

# sollos®

LANDSCAPE LIGHTING  
A Halco Lighting Technologies Company



THE ART OF OUTDOOR ILLUMINATION

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# The Art of Outdoor Illumination

Sollos Landscape Lighting offers a complete line of fixtures and finishes that enhance gardens, landscapes and outdoor settings. Surroundings are enriched by the subtle curves and organic feel of natural metal and architectural aluminum finishes. Dynamic fixture functionality provides safety, security and quality illumination.

Superior thermal management allows Sollos fixtures to operate both halogen and LED lamp technologies. Sollos fixtures powered by energy efficient Halco ProLED lamps provide consistent, reliable light output.

Sollos Landscape Lighting combines aesthetic styling and ProLED power for today's landscapes.



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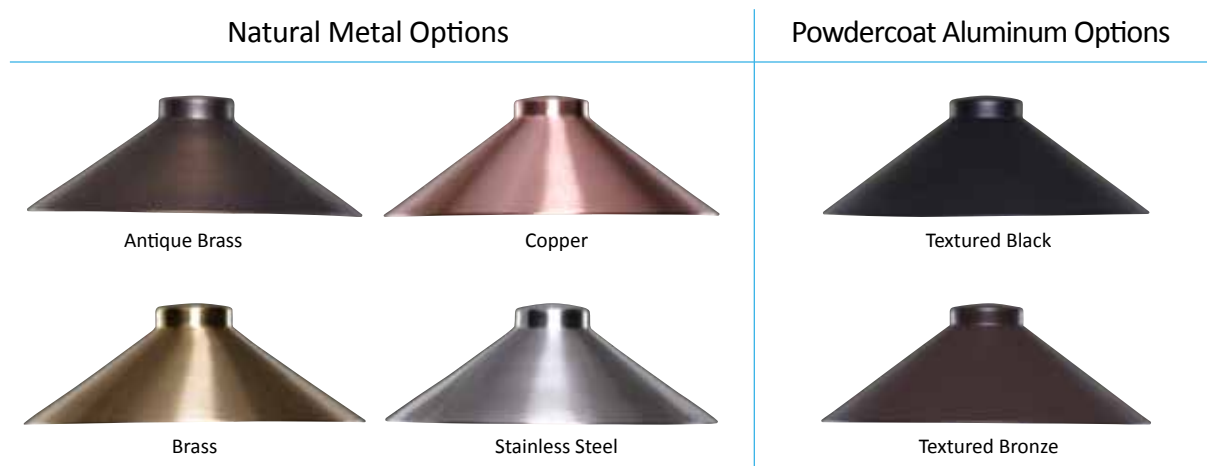
# Why Choose Sollos?

Sollos Landscape Lighting was born out of an unmet need in the marketplace for a line of architectural fixtures designed to operate retrofit LED lamps. As a Halco Lighting Technologies Company, Sollos leveraged Halco's lamp expertise to be the first to market with a full line of landscape lighting fixtures designed to operate with both traditional and advanced technology retrofit lamps. The Sollos design methodology centers around form, function and efficiency.

## Form

### Architectural Grade

Simple, elegant designs in Antique Brass, Brass, Copper and Stainless Steel natural metals and Textured Black and Textured Bronze powdercoat aluminum finishes complement and enhance landscape settings.



### Quality Construction

Durable natural metal and aluminum construction weathers the challenges of outdoor applications.

### Breadth of Offering

Sollos bullet lights, floodlights, path lights, in-grounds and well lights, step and under-step lights, deck lights and integrated and commercial grade transformers illuminate every aspect of an application.







NVLAP-accredited  
Halco Lighting Laboratories

## Function

### Performance

Superior thermal management stemming from design factors such as socket location and shroud length optimize light output and dispersion while maximizing lamp life.

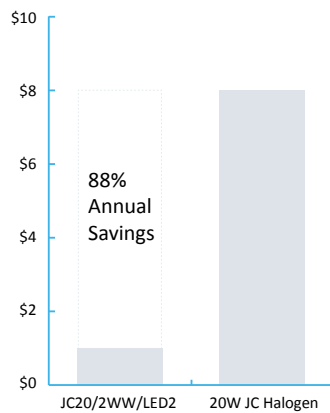
### Longevity

Lamps and fixtures equipped with industry-leading warranties provide peace-of-mind to installers and homeowners.

