LIGHT COLUMN BOLLARD

PRODUCT DATA

FORMS+SURFACES®

LIGHT COLUMN BOLLARD

PRODUCT DATA

Light Column Bollards integrate into a wide range of settings and offer numerous design possibilities. Sleek in stainless steel, bollard columns are available in 5" or 6" diameters. Illumination options include LED lamps in white or RGBW, 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 are 5" (127 mm) diameter tubular stainless steel; Series 600 columns are 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 option. • Weather resistant GFCI outlet for maintenance access is available for Series 600, illuminated, non-RGBW, non-security bollards.	• 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. • Stainless steel is standard with a Satin finish and Ceramiloc treatment. See below for details • 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 3000K warm white and 4000K natural white LEDs. • 10W LED driver input power is 120-277V, -30ºC starting temperature. • Driver has forward-phase, reverse-phase and 0-10V dimming capabilites. • LED driver certifications include: IP66 (waterproof) enclosure, and Class 2 rated output (UL8750)
SHIELD OPTIONS	**WEIGHT**	**RGBW LED LAMPS & DRIVER**
• Directional shields are available for Series 500 and Series 600 illuminated and RGBW bollards. • Four standard shield designs are available for an upcharge. Refer to page 2 for details. • Custom shield designs with either 180° or 360° coverage are also available.	• 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, deep set security core, illuminated: 170 lbs (77 kg); non-illuminated: 177 lbs (80 kg)	• 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. • 96W LED driver with 100-277V input power, -30ºC starting temperature. • LED driver certifications include: IP66 (waterproof) enclosure, and Class 2 rated output (UL8750)

CERAMILOC TREATMENT

Ceramiloc is an invisible surface treatment that offers significantly enhanced protection from weather and graffiti and increases the maintenance ease of stainless steel. Ceramiloc combines ceramic durability with an unparalleled ability to lock out water spots, fingerprints, graffiti and more. Patented technology bonds nano-silica particles to the surface of the stainless steel. The treatment minimally alters the surface appearance of the stainless and offers numerous benefits:

- Easily Cleaned: The Ceramiloc treatment creates a surface that simultaneously resists fingerprints and is easy to clean. Water spots, grease marks and more can be quickly wiped away. It also creates an “anti-graffiti” surface – even permanent marker is easily removed with a clean microfiber towel and water.
- Durable: Ceramiloc-treated materials are abrasion- and scratch-resistant. The treatment is permanent, UV stable, and will not degrade or discolor over time.
- Environmentally Sound: The Ceramiloc treatment is a no-VOC, water-based process. Because Ceramiloc surfaces are so easily maintained, cleaning solutions and maintenance are kept to a minimum.

INSTALLATION & MAINTENANCE

INSTALLATION	MAINTENANCE
• Standard mounting is surface mount with 1/2"-13x18" J-bolt anchors. 1/2" thick stainless steel base plate is slotted for rotational capability. • Light Column Bollards, Series 600, in both illuminated and non-illuminated designs are available with an optional embedded security core that accommodates two mounting styles: deep set mounting achieves an S10-P1 security rating; shallow mounting achieves an S30-P1 security rating. • 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. • Stainless steel mounting hardware sold separately. 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.

© 2023 Forms+Surfaces® | All dimensions are nominal. Specifications and pricing subject to change without notice. For the most current version of this document, please refer to our website at www.forms-surfaces.com.

ILLUMINATED BOLLARDS

LAMP DESCRIPTIONS

LAMP	DESCRIPTION	LUMINAIRE LUMENS*		B.U.G. RATING	LED STARTING TEMPERATURE ˚C
		500	600		
3000K LED	10W custom LED light engine	1006	990	B0-U3-G1	-30
4000K LED	10W custom LED light engine	1006	990	B0-U3-G1	-30
RGBW LED	78W custom LED light engine	varies	varies	varies	-30

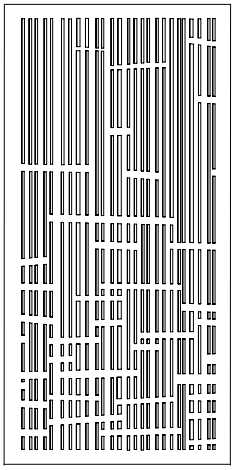
*Luminaire lumens represents the absolute photometry for the luminaire, and indicates the lumens out of the entire fixture.

