FORMS+SURFACES®

LIGHT COLUMN BOLLARD

PRODUCT DATA

Sleek in stainless steel, the **Light Column Bollard** integrates into a wide range of settings and offers numerous design possibilities. Bollard columns are available in 5" or 6" diameters. Illumination options include LED, RGBW LED, or linear fluorescent lamps, and multiple ways to direct light: no shield for symmetrical lighting, or 180° and 360° shields in standard or custom designs. Non-illuminated and security core variations, and matching Light Column Pathway Bollards and Light Column Pedestrian Lighting make it easy to create a cohesive look across functionalities.

MATERIAL & CONSTRUCTION DETAILS

CONFIGURATIONS	MATERIALS & FINISHES	LED LAMPS & DRIVER
• Light Column Bollards are available in two sizes. Series 500 columns have 5" (127 mm) diameter tubular stainless steel; Series 600 columns have 6" (152 mm) diameter tubular stainless steel. • To complement the illuminated bollard, a non-illuminated version is also available in both Series 500 and Series 600. • Bollards can be specified with a removable base, with the exception of the RGBW LED option. • Weather resistant GFCI outlet for maintenance access is available for Series 600, illuminated, non-RGBW, non-security bollards. • Door for optional GFCI outlet is accessed using a flathead screwdriver. See drawings on our website for details.	• Illuminated bollards have a tubular stainless steel column, white-frosted acrylic lens, and a stainless steel head cap. • Non-illuminated bollards are tubular stainless steel with welded stainless steel cap. • Standard stainless steel finish is Satin. • For optional powdercoat colors see the Forms+Surfaces Powdercoat Chart. Custom RAL colors are available for an upcharge.	• Custom LED light engine with Cree® LEDs. • Features advanced LED technology with 17W, 3000K warm white and 4000K natural white LEDs. • 17W LED driver input power is 100-277V, -30ºC starting temperature. • Driver has 0-10V dimming capabilites. • LED driver certifications include: IP66 (waterproof) enclosure, and Class 2 rated output (UL8750)
		RGBW LED LAMPS & DRIVER
		• RGBW LED board utilizing Cree® LEDs. • RGBW, 4000K white, and dynamic white via DMX512 protocol and onboard decoder interface. Controller to be provided by others. • 78W LED driver with 100-277V input power, -30ºC starting temperature. • LED driver certifications include: IP66 (waterproof) enclosure, and Class 2 rated output (UL8750)
WEIGHT	**SHIELD OPTIONS**	**FLUORESCENT LAMPS & BALLASTS**
• Series 500, illuminated: 30 lbs (14 kg); non-illuminated: 32-33 lbs (15 kg) • Series 600, illuminated: 34 lbs (15 kg); non-illuminated: 34-39 lbs (15-18 kg) • Series 600, security core, illuminated: 170 lbs (77 kg); non-illuminated: 177 lbs (80 kg)	• Four standard shield designs are available for an upcharge. Refer to page 3 for details. • Custom shield designs with either 180° or 360° coverage are also available. • Shields are offered for Series 500 and Series 600 illuminated and RGBW bollards.	• Linear fluorescent lamps are available in two options. See lamp information on page 3. • Ballast is an electronic, thermally protected, 120/277V combination for two F14T5 lamps, -18°C starting temperature, <10% THD, Class A sound rating. Please call for HO ballast specifications.

