



LED WATTAGE CHART

	16L
400 milliamps	21w
530 milliamps	26w
700 milliamps	35w

Introducing NLS Impact Bollard with TG Core-In Protection System (impact rated core with sleeve) which has been ASTM F3016 full scale crash tested at an accredited test center; the 6" version offers a S10 impact rating (rated to stop a 5,000 lb vehicle up to 10 mph), while the 8" version comes with an impressive S20 impact rating (rated to stop a 5,000 lb vehicle up to 20 mph).

The Sea Side Impact Bollard combines security, style, and impact resistance that blends beautifully into any pathway environment while protecting from traffic intrusion.

This luminaire tower can disperse light in a 45° angle with the cast Cut Off Grill (COG45) with diffused lens standard. Paracine Reflector (PR) or Stacked Louver (SL) are optional light distributions with a clear lens standard. Optional unlit versions are available.

LED wattage ranges from 21 to 33 using 16 LEDs. The 6" or 8" round Sea Side Impact Bollard is available with the Dome Top or Flat Top. The 8" square Sea Side Impact Bollard only comes with the Flat Top option. Kelvin temperature offerings of Amber, 2700, 3000K, 3500K, 4000K, and 5000K

BUY AMERICAN

To ensure the latest BAA/TAA/BABA Standards are being met, please select BAA, TAA, or BABA in the options section. Please contact the factory before placing an order for any NLS products requesting BAA (Buy American Act), TAA (Trade American Act), or BABA (Build America, Buy America).



STAR POWER™ OPTICAL SYSTEM

The Star Power™ reflector is an excellent system which provides great value and performance. Star Power Patent number: 10168023

Project Name:

Type:

SEA SIDE BOLLARD ORDERING GUIDE

Cat#	Height	Shaft Dim.	Lit / UnLit	Light Dist.	# of LEDs
Sea Side Impact Bollard Flat Top (SSF-IMP)	49" (49)	6" Round Impact Rated Up to 10 MPH (6R-S10)	Lit (LIT) UnLit (UNL) ²	Cut Off Grill (COG45) Stacked Louver (SL) Paracline Reflector (PR)	16 (16L)
Sea Side Impact Bollard Dome Top (SSD-IMP)		8" Round Impact Rated Up to 20 MPH (8R-S20) 8" Square Impact Bollard Up to 20 MPH (8S-S20)			

Milliamps	Kelvin	Volts	Color	Options
400 (40)	Amber 585-600nm (AMBER) ^{5, 7, 8}	120-277 (UNV)	Bronze Textured (BRZ)	Button Photocell (PC) ³
530 (53)	2700K, 70 CRI (27K7)	347-480 (HV)	White Textured (WHT)	Marine Grade Finish (MGF)
700 (7)	2700K, 80 CRI (27K8) ¹		Smooth White Gloss (SWT)	Emergency Battery Back-up 4W (EM4) ³
	3000K, 70 CRI (30K7)		Silver Metallic (SVR)	Emergency Battery Back-up 8W (EM8) ³
	3000K, 80 CRI (30K8) ¹		Black Textured (BLK)	House Side Shield (HSS)
	3500K, 80 CRI (35K8) ¹		Smooth Black Gloss (SBK)	Buy American Act (BAA) ⁶
	4000K, 70 CRI (40K7)		Graphite Textured (GPH)	Trade Agreement Act (TAA) ⁶
	4000K, 80 CRI (40K8) ¹		Grey Textured (GRY)	Build America Buy American (BABA) ⁶
	5000K, 70 CRI (50K7)		Green Textured (GRN)	Custom Controls Integration (CCI) ⁴
	5000K, 80 CRI (50K8) ¹		Hunter Green Textured (HGN)	
			Custom (CS)	

NOTES:

1. Consult Factory for Lead Time. Consult Factory for 90 CRI Requests.
2. If Unlit is selected the following categories will not be available: Light Distribution, # of LEDs, Milliamps, Kelvin, Volts, Photocell, and House Side Shield
3. Universal Voltage 120-277
4. Please contact Factory for Custom Control Integration requests (nLight, NX, WaveLinx, Crestron, DMX/RDM, Synapse, Casambi, Dali II, Avi-On, or other control systems)
5. Turtle Safe
6. Consult factory for all BAA/TAA/BABA requests
7. Contact Factory
8. Not Available above 700mA



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PRODUCT SPECIFICATIONS

ELECTRICAL

- 120-277 Volts (UNV) or 347-480 Volts (HV)
- 0-10V dimming driver
- Driver power factor at maximum load is $\geq .95$, THD maximum load is 15%
- LED Drivers Ambient Temp. Min is -40°C and Ambient Temp. Max ranges from 50°C to 55°C and, in some cases, even higher. Consult the factory for revalidation by providing the fixture catalog string before quoting and specifying it.
- All internal wiring UL certified for 600 VAC and 105°C
- CRI 70, 80 or 90
- Color temperatures: Amber, 2700, 3000K, 3500K, 4000K, 5000K
- Surge Protection: 20kA supplied as standard.