NOTE: Polar candela and isofootcandle plots can be found on the Light Column Bollard product page on our website.

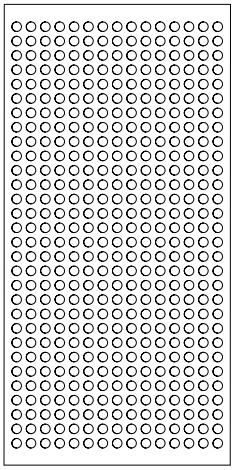
STANDARD SHIELD DESIGNS

Shields are available in 180° or 360° configurations with standard or custom designs. Solid 180° shields are also available.

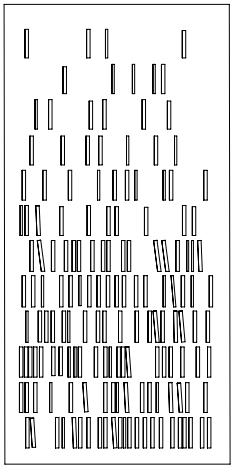
STRUM



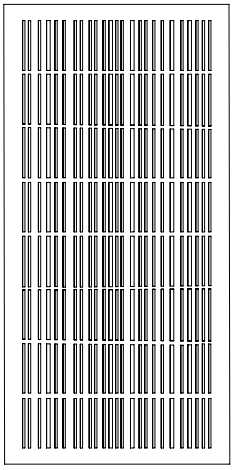
SECTOR



SCALE



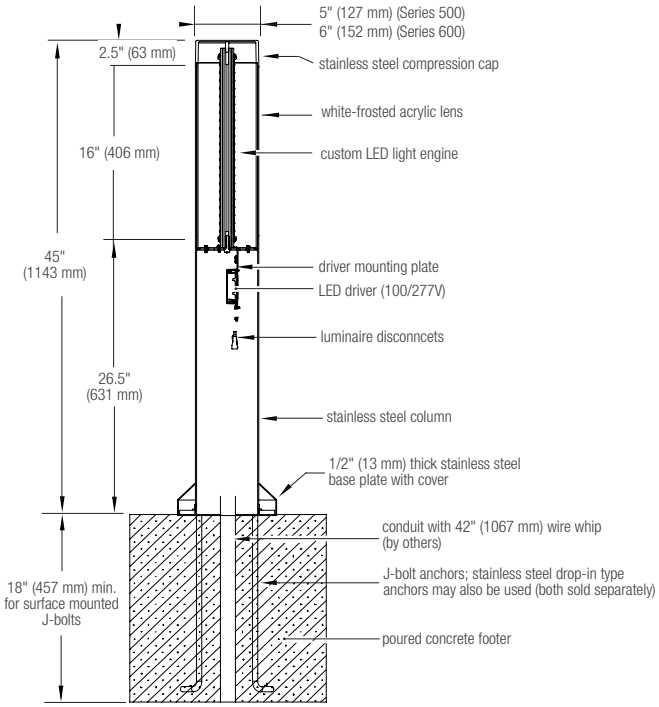
STRIA



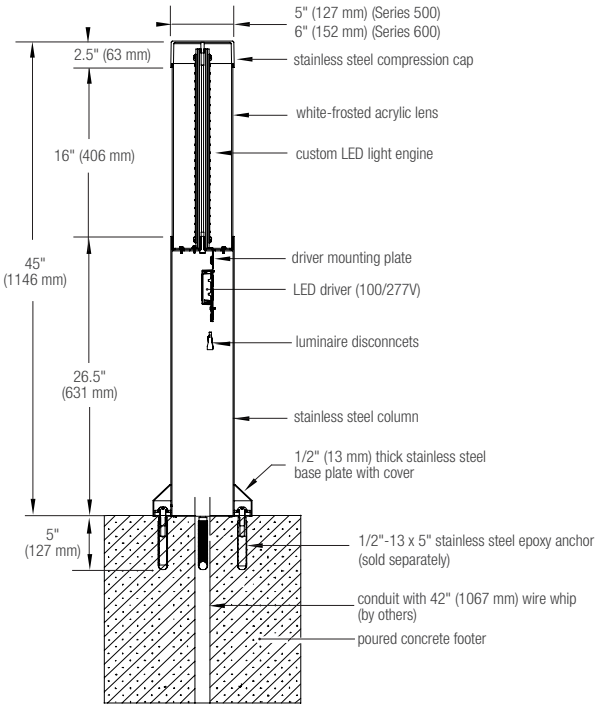
© 2023 Forms+Surfaces® | All dimensions are nominal. Specifications and pricing subject to change without notice. For the most current version of this document, please refer to our website at www.forms-surfaces.com.