INSTALLATION & MAINTENANCE

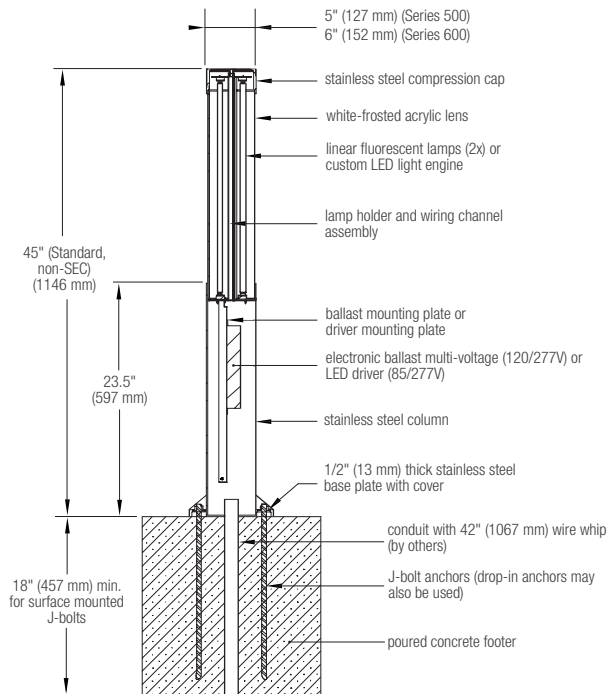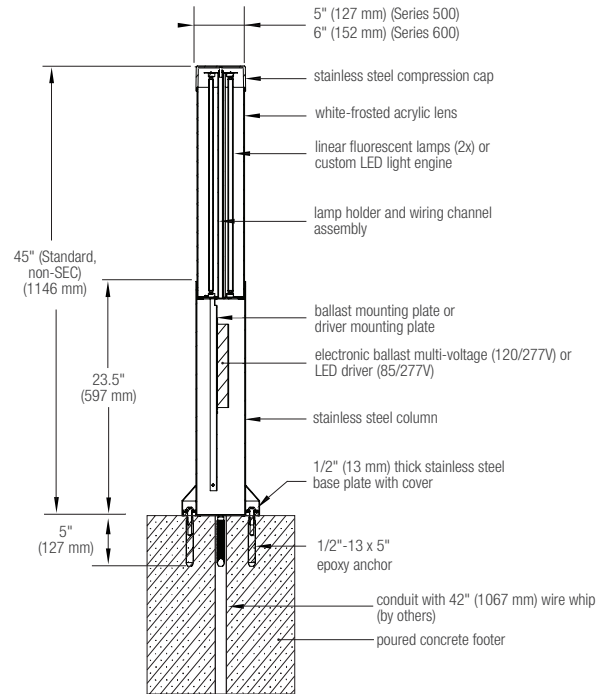| INSTALLATION	MAINTENANCE
• Standard mounting is surface mount with 1/2"-13x18" galvanized steel J-bolt anchors. 1/2" thick stainless steel base plate is slotted for rotational capability. • Security bollards have an embedded security core and are available for Series 600 bollards, except for the RGBW option, for an upcharge. • All bollards, except for the RGBW option, can be specified with a removable base. • RGBW bollards are connected via a daisy-chained hard-wired control signal in and out of each bollard. • Installation of a surge protector as part of each units wiring is recommended. • Necessary hardware is included for all mounting options. Templates are available upon request.	• Metal surfaces can be cleaned as needed using a soft cloth or brush with warm water and a mild detergent. Avoid abrasive cleaners.

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LIGHT COLUMN BOLLARD

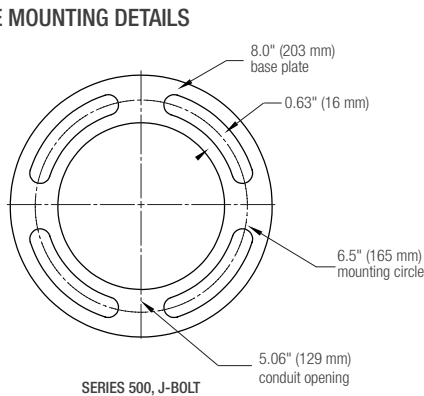PRODUCT DATA

ILLUMINATED BOLLARDS

NOMINAL DIMENSIONS

SURFACE MOUNT WITH J-BOLTS

5" (127 mm) (Series 500)
6" (152 mm) (Series 600)

stainless steel compression cap

white-frosted acrylic lens

linear fluorescent lamps (2x) or
custom LED light engine

lamp holder and wiring channel
assembly

45" (Standard,
non-SEC)
(1146 mm)

ballast mounting plate or
driver mounting plate

electronic ballast multi-voltage (120/277V) or
LED driver (85/277V)

23.5"
(597 mm)

stainless steel column

1/2" (13 mm) thick stainless steel
base plate with cover

conduit with 42" (1067 mm) wire whip
(by others)

J-bolt anchors (drop-in anchors may
also be used)

18" (457 mm) min.
for surface mounted
J-bolts

poured concrete footer

SURFACE MOUNT WITH REMOVABLE BASE*

5" (127 mm) (Series 500)
6" (152 mm) (Series 600)

stainless steel compression cap

white-frosted acrylic lens

linear fluorescent lamps (2x) or
custom LED light engine

lamp holder and wiring channel
assembly

45" (Standard,
non-SEC)
(1146 mm)

ballast mounting plate or
driver mounting plate

electronic ballast multi-voltage (120/277V) or
LED driver (85/277V)