CONSTRUCTION

- Extruded Aluminum. Cast Aluminum. Spun Aluminum

OPTIONS

- MARINE GRADE FINISH (MGF) - A multi-step process creating protective finishing coat against harsh environments. Chemically washed in a 5 stage cleaning system. Pre-baked, Powder coated 3-5 mils of Zinc Rich Super Durable Polyester Primer. Oven Baked. Finished Powder Coating of Super Durable Polyester Powder Coat 3-5 mil thickness.
- EMERGENCY BATTERY BACK-UP (EM)
 - 100-277 VAC $\pm$ 10%, 50/60 Hz Input Voltage
 - 43mA Max. Input Current
 - 2.82W Max. Input Power
 - 24-48 Hours Recharge Time
 - Battery Type NiCd 9.6VDC or LiFePO4 9.6VDC
 - 90 Minutes Min. Illumination Time
 - 20W Total Max. LED Powered
 - Class 2 Output Classification
- HOUSE SIDE SHIELD (HSS)

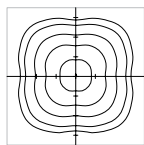
CONTROL OPTIONS

- PHOTOCELL (PC) - Button Type
- Controls Agnostic: Please contact factory for your preferred controls option. (nLight, NX, WaveLinx, Crestron, DMX/RDM, Synapse, Casambi, DALI II, Avi-On, or other control systems)

LIGHT DISTRIBUTION

Utilizes a linear diffused pattern, softening the light distribution and eliminating any dark shadows or striations.

- IES Types



TYPE V (T5)

FINISH

- 3-5 mils electrostatic powder coat.
- NLS Lighting standard high-quality finishes prevent corrosion and protects against extreme environmental conditions

WARRANTY

Five-year limited warranty for drivers and LEDs.

BUY AMERICAN OPTION

While all of the NLS Lighting products listed in this document qualify for the Buy America(n) Act of 1933, we reserve the right to change our listings without notice.

The information provided above is for general informational purposes only. We encourage you to consult legal professionals for advice particular to your projects concerning BAA, TAA, BABA or Buy America.

Additional NLS Products that meet BAA, TAA standards can be found at the following link:

<https://nslighting.com/buy-american/>

INSTALLATION

https://www.youtube.com/watch?v=g1lvW_K8yo

Proper installation of the NLS Impact Bollard is mandatory and required to ensure it can achieve the desired performance as the integrated TG Core-In Protection System comprising of impact rated core with sleeve was evaluated to per ASTM F3016.

If the NLS Impact Bollard is modified in any way or form or fit or function during the installation, it may not perform as the integrated TG Core-In Protection System (impact rated core with sleeve) was tested per ASTM F3016. It is important to follow installation instructions, and make sure trained installers, proper equipment and procedures are used to install the NLS Impact Bollard.

NLS Lighting bears no responsibility or liability for improper installation of NLS Impact Bollard. NLS Lighting is not liable for any failures due to soil conditions, incorrect installation, improper product use, and/or modifications to the NLS Impact Bollard. NLS specification sheet, installation instructions and video should be considered as guidelines therefore the soil condition, structural integrity and foundation and any other critical parameter related to installation of the NLS Impact Bollard are to be reviewed and approved by the customer and end user's structural engineer prior to installation.

To comply with the ASTM F3016 crash rating the impact portion must be installed exactly as TG Core-In Protection System was tested at an accredited test center and the full-scale crash test summary can be provided upon request.



The information and specifications on this document are subject to change without any notification. All values are design, nominal, or typical or prorated values when measured under internal and external laboratory conditions.