### Reliability

NVLAP-accredited Halco Lighting Laboratories provides photometric, color, and electrical measurements to ensure continuous quality control and outstanding product performance.

Annual Energy Costs



## Efficiency

### Sustainability

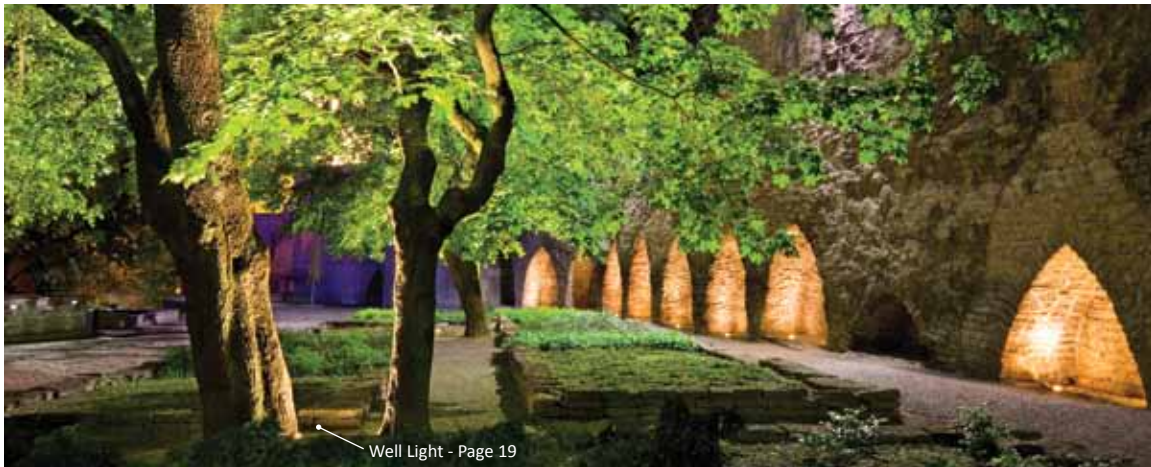
ProLED lamps contain no mercury and emit no UV or IR. Sollos fixtures powered by ProLED lamps establish an environmentally responsible, long life landscape lighting system.

### Energy Efficiency

ProLED lamp options reduce power consumption by up to 88% versus halogen. This allows more fixtures per transformer, resulting in significant total cost of ownership savings.

### Labor Saving

Sollos fixtures are designed and packaged to minimize installation time and associated labor costs.



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# Sollos & Halco ProLED Advantage

When powered by ProLED lamps, Sollos fixtures provide sustainable, high performance and quality LED illumination.

## Powered by ProLED

ProLED lamps are constructed with LED chips, integrated drivers and transformers. ProLED lamps utilize a special heat sink to safely drive the components and achieve a long lifespan.

The input voltage range of ProLED lamps eliminate voltage drop, which is a common hurdle with traditional lamp technologies. ProLED lamps perform to specification at every input voltage within their voltage range.

Voltage Range	ProLED Lamp
10V-15V	MR and PAR36
10V-18V	JC, 912 and Wedge Base

For applications that normally require that the lamp is protected from the elements, Halco offers ingress protection (IP) rated ProLED lamps:

Conditions	IP Rating	Halogen Equivalent	ProLED Lamp
Susceptible to Rainwater or Irrigation	IP65	10W	JC10/1WW/LED2
		20W	JC20/2WW/LED2
Temporary Immersion from 5.9in (15cm) to 3.28ft (1m)	IP67	20W	PAR36/6WW/SP/LED, PAR36/6WW/WFL/LED2
		35W	PAR36/10WW/SP/LED, PAR36/10WW/WFL/LED2
		50W	PAR36/18WW/SP/LED, PAR36/18WW/WFL/LED2



Rigorous adherence to design and manufacturing specifications ensures consistent lamp-to-lamp color, light output and beam spreads. ProLED lamps are available in 2700K, 3000K, 5000K and a variety of colors including amber, red, green, blue and color-changing red-green-blue (RGB). LM-79 and IES files are available for all ProLED lamps upon request.

