



HELIO™ BOLLARD, SERIES 600

PRODUCT DATA





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Helio Bollards, Series 600 bring an elegant simplicity to public spaces of all kinds. Constructed of stainless steel, fixtures 6" in diameter are available in illuminated and non-illuminated variations with or without a security core option. Illuminated bollards feature a frosted acrylic lens, 180° or 360° light distribution, and Cree® LEDs in 3000K warm white and 4000K neutral white. The bollards provide downward-facing light to help minimize light pollution and glare. For expanded performance, the Helio family also includes Helio M40/K8 and M50/K12 Security Bollards 11.5" in diameter (Series 1200) and Helio M30/K4 Security Bollards 9.25" in diameter (Series 900), all in illuminated and non-illuminated designs.

MATERIAL & CONSTRUCTION DETAILS

CONFIGURATIONS	LED LAMPS & DRIVER	INSTALLATION
<ul style="list-style-type: none"> Series 600 Helio Bollards are 40" high x 6" in diameter. Illuminated bollards are available with 180° and 360° light distribution options. Non-illuminated versions are also available. Series 600 Helio Bollards are available with an optional security core (illuminated or non-illuminated). 	<ul style="list-style-type: none"> Custom LED light engine with Cree® LEDs. 3000K warm white and 4000K neutral white color temperatures. 424 lumen output. Less than 5% upward lumen output. LED driver input voltage is 120-277VAC, -30°C minimum starting temperature. Driver has reverse-phase, forward-phase, and 0-10V dimming capabilities. LED driver certifications include: IP66 (waterproof) enclosure, and Class 2 rated output (UL8750). 	<ul style="list-style-type: none"> Standard mounting is surface mount. Security bollards have an embedded security core. Installation of a surge protector as part of each unit's wiring is recommended. Necessary hardware is included for all mounting options. Templates are available upon request.
MATERIALS & FINISHES		MAINTENANCE
<ul style="list-style-type: none"> Illuminated bollards have a tubular stainless steel column, 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. 		<ul style="list-style-type: none"> Metal surfaces can be cleaned as needed using a soft cloth or brush with warm water and a mild detergent. Avoid abrasive cleaners.

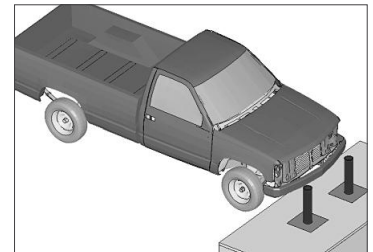
OPTIONAL SECURITY CORE

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.

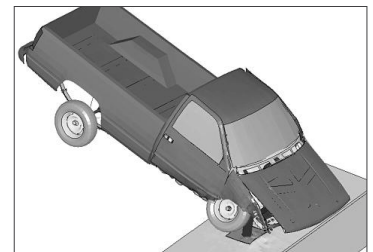
Most security bollards have taken the form of generic pipes and cylinders that offered little in the way of design or lighting functionality. An integral security solution is available as an optional enhancement to Forms+Surfaces' Helio lighting bollards. By adding a pre-engineered and fully-tested security core to the existing Helio 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.

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. All of our bollards with the security solution option were tested and passed a very demanding set of impact criteria. Tests were performed using our bollards set in permanent concrete footings spaced 42" 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.

Our permanently embedded security cores are available for both illuminated and non-illuminated bollards. Please contact us to discuss design and installation considerations for Helio bollards with security cores.



Crash scenario with 5,500 lb pickup truck approaching embedded bollard system at 40 mph