ILLUMINATED BOLLARDS - CONTINUED

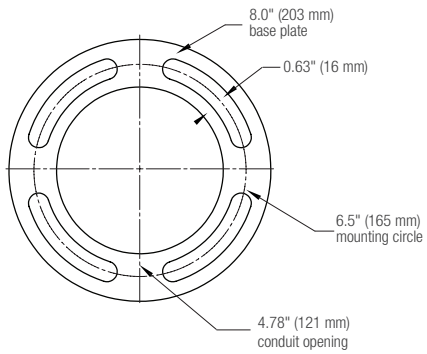
SURFACE MOUNT WITH J-BOLTS



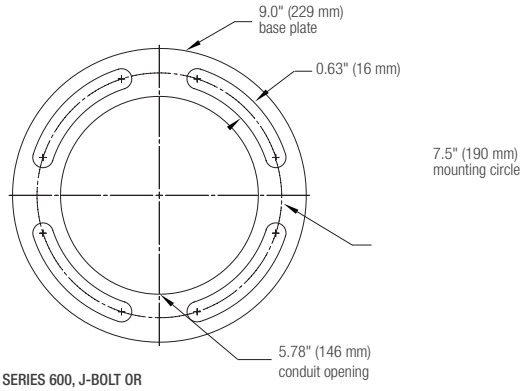
SURFACE MOUNT WITH REMOVABLE BASE*



BASE PLATE MOUNTING DETAILS



SERIES 500, J-BOLT



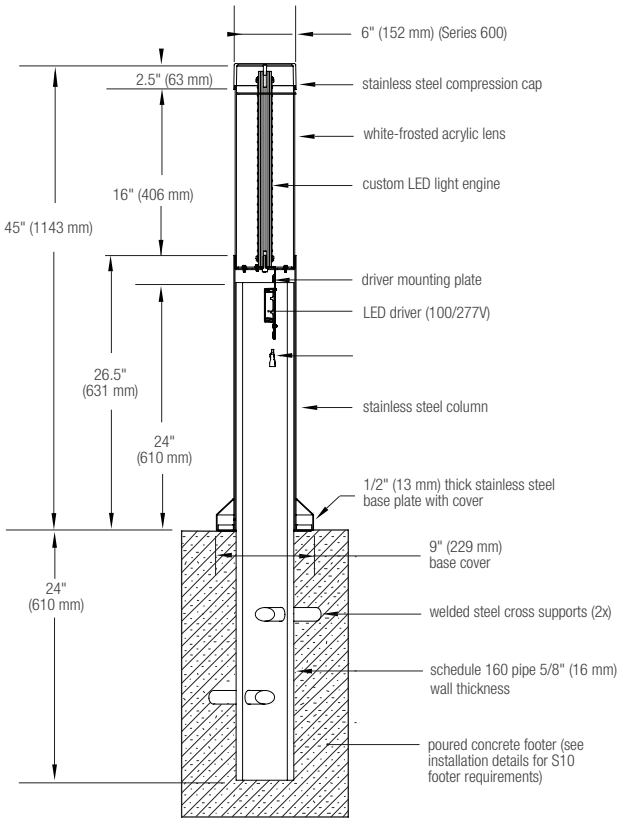
SERIES 600, J-BOLT OR
SECURITY CORE BASE

* Not Available with RGBW LED option.

© 2023 Forms+Surfaces® | All dimensions are nominal. Specifications and pricing subject to change without notice. For the most current version of this document, please refer to our website at www.forms-surfaces.com.