### Strongest Lamp Warranty






When installed in a Sollos fixture in recommended conditions and packaging warnings are followed, ProLED MR16 and IP65-rated JC lamps are backed by a 20-year limited warranty, the strongest lamp warranty in the industry. When installed in other fixtures, these lamps are backed by a 5-year Limited Warranty. ProLED 912 lamps and non-IP65-rated JC lamps are backed by a 2-year Limited Warranty.

### Think Lumens!

Efficient lighting technologies such as LED and compact fluorescent lamps produce comparable light output while consuming considerably less energy than traditional light sources. When evaluating replacement lamps, refer to lamps' light output, which is measured in lumens, rather than wattage. Lamps with relatively equivalent lumens and CBCP will provide similar illumination. So think lumens for light output and use lamp wattage to determine energy savings.

Lamp	Wattage	CBCP	Life (hrs)
Halogen MR16 BAB	20W	460	3,000
Halco ProLED MR16 BAB	4.5W	400	40,000

### ProLED Lamp Options for Sollos Landscape Lighting

		
<p align="center"><b>MR16 Series</b></p> <ul style="list-style-type: none"> <li>• 10W, 20W, 35W &amp; 50W Halogen equivalents available</li> <li>• Input voltage range 10-15V</li> <li>• 40,000 hour rated life</li> <li>• 2700K, 3000K, amber, blue, green, red &amp; color changing RGB</li> <li>• Spot, narrow flood, flood, wide flood &amp; very wide flood beam spreads</li> </ul>	<p align="center"><b>JC Series</b></p> <ul style="list-style-type: none"> <li>• 10W &amp; 20W Halogen equivalents available</li> <li>• IP65-Rated Option</li> <li>• Input voltage range 10-18V</li> <li>• Up-to 40,000 hour rated life</li> <li>• 3000K, amber, blue, green &amp; red</li> <li>• G4 and BA15s base options</li> </ul>	<p align="center"><b>Waterproof PAR36 Series</b></p> <ul style="list-style-type: none"> <li>• 20W, 35W &amp; 50W Halogen equivalents available</li> <li>• IP67-Rated</li> <li>• Input voltage range 10-15V</li> <li>• 40,000 hour rated life</li> <li>• 2700K, amber, blue, green &amp; red</li> <li>• Spot &amp; wide flood beam spreads</li> <li>• Multi-purpose base allows for slip-on or screw terminal connections</li> </ul>

For the complete offering of ProLED lamps please visit [halcolighting.com](http://halcolighting.com).

# Up & Accent Lights





# Contemporary, Straight & Modern Bullet

## Mix and Match Bullet Light Ordering

Sollos Bullet Lights are supplied with an 8" ground stake. To order with lamp, please provide the lamp part number (indicated below) with the fixture order code from the following pages.

### 1 Select the Fixture:



Contemporary  
Bullet



Straight  
Bullet



Modern  
Bullet

### 2 Select the Finish:

Natural Metal:

Antique  
Brass

Brass

Copper

Stainless  
Steel

Powdercoat Aluminum:

Textured  
Black

Textured  
Bronze

### 3 Select the Light Output Equivalent:



10W Halogen Flood  
150lm - Part Number:  
MR16FL10/827/LED



20W Halogen BAB  
220lm - Part Number:  
MR16BAB/827/LED



35W Halogen FMW  
350lm - Part Number:  
MR16FMW/827/LED



50W Halogen EXN  
500lm - Part Number:  
MR16EXN/827/LED

For the complete ProLED offering of MR16 lamps please visit [halcolighting.com](http://halcolighting.com).

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# Up & Accent Lights



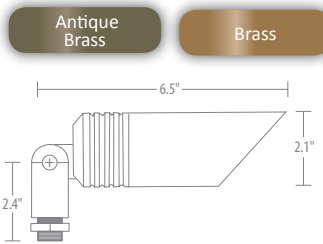
BCB065-AB

## BCB065 Contemporary Bullet

Housing	Cast Brass
Lens	Clear Tempered Glass
Stem/Knuckle	Cast Brass
Wiring	3 ft. 18-2 Lead Wire
Lamp	MR16 (57W Max)
Mounting Accessory	8" Ground Stake Included