23.5"
(597 mm)

stainless steel column

1/2" (13 mm) thick stainless steel
base plate with cover

5"
(127 mm)

1/2"-13 x 5"
epoxy anchor

conduit with 42" (1067 mm) wire whip
(by others)

poured concrete footer

BASE PLATE MOUNTING DETAILS

8.0" (203 mm)
base plate

0.63" (16 mm)

6.5" (165 mm)
mounting circle

5.06" (129 mm)
conduit opening

SERIES 500, J-BOLT

9.0" (229 mm)
base plate

0.63" (16 mm)

7.5" (190 mm)
mounting circle

6.06" (154 mm)
conduit opening

**SERIES 600, J-BOLT OR
SECURITY CORE BASE**

* Not Available with RGBW LED option.

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LIGHT COLUMN BOLLARD

ILLUMINATED BOLLARDS - CONTINUED

LAMP DESCRIPTIONS

LAMP	DESCRIPTION	BASE	COLOR TEMPERATURE	LUMINAIRE LUMENS*		B.U.G. RATING	LED STARTING TEMPERATURE °C
				500	600		
3000K LED	17W custom LED light engine	N/A	3,000K	1542	1545	B1-U4-G1	-30
4000K LED	17W custom LED light engine	N/A	4,000K	1542	1545	B1-U4-G1	-30
RGBW LED	78W custom LED light engine	N/A	RGBW	varies	varies	varies	-30
(2) F14T5	14W T5 linear fluorescent	Mini bi-pin	4,100K	2220	2195	B1-U4-G2	N/A
(2) F24T5/HO	24W T5HO linear fluorescent	Mini bi-pin	4,100K	3288	3252	B1-U5-G2	N/A

*Luminaire lumens represents the absolute photometry for the luminaire, and indicates the lumens out of the entire fixture.

STANDARD SHIELD DESIGNS

KENTE   PERFORATED   SCAPE   BUBBLES
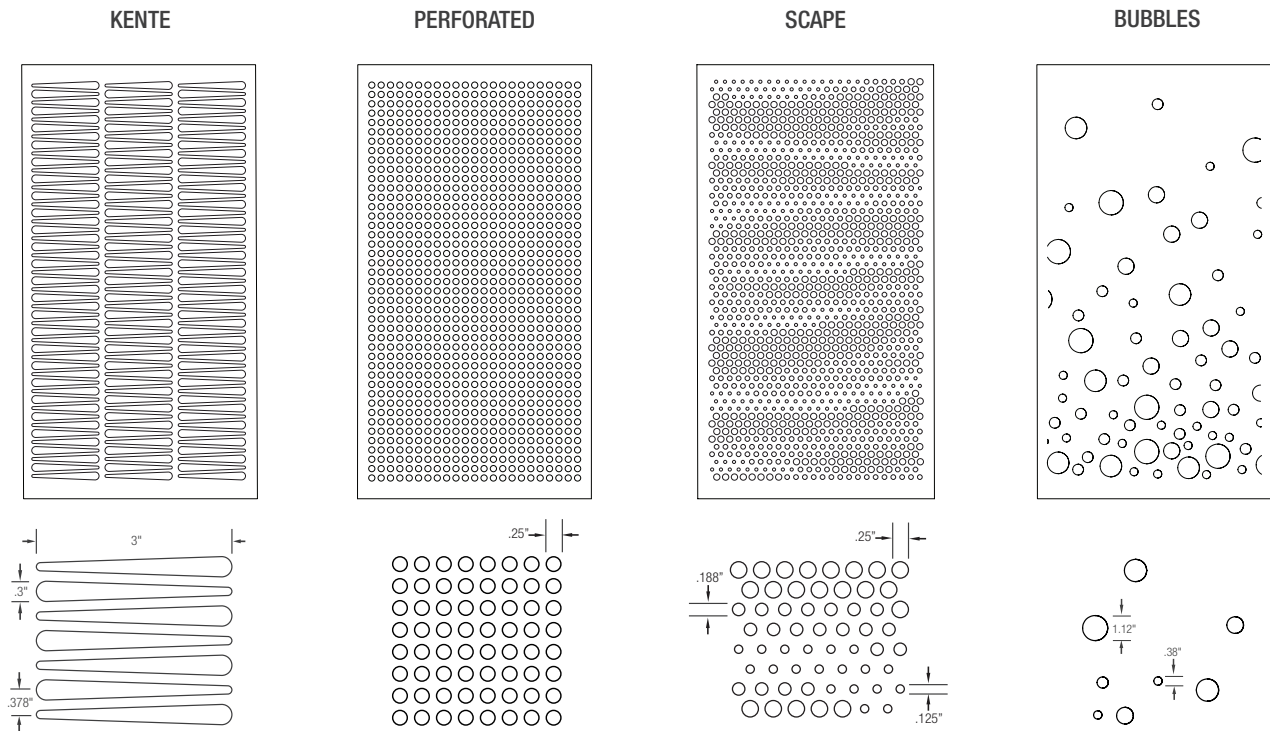
	KENTE		PERFORATED		SCAPE		BUBBLES	
	Series 500	Series 600	Series 500	Series 600	Series 500	Series 600	Series 500	Series 600
180 Bollard	N/A	•	•	•	•	•	•	•
360 Bollard	N/A	N/A	•	•	•	•	•	•