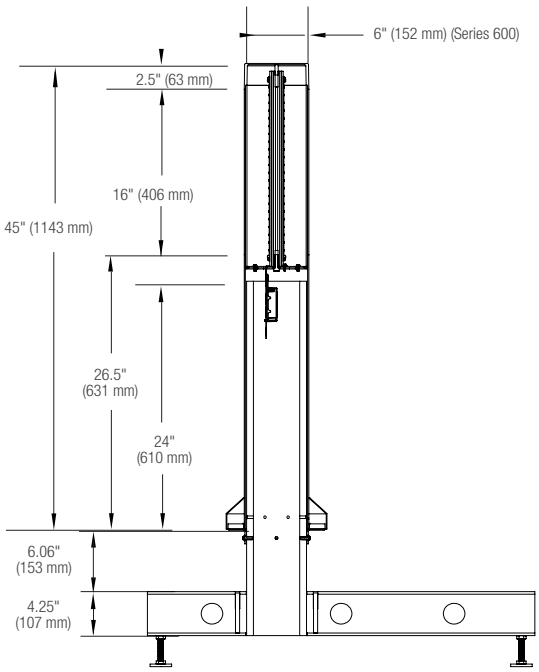
ILLUMINATED BOLLARDS - CONTINUED

DEEP SET EMBEDDED S10-P1 SECURITY CORE*



See page 5 for Base Plate Detail

SHALLOW MOUNT EMBEDDED SC30-P1 SECURITY CORE*



* Not Available with RGBW LED option.

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 allowing pedestrian access.

Most security bollards have taken the form of generic pipes and cylinders that offered little in the way of design or lighting functionality. An integral security solution is available as an optional enhancement to Forms+Surfaces' Light Column lighting bollards. By adding a pre-engineered and fully-tested security core to the existing Light Column design, we can offer a beautiful and efficient lighting bollard that also meets the stringent hi-impact crash requirements normally attained only with unattractive pipe barriers.

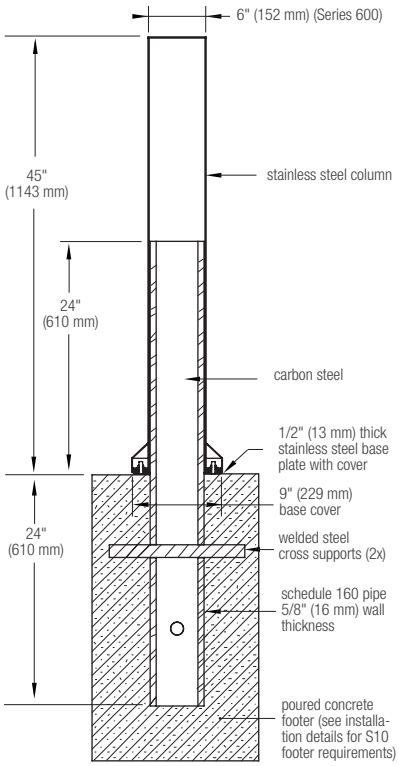
Light Column SC30-P1 and S10-P1 security bollards have been tested using a Finite Element Analysis (FEA) by a professional engineering consultant. FEA is a software-based tool commonly used in the automotive industry and used extensively for crash test simulations. Tests were performed using our bollard set in permanent concrete footings and struck by a vehicle at a 90 degree impact. The impact simulation found the bollards to be successful in stopping a 5,000 lb. small passenger vehicle going 10 mph with less than one meter penetration.

Please contact us to discuss design and installation considerations for Light Column bollards with security cores.