### Order Codes

Antique Brass	BCB065-AB
Brass	BCB065-BR



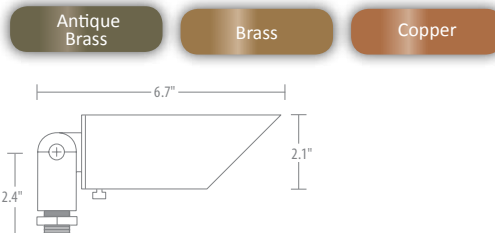
BSB067-BR

## BSB067 Straight Bullet

Housing	Cast Brass or Natural Copper
Lens	Clear Tempered Glass
Stem/Knuckle	Cast Brass
Wiring	3 ft. 18-2 Lead Wire
Lamp	MR16 (57W Max)
Mounting Accessory	8" Ground Stake Included

### Order Codes

Antique Brass	BSB067-AB
Brass	BSB067-BR
Copper	BSB067-CU



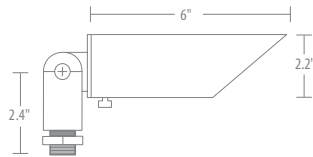
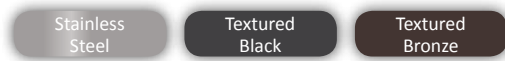
# Up & Accent Lights

## BSB060 Straight Bullet

Housing	Architectural Aluminum or Stainless Steel
Lens	Clear Tempered Glass
Stem/Knuckle	Architectural Aluminum or Cast Brass (SS Version)
Wiring	3 ft. 18-2 Lead Wire
Lamp	MR16 (50W Max)
Mounting Accessory	8" Ground Stake Included

### Order Codes

Stainless Steel	BSB060-SS
Textured Black	BSB060-TB
Textured Bronze	BSB060-TZ



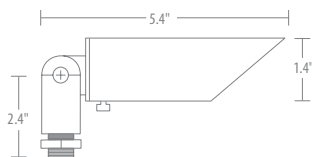
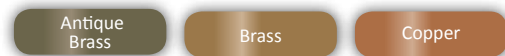
BSB060-SS

## BSB054 Straight Bullet

Housing	Cast Brass or Natural Copper
Lens	Clear Tempered Glass
Stem/Knuckle	Cast Brass
Wiring	3 ft. 18-2 Lead Wire
Lamp	MR11 (35W Max)
Mounting Accessory	8" Ground Stake Included

### Order Codes

Antique Brass	BSB054-AB
Brass	BSB054-BR
Copper	BSB054-CU



BSB054-CU

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# Up & Accent Lights



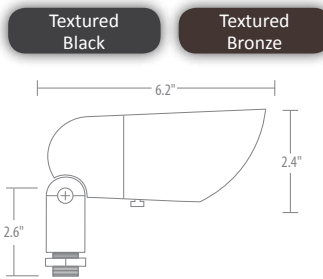
BMB062-TB

## BMB062 Modern Bullet

Housing	Architectural Aluminum
Lens	Clear Tempered Glass
Stem/Knuckle	Architectural Aluminum
Wiring	3 ft. 18-2 Lead Wire
Lamp	MR16 (50W Max)
Mounting Accessory	8" Ground Stake Included

### Order Codes

Textured Black	BMB062-TB
Textured Bronze	BMB062-TZ



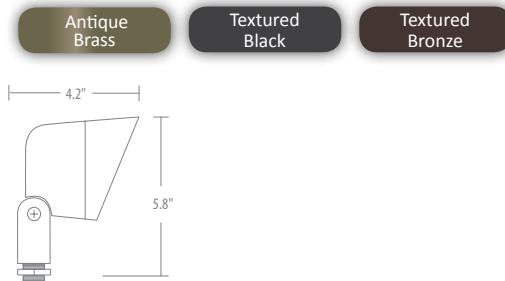
FRF058-AB

## FRF058 Flood Light

Housing	Cast Brass or Architectural Aluminum
Lens	Clear Tempered Glass
Stem/Knuckle	Cast Brass or Architectural Aluminum
Wiring	3 ft. 18-2 Lead Wire
Lamp	T4 Bi-Pin (50W Max)
Mounting Accessory	8" Ground Stake Included