NOTE: "•" indicates that the shield design is available in the selected series and size combination.

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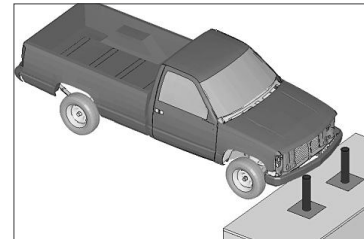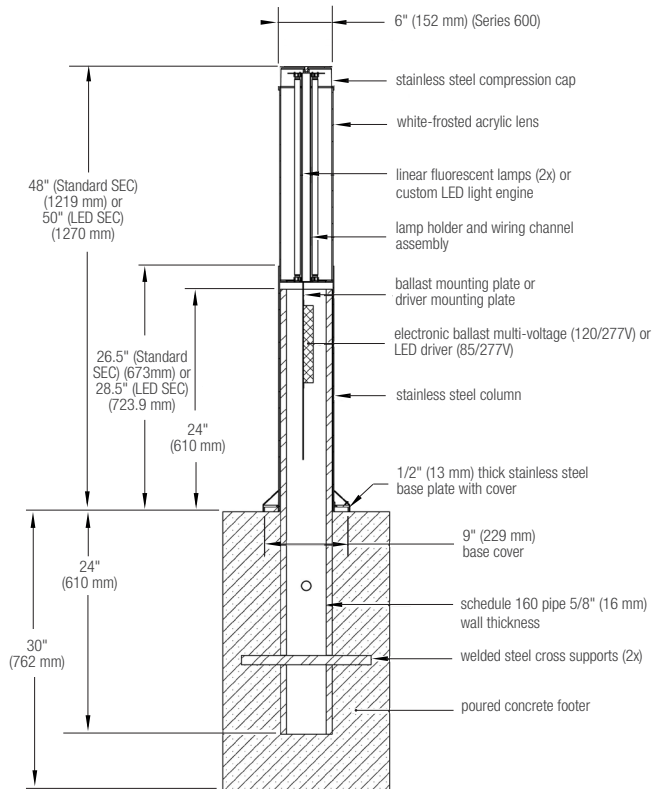
LIGHT COLUMN BOLLARD

ILLUMINATED BOLLARDS - CONTINUED

NOMINAL DIMENSIONS - EMBEDDED SECURITY CORE

6" (152 mm) (Series 600)

stainless steel compression cap

white-frosted acrylic lens

linear fluorescent lamps (2x) or custom LED light engine

lamp holder and wiring channel assembly

ballast mounting plate or driver mounting plate

electronic ballast multi-voltage (120/277V) or LED driver (85/277V)

stainless steel column

1/2" (13 mm) thick stainless steel base plate with cover

9" (229 mm) base cover

schedule 160 pipe 5/8" (16 mm) wall thickness

welded steel cross supports (2x)

poured concrete footer

48" (Standard SEC) (1219 mm) or 50" (LED SEC) (1270 mm)

26.5" (Standard SEC) (673mm) or 28.5" (LED SEC) (723.9 mm)

24" (610 mm)

24" (610 mm)

30" (762 mm)

Crash scenario with 5,500 lb pickup truck approaching embedded bollard system at 40 mph
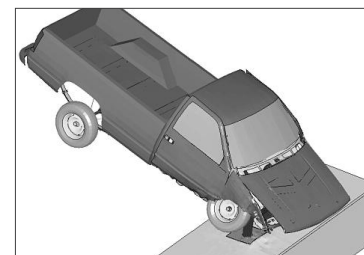
Full-scale crash 330ms after impact

OPTIONAL SECURITY CORE

Site security is a major concern in today's unpredictable world. Public and private buildings, government facilities, campuses and public parks are all susceptible to accidental, as well as deliberate vehicle infringement. Design professionals, city planners, facilities managers and engineers must now be increasingly sensitive to the safety and security requirements of public and private spaces. Security bollards placed at ingress points are an excellent way to guard against vehicle infringement while still allowing pedestrian access.