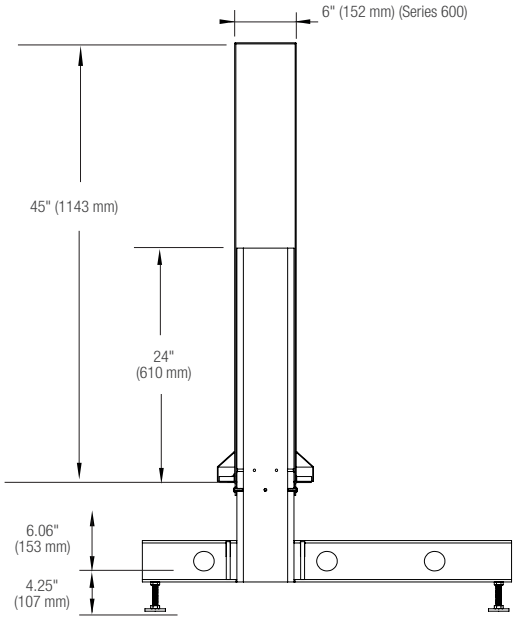
© 2023 Forms+Surfaces® | All dimensions are nominal. Specifications and pricing subject to change without notice. For the most current version of this document, please refer to our website at www.forms-surfaces.com.

NON-ILLUMINATED BOLLARDS

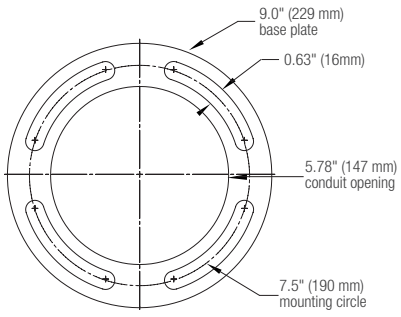
DEEP SET EMBEDDED S10-P1 SECURITY CORE*



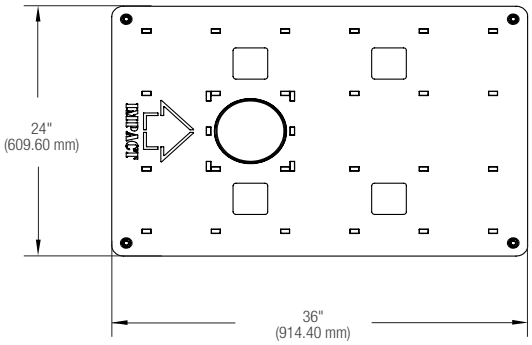
SHALLOW MOUNT EMBEDDED SC30-P1 SECURITY CORE*



BASE PLATE MOUNTING DETAIL



SERIES 600, J-BOLT OR SECURITY CORE BASE

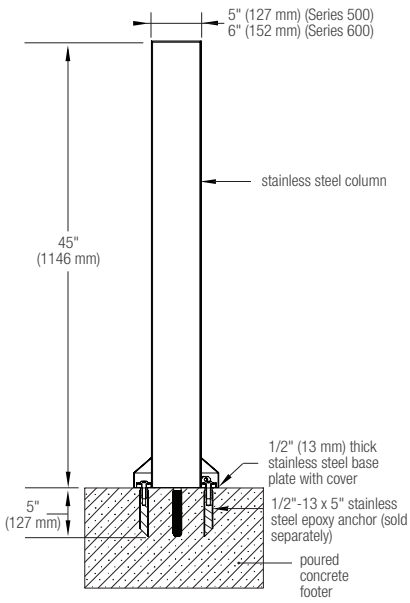


* Not Available with RGBW LED option.

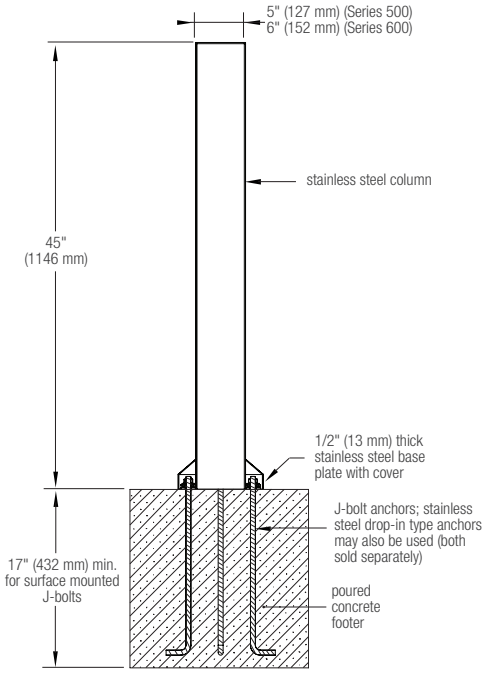
© 2023 Forms+Surfaces® | All dimensions are nominal. Specifications and pricing subject to change without notice. For the most current version of this document, please refer to our website at www.forms-surfaces.com.