### Order Codes

Antique Brass	FRF058-AB
Textured Black	FRF058-TB
Textured Bronze	FRF058-TZ







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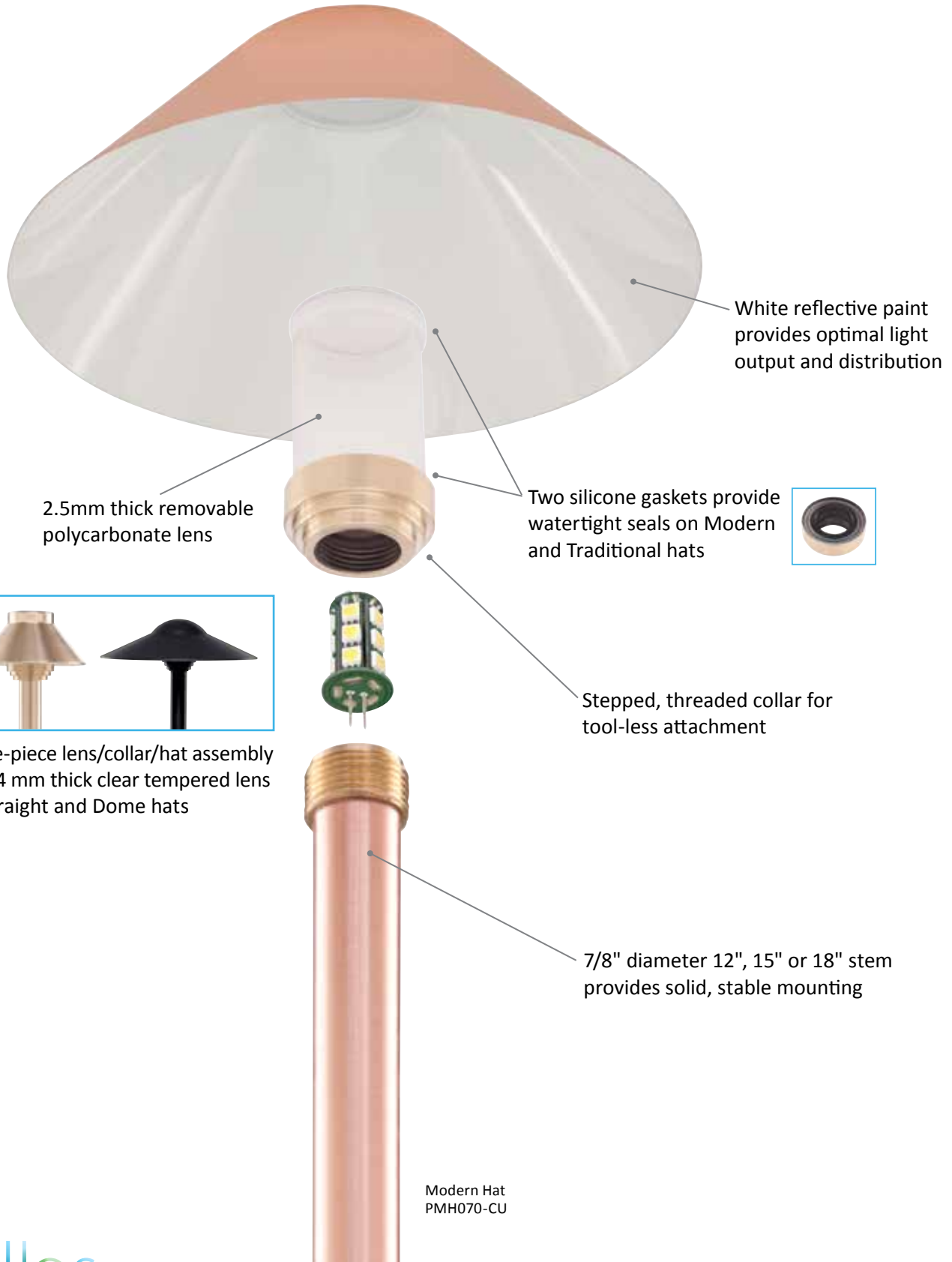
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# Path Lights



# Modern, Traditional, Straight & Dome Hats

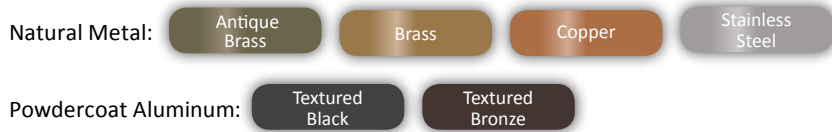
## Mix and Match Path Light Ordering

Sollos Path Light components can be ordered individually or as a complete fixture kit. Sollos Path Light kits include a hat, stem, 8" ground stake, and lamp. All Sollos Path Lights are supplied with a Halco JC20 halogen lamp unless another lamp model is specified.

