 2" zinc plated L-hooks, each with two nuts, washers and a rigid pressed board template.

Material: Cement shall conform to current specifications for "Portland Cement." ASTM C150, Type I or II. Aggregates shall meet current requirements of "Specifications for Concrete Aggregates," ASTM C33. Water shall be clean and free from deleterious amounts of silt, oil, acids, alkalis or organic materials. Wire for reinforcement shall conform to ASTM A185. Steel for lugs and plates shall conform to ASTM A36, or A283 grade D.

Surface: Medium sand-blasted with anti-graffiti sealer. Available colors are: Charcoal, Brown, Natural Gray or White, integral in concrete mix.

Cure and Strength: Allows for completion of the hydration process, and result in a 28 day compressive strength of not less than 4,500 psi.

Manufacture: Fiberglass molds used to insure uniform parts. Mold parting lines may be slightly visible in finished parts.

Anchorage: Four steel mounting tabs for installation on four 3/8" x 10" + 2" zinc electroplated L-hook anchor bolts. Each anchor bolt is supplied with two nuts, two washers, and a rigid pressed board template.

Shipment: Palletized with adequate hold-downs to prevent load movement in transit.

Finish: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat finish.

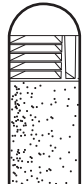
Listed to: UL 1598 Standard for Luminaires - UL 8750 Standard for Safety for Light Emitting Diode (LED) Equipment for use in Lighting Products and CSA C22.2#250.0 Luminaires. RoHS compliant. Meets Buy American provisions within ARRA.

CAUTION: Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.



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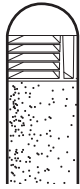


Standard Features

<p>Fixture</p>	<p>Cat. No. VRB2C Dual Function, Concrete Shaft, Domed Top</p>					
<p>Electrical Module LED = Light Emitting Diode</p>	<p>Cat. Nos. for LED Electrical Modules available:</p> <table border="0" style="width: 100%;"> <tr> <td style="text-align: center; vertical-align: top;"> <p>xL</p> <p>Source:</p> <ul style="list-style-type: none"> 10L= 10 LED (IES Type I) 15L= 15 LED (IES Type III) 20L= 20 LED (IES Type V) </td> <td style="text-align: center; vertical-align: top;"> <p>xK</p> <p>Color Temperature:</p> <ul style="list-style-type: none"> 2K = 580nm - Amber 3K = 3000K 4K = 4200K 5K = 5100K </td> <td style="text-align: center; vertical-align: top;"> <p>UV</p> <p>Voltage:</p> <ul style="list-style-type: none"> UV Universal Voltage shall range from 120V-277V </td> </tr> </table>		<p>xL</p> <p>Source:</p> <ul style="list-style-type: none"> 10L= 10 LED (IES Type I) 15L= 15 LED (IES Type III) 20L= 20 LED (IES Type V) 	<p>xK</p> <p>Color Temperature:</p> <ul style="list-style-type: none"> 2K = 580nm - Amber 3K = 3000K 4K = 4200K 5K = 5100K 	<p>UV</p> <p>Voltage:</p> <ul style="list-style-type: none"> UV Universal Voltage shall range from 120V-277V 	
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<p>Finish TGIC thermoset polyester powder coat paint applied over a titanated zirconium conversion coating on fixture top cap. Concrete shaft surface color is integral in concrete mix. Available in any combination of paint and concrete finishes listed at right.</p>	<p>Top Cap</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"> <p>Cat. No.: Color:</p> <ul style="list-style-type: none"> BLS Black Gloss Smooth BLT Black Matte Textured DBS Dark Bronze Gloss Smooth DBT Dark Bronze Matte Textured GTT Graphic Matte Textured LGS Light Grey Gloss Smooth </td> <td style="width: 50%;"> <p>Cat. No.: Color:</p> <ul style="list-style-type: none"> LGT Light Grey Matte Textured PSS Platinum Silver Gloss Smooth VGT Verde Green Matte Textured WHS White Gloss Smooth WHT White Matte Textured CC¹ Custom Color </td> </tr> </table> <p>Concrete Shaft</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"> <ul style="list-style-type: none"> BR-C Brown CH-C Charcoal </td> <td style="width: 50%;"> <ul style="list-style-type: none"> NG-C Natural Gray WH-C White </td> </tr> </table> <p>NOTE: Black and Dark Bronze colors will produce slightly less louver brightness than Light Grey or White. ¹ Custom colors subject to additional charges, minimum quantities and extended lead times. Available on fixture head only. Consult representative. Custom color description: _____</p>		<p>Cat. No.: Color:</p> <ul style="list-style-type: none"> BLS Black Gloss Smooth BLT Black Matte Textured DBS Dark Bronze Gloss Smooth DBT Dark Bronze Matte Textured GTT Graphic Matte Textured LGS Light Grey Gloss Smooth 	<p>Cat. No.: Color:</p> <ul style="list-style-type: none"> LGT Light Grey Matte Textured PSS Platinum Silver Gloss Smooth VGT Verde Green Matte Textured WHS White Gloss Smooth WHT White Matte Textured CC¹ Custom Color 	<ul style="list-style-type: none"> BR-C Brown CH-C Charcoal 	<ul style="list-style-type: none"> NG-C Natural Gray WH-C White
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<ul style="list-style-type: none"> BR-C Brown CH-C Charcoal 	<ul style="list-style-type: none"> NG-C Natural Gray WH-C White 					
<p>Battery Back-up Cat. No. EM No Option</p>	<p>Internal battery pack provides 90 minutes of supplemental light at 50% of initial lamp lumens.</p> <div style="text-align: right;">  <p>battery back-up</p> </div>					
<p>0-10V Dimming Interface</p>	<p>Driver has a 0-10V dimming interface with a dimming range of 10-100%. Is compatible with most control systems. Note: Not compatible with current sourcing dimmers. Controls compatible via Pink and Purple dimming lead.</p> <div style="text-align: right;">  </div>					

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Lumen Data

Spectroradiometric			
	3000K Average	4200K Average	5100K Average
Correlated Color Temp. CCT (K)	2800K - 3175K	3800K - 4600K	4600K - 5600K
Color Rendering Index (CRI)	≥75	≥70	≥65
Power Factor	>.90	>.90	>.90

Projected Lumen Maintenance		
mA	50,000 hrs	100,000 hrs
350mA	N/A	N/A

Based on 20LED version.

Electrical Drive Current - @350mA						
Volts - AC	Type 1		Type 3		Type 5	
	Amps - AC	System Watts	Amps - AC	System Watts	Amps - AC	System Watts
120	0.11	13	0.16	19	0.21	25
208	0.06	13	0.09	19	0.12	25
240	0.05	13	0.08	19	0.10	25
277	0.05	13	0.07	19	0.09	25

B.U.G. Rating (TM15) in Lumens where B = Backlight, U = Uplight, G = Glare			
Temperature	TYPE 1	TYPE 3	TYPE 5
3000K	N/A	N/A	B1 U2 G1
4200K	N/A	N/A	B1 U2 G1
5100K	N/A	N/A	B1 U3 G1

Absolute Lumens			
Temperature	TYPE 1	TYPE 3	TYPE 5
3000K	N/A	N/A	816
4200K	N/A	N/A	1012
5100K	N/A	N/A	1063

LED performance and lumen output continues to improve at a rapid pace. For custom optics and color temperature configurations, contact factory.