NON-ILLUMINATED BOLLARDS

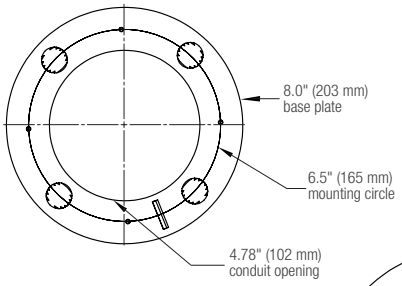
SURFACE MOUNT WITH REMOVABLE BASE



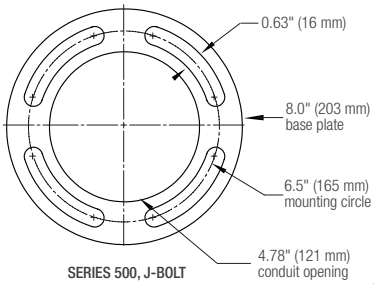
SURFACE MOUNT WITH J-BOLTS



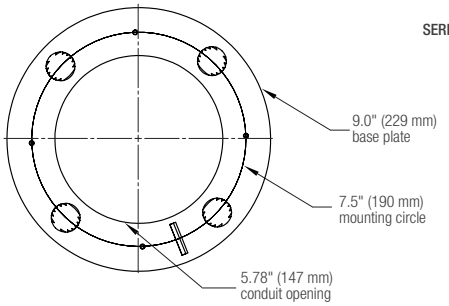
BASE PLATE MOUNTING DETAILS



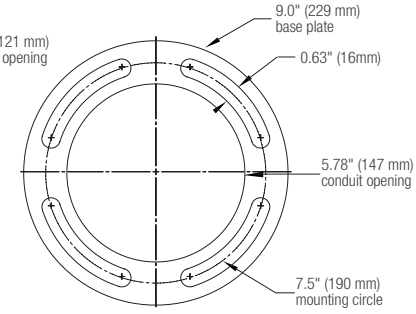
SERIES 500, REMOVABLE BASE



SERIES 500, J-BOLT



SERIES 600, REMOVABLE BASE



SERIES 600, J-BOLT OR
SECURITY CORE BASE

© 2023 Forms+Surfaces® | All dimensions are nominal. Specifications and pricing subject to change without notice. For the most current version of this document, please refer to our website at www.forms-surfaces.com.

LIGHT COLUMN BOLLARD

CERTIFICATIONS

• ETL and C-ETL listed for wet locations.

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
LBLCB-504	Light Column Bollard, Series 500, illuminated
LBLCB-604	Light Column Bollard, Series 600, illuminated
LBLCB-504-RGBW	Light Column Bollard, Series 500, illuminated, RGBW
LBLCB-604-RGBW	Light Column Bollard, Series 600, illuminated, RGBW
LBLCB-504-N	Light Column Bollard, Series 500, non-illuminated
LBLCB-604-N	Light Column Bollard, Series 600, non-illuminated

PRODUCT OPTIONS

The following options are available for an upcharge

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

*Not available with RGBW LED option.

LEAD TIME: 6 to 8 weeks. Shorter lead times may be available upon request. Please contact us to discuss your specific timing requirements.

PRICING: Please contact us at **800.451.0410** or **sales@forms-surfaces.com**. At Forms+Surfaces, we design, manufacture and sell our products directly to you. Our sales team is available to assist you with questions about our products, requests for quotes, and orders. Territory Managers are located worldwide to assist with the front-end specification and quoting process, and our in-house Project Sales Coordinators follow your project through from the time you place an order to shipment.

TO ORDER SPECIFY: Quantity, model, finish, lamp option, shield (if applicable), and mounting (surface mount or embedded security core). Quote/Order Forms are available on our website to lead you through the specification process in a simple checkbox format.

© 2023 Forms+Surfaces® | All dimensions are nominal. Specifications and pricing subject to change without notice. For the most current version of this document, please refer to our website at www.forms-surfaces.com.