### 1 Select the Hat:



### 2 Select the Finish:



### 3 Select the Stem Height:



### 4 Select the Light Output Equivalent:



Example: To order an Antique Brass 5.5" Traditional Hat with 15" Stem and Halco ProLED JC20/2WW/LED Lamp, the order code would be **PTH055-AB-15-JC20/2WW/LED**

# Path Lights



## PMH Modern Hat

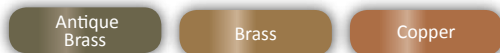
Housing	Brass or Natural Copper
Lens	Clear Polycarbonate with Dual Silicone Gaskets
Collar	Brass
Stem Options	12", 15" and 18"
Wiring	3 ft. 18-2 Lead Wire
Lamp	T3 Bi-Pin (20W Max)
Mounting Accessory	8" Ground Stake Mounted on Stem

<b>Hat Order Codes</b>	5" Diameter	7" Diameter
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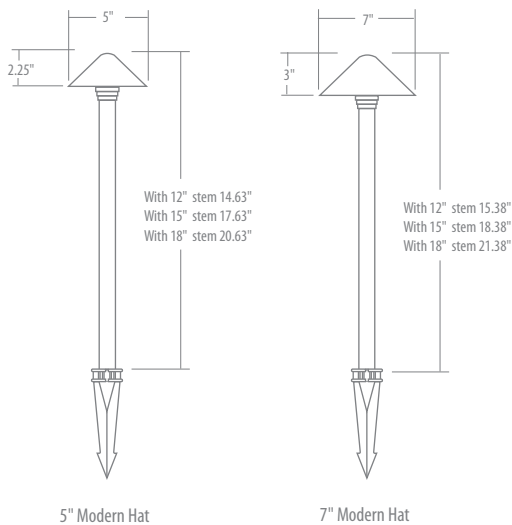
Antique Brass	PMH050-AB	PMH070-AB
Brass	PMH050-BR	PMH070-BR
Copper	PMH050-CU	PMH070-CU

<b>Stem Order Codes</b>	12" Stem	15" Stem	18" Stem
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Antique Brass	PST12-AB	PST15-AB	PST18-AB
Brass	PST12-BR	PST15-BR	PST18-BR
Copper	PST12-CU	PST15-CU	PST18-CU



Example: To order a Copper 5" Modern Hat with 18" Stem and Halco ProLED JC20/2WW/LED Lamp, the order code would be **PMH050-CU-18-JC20/2WW/LED**