Until recently, security bollards have frequently taken the form of generic pipes or cylinders that offer little in the way of design or lighting functionality. Now, an optional enhancement to our Light Column Bollards provides a solution that blends security, performance and style. By adding a pre-engineered security core to our Series 600 design, we're able to respond to the needs of today's public spaces with a beautiful illuminated bollard that meets stringent high-impact crash requirements.

Forms+Surfaces' security bollards have been tested using a Finite Element Analysis (FEA) by a professional engineering consultant. FEA is a software-based tool commonly used in the automotive industry and used extensively for crash test simulations. Tests were performed using our bollards set in permanent concrete footings spaced 42" center-to-center apart (to assure a minimum of two bollards being hit) and struck by a vehicle at a 90 degree impact. The impact simulation found the bollards to be successful in stopping a 5,500 lb. vehicle traveling at a minimum test velocity of 40 mph.

In addition to our illuminated security bollards, we can also provide non-illuminated options. Refer to page 5 for details. Note that security cores are not available with the RGBW LED option. Please contact Streetscapes to discuss design and installation considerations for Light Column Bollards with security cores.
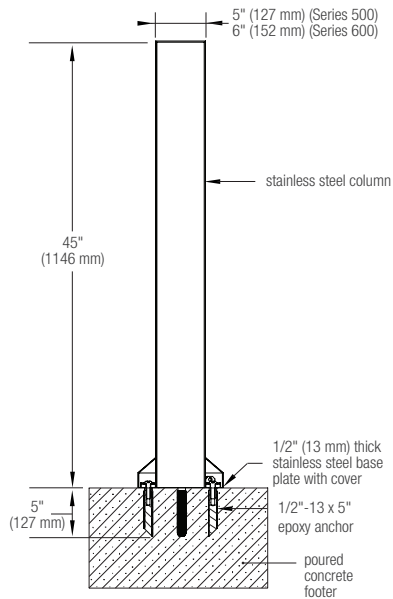
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STREETSCAPES
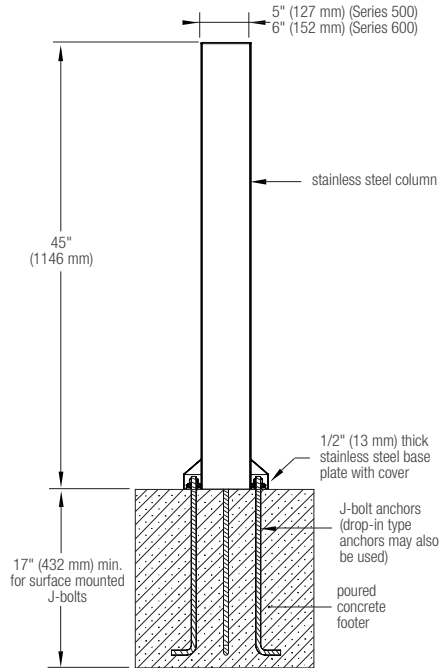303.398.7040   STREET-SCAPES.COM

LIGHT COLUMN BOLLARD

PRODUCT DATA

NON-ILLUMINATED BOLLARDS

NOMINAL DIMENSIONS

SURFACE MOUNT WITH REMOVABLE BASE

5" (127 mm) (Series 500)
6" (152 mm) (Series 600)

stainless steel column

45"
(1146 mm)

1/2" (13 mm) thick
stainless steel base
plate with cover

5"
(127 mm)

1/2"-13 x 5"
epoxy anchor

poured
concrete
footer

SURFACE MOUNT WITH J-BOLTS

5" (127 mm) (Series 500)
6" (152 mm) (Series 600)

stainless steel column

45"
(1146 mm)

1/2" (13 mm) thick
stainless steel base
plate with cover

J-bolt anchors
(drop-in type
anchors may also
be used)