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PRODUCT SPECIFICATIONS

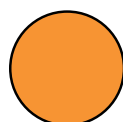
SEA SIDE BOLLARD - LUMEN DATA CHART

PART NUMBER	T5 LUMENS	T5 Lm/W	WATTS
SEA SIDE IMPACT-COG45-16L-40-27K7	987	47	21
SEA SIDE IMPACT-COG45-16L-40-27K8	924	44	21
SEA SIDE IMPACT-COG45-16L-40-30K8	991	47	21
SEA SIDE IMPACT-COG45-16L-40-30K7	1067	51	21
SEA SIDE IMPACT-COG45-16L-40-35K8	991	47	21
SEA SIDE IMPACT-COG45-16L-40-40K8	1067	51	21
SEA SIDE IMPACT-COG45-16L-40-40K7	1153	55	21
SEA SIDE IMPACT-COG45-16L-40-50K8	1067	51	21
SEA SIDE IMPACT-COG45-16L-40-50K7	1153	55	21
SEA SIDE IMPACT-COG45-16L-53-30K	1429	55	26
SEA SIDE IMPACT-COG45-16L-53-40K	1502	58	26
SEA SIDE IMPACT-COG45-16L-53-50K	1502	58	26
SEA SIDE IMPACT-COG45-16L-7-30K	1906	53	36
SEA SIDE IMPACT-COG45-16L-7-40K	2003	56	36
SEA SIDE IMPACT-COG45-16L-7-50K	2003	56	36
SEA SIDE IMPACT-SL-16L-40-27K7	1081	51	21
SEA SIDE IMPACT-SL-16L-40-27K8	1012	48	21
SEA SIDE IMPACT-SL-16L-40-30K8	1085	52	21
SEA SIDE IMPACT-SL-16L-40-30K7	1169	56	21
SEA SIDE IMPACT-SL-16L-40-35K8	1085	52	21
SEA SIDE IMPACT-SL-16L-40-40K8	1169	56	21
SEA SIDE IMPACT-SL-16L-40-40K7	1263	60	21
SEA SIDE IMPACT-SL-16L-40-50K8	1169	56	21
SEA SIDE IMPACT-SL-16L-40-50K7	1263	60	21
SEA SIDE IMPACT-SL-16L-53-30K	1508	58	26
SEA SIDE IMPACT-SL-16L-53-40K	1612	62	26
SEA SIDE IMPACT-SL-16L-53-50K	1690	65	26
SEA SIDE IMPACT-SL-16L-7-30K	2030	58	35
SEA SIDE IMPACT-SL-16L-7-40K	2170	62	35
SEA SIDE IMPACT-SL-16L-7-50K	2275	65	35
SEA SIDE IMPACT-PR-16L-40-27K7	1397	67	21
SEA SIDE IMPACT-PR-16L-40-27K8	1308	62	21
SEA SIDE IMPACT-PR-16L-40-30K8	1402	67	21
SEA SIDE IMPACT-PR-16L-40-30K7	1510	72	21
SEA SIDE IMPACT-PR-16L-40-35K8	1402	67	21
SEA SIDE IMPACT-PR-16L-40-40K8	1510	72	21
SEA SIDE IMPACT-PR-16L-40-40K7	1632	78	21
SEA SIDE IMPACT-PR-16L-40-50K8	1510	72	21
SEA SIDE IMPACT-PR-16L-40-50K7	1632	78	21
SEA SIDE IMPACT-PR-16L-53-30K	2002	77	26
SEA SIDE IMPACT-PR-16L-53-40K	2106	81	26
SEA SIDE IMPACT-PR-16L-53-50K	2184	84	26
SEA SIDE IMPACT-PR-16L-7-30K	2695	77	35
SEA SIDE IMPACT-PR-16L-7-40K	2835	81	35
SEA SIDE IMPACT-PR-16L-7-50K	2975	85	35

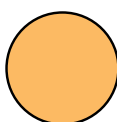
LUMEN MAINTENANCE DATA

Ambient Temperature	Drive Current	L90 Hours*	L70 Hours**	30,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours**
25°C	Up to 700mA	58,000	173,000	95.7%	91.6%	89.6%	82.1%
*Reported extrapolations per IESNA TM-21				**Projected extrapolations per IESNA TM-21			