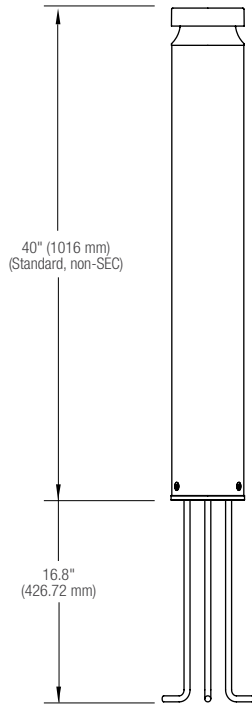


Full-scale crash 330ms after impact

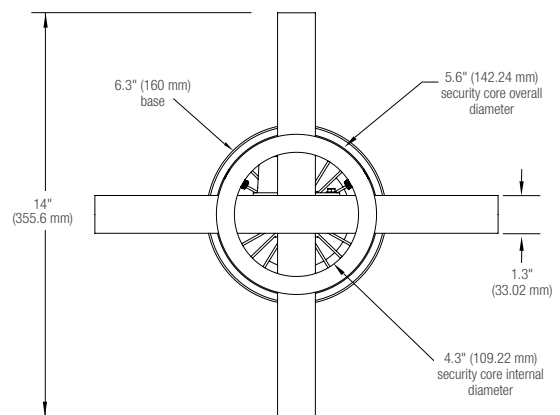
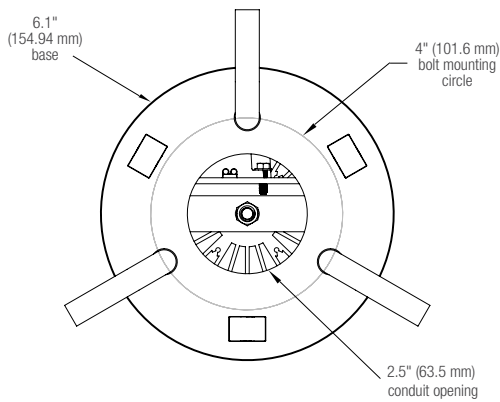
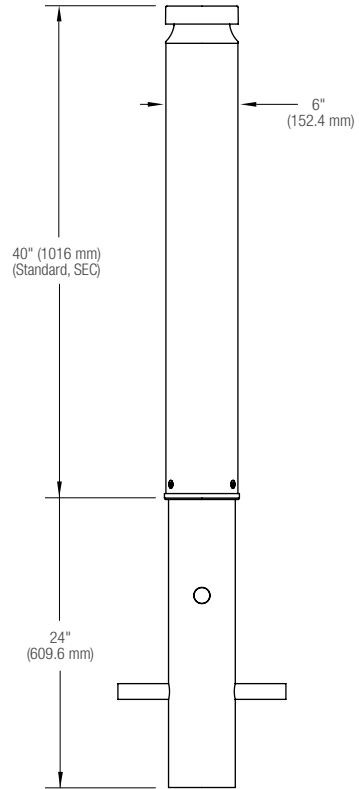


NOMINAL DIMENSIONS

SURFACE MOUNT WITH J-BOLTS, ILLUMINATED



EMBEDDED SECURITY CORE, ILLUMINATED





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LIGHT ENGINE DESCRIPTIONS

LED ENGINE	LIGHT DISTRIBUTION	DRIVER	LUMINAIRE LUMENS*	B.U.G. RATINGS
3000K LED	360°	40W	424	B0-U1-G0
4000K LED	360°	40W	424	B0-U1-G0
3000K LED	180°	20W	158	B0-U1-G0
4000K LED	180°	20W	158	B0-U1-G0

*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 Helio Bollard, Series 600 product page on our website.

CERTIFICATION

- ETL and C-ETL listed for wet locations.

ENVIRONMENTAL CONSIDERATIONS

- Please refer to the Helio Bollard, Series 600 Environmental Data Sheets for detailed environmental impact information.
- Metal components have a long life cycle and are 100% recyclable.
- Standard powdercoat finishes are no-VOC; non-standard powdercoat finishes are no- or low-VOC, depending on color.
- Low maintenance.

MODEL NUMBERS AND DESCRIPTIONS

MODEL	DESCRIPTION
LBHLO-603	Helio Bollard, Series 600, illuminated
LBHLO-603-N	Helio Bollard, Series 600, non-illuminated

PRODUCT OPTIONS

The following options are available for an upcharge

Add powdercoat color from Forms+Surfaces Powdercoat Chart	Upgrade to embedded security core
Custom RAL powdercoat color	

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, finish, color temperature, and light distribution option. Quote/Order Forms are available on our website to lead you through the specification process in a simple checkbox format.