17" (432 mm) min.
for surface mounted
J-bolts

poured
concrete
footer

EMBEDDED SECURITY CORE

6" (152 mm) (Series 600)

stainless steel column

45"
(1143 mm)

24"
(610 mm)

carbon steel

1/2" (13 mm) thick
stainless steel base
plate with cover

9" (229 mm)
base cover

24"
(610 mm)

welded steel
cross supports (2x)

schedule 160 pipe
5/8" (16 mm) wall
thickness

30"
(762 mm)

poured
concrete
footer

BASE PLATE MOUNTING DETAILS

8.0" (203 mm)
base plate

6.5" (165 mm)
mounting circle

5.06" (129 mm)
conduit opening

SERIES 500, REMOVABLE BASE

0.63" (16 mm)

8.0" (203 mm)
base plate

6.5" (165 mm)
mounting circle

5.06" (129 mm)
conduit opening

SERIES 500, J-BOLT

9.0" (229 mm)
base plate

7.5" (190 mm)
mounting circle

6.06" (154 mm)
conduit opening
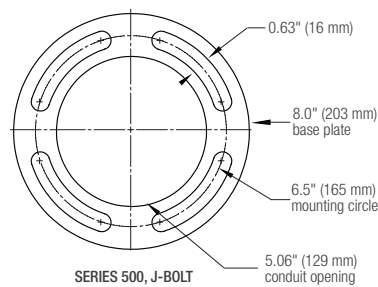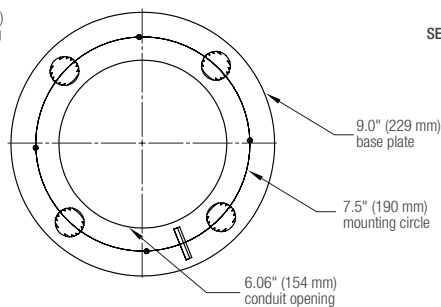
SERIES 600, REMOVABLE BASE
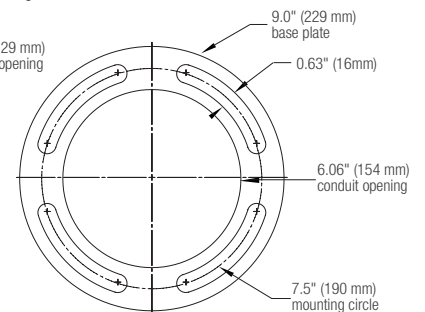
9.0" (229 mm)
base plate

0.63" (16mm)

6.06" (154 mm)
conduit opening

7.5" (190 mm)
mounting circle

**SERIES 600, J-BOLT OR
SECURITY CORE BASE**

FORMS+SURFACES®

LIGHT COLUMN BOLLARD

CERTIFICATIONS
- UL and C-UL listed for wet locations (linear fluorescent).
- ETL and C-ETL listed for wet locations (LED).

ENVIRONMENTAL CONSIDERATIONS
- Please refer to the Light Column Bollard Environmental Data Sheets for detailed environmental impact information.
- Light Column Bollard has high recycled content and is highly recyclable.
- Powdercoat finishes are no- or low-VOC, depending on color.
- Low maintenance.

MODEL NUMBERS AND DESCRIPTIONS

MODEL	DESCRIPTION
LBLCO-504	Light Column Bollard, Series 500, illuminated
LBLCO-604	Light Column Bollard, Series 600, illuminated
LBLCO-504-RGBW	Light Column Bollard, Series 500, illuminated, RGBW
LBLCO-604-RGBW	Light Column Bollard, Series 600, illuminated, RGBW
LBLCO-504-N	Light Column Bollard, Series 500, non-illuminated
LBLCO-604-N	Light Column Bollard, Series 600, non-illuminated

PRODUCT OPTIONS
The following options are available for an upcharge

Upgrade to embedded security core (available for Series 600)*	Add 360° custom shield (customer-supplied artwork)
Upgrade to removable base*	GFCI outlet (available for Series 600, illuminated, non-security bollards)*
Add 180° perforated shield in standard designs	Add powdercoat color from Forms+Surfaces Powdercoat Chart
Add 360° perforated shield in standard designs	Custom RAL powdercoat color
Add 180° custom shield (customer-supplied artwork)	Custom fixture height

*Not available with RGBW LED option.

TO ORDER SPECIFY: Quantity, model, finish, lamp, shield (if applicable), and mounting.

NOTE: Because different computers will render colors and textures differently, actual colors and finishes may vary slightly from those shown here.

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