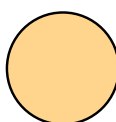
LED KELVIN RANGE



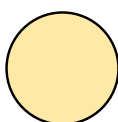
AMBER
585-600 nm



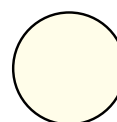
2700K 70 CRI



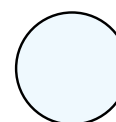
3000K 70 CRI



3500K 80 CRI



4000K 70 CRI



5000K 70 CRI

Color	Dominant or Peak Wavelength Range (nm)	
	Minimum	Maximum
Amber	585	600



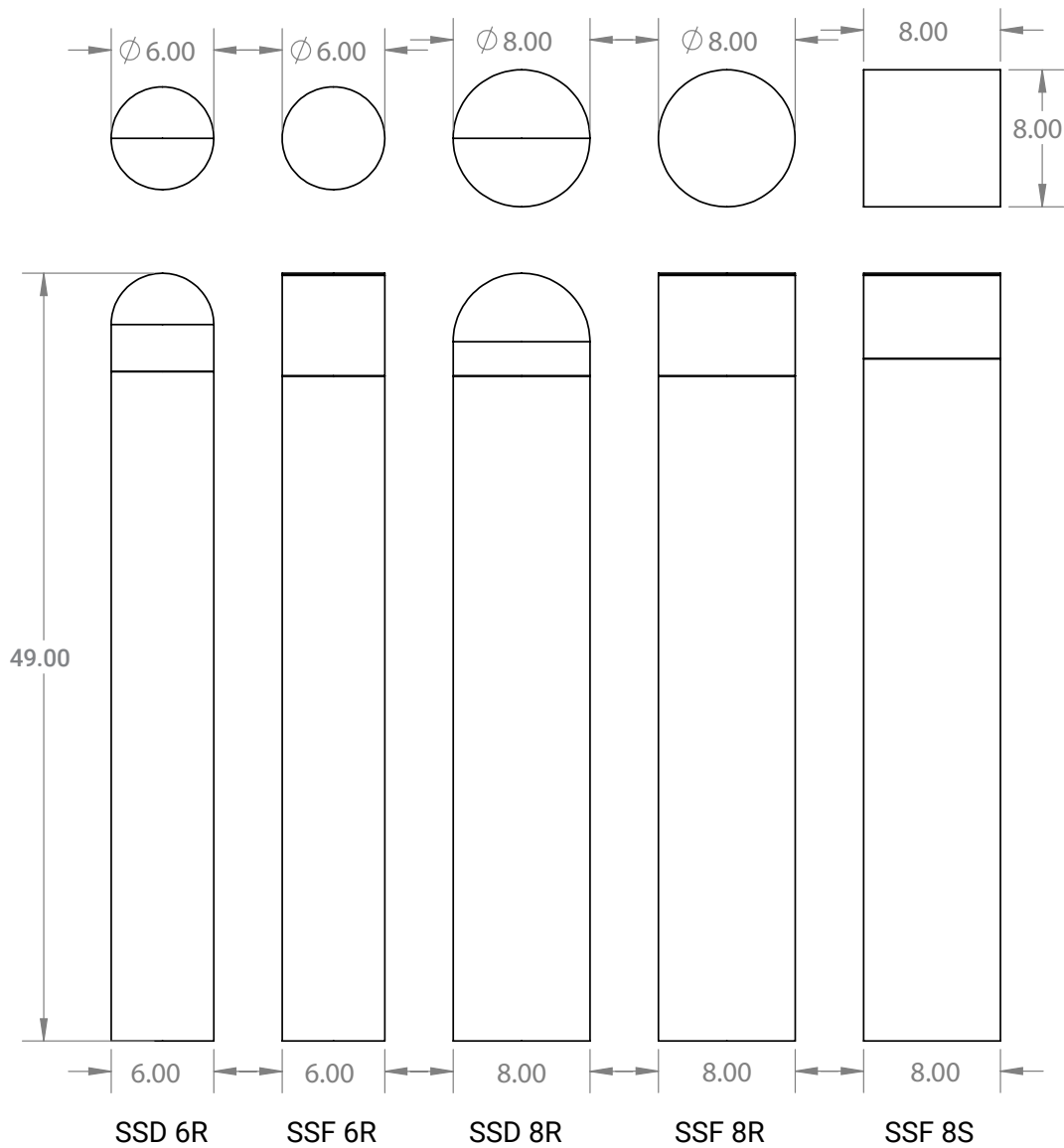
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PRODUCT SPECIFICATIONS

DIMENSIONS

WEIGHT	
SS-6R-PR	14 LBS
SS-6R-SL	15 LBS
SS-6R-COG45	16 LBS
SS-8R-PR	19 LBS
SS-8R-SL	20 LBS
SS-8R-COG45	21 LBS
SS-8S-PR	33 LBS
SS-8S-SL	35 LBS
SS-8S-COG45	35 LBS



PRODUCT SPECIFICATIONS

SEA SIDE-SSD-6R



SSD-6R-UNL



SSD-6R-UNL-COG45



SSD-6R-COG45



SSD-6R-PR



SSD-6R-SL

PRODUCT SPECIFICATIONS

SEA SIDE-SSF-6R



SSF-6R-UNL

SSF-6R-UNL-COG45

SSF-6R-COG45

SSF-6R-PR

SSF-6R-SL

PRODUCT SPECIFICATIONS

SEA SIDE-SSD-8R



SSD-8R-UNL



SSD-8R-UNL-COG45



SSD-8R-COG45



SSD-8R-PR



SSD-8R-SL

PRODUCT SPECIFICATIONS

SEA SIDE-SSF-8R



SSF-8R-UNL

SSF-8R-UNL-COG45

SSF-8R-COG45

SSF-8R-PR

SSF-8R-SL

PRODUCT SPECIFICATIONS

SEA SIDE-SSF-8S



SSF-8S-UNL



SSF-8S-UNL-COG45



SSF-8S-COG45



SSF-8S-PR



SSF-8S-SL

PRODUCT SPECIFICATIONS

MOUNTING

In-ground cement with rebar support cage (refer to insatallation instructions)