PMH070-BR-18

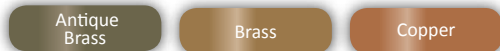


# Path Lights

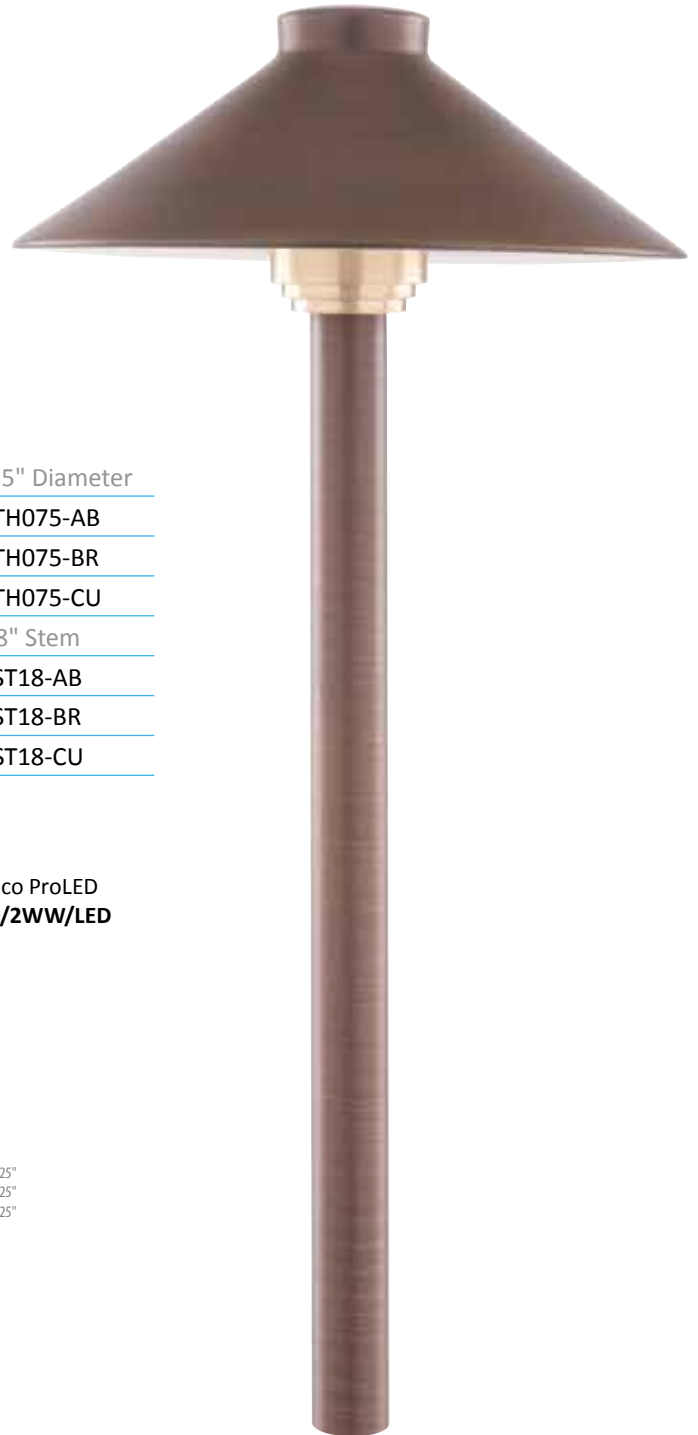
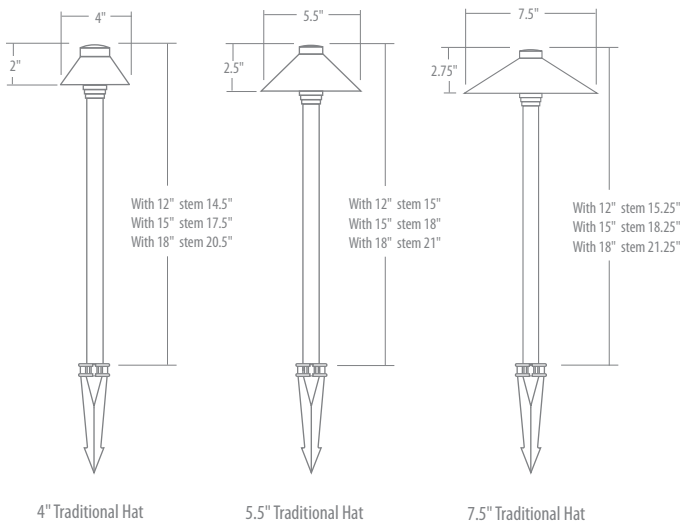
## PTH Traditional Hat

Housing	Brass or Natural Copper
Lens	Clear Polycarbonate with Dual Silicone Gaskets
Collar	Brass
Stem Options	12", 15" and 18"
Wiring	3 ft. 18-2 Lead Wire
Lamp	T3 Bi-Pin (20W Max)
Mounting Accessory	8" Ground Stake Mounted on Stem

Hat Order Codes	4" Diameter	5.5" Diameter	7.5" Diameter
Antique Brass	PTH040-AB	PTH055-AB	PTH075-AB
Brass	PTH040-BR	PTH055-BR	PTH075-BR
Copper	PTH040-CU	PTH055-CU	PTH075-CU
Stem Order Codes	12" Stem	15" Stem	18" Stem
Antique Brass	PST12-AB	PST15-AB	PST18-AB
Brass	PST12-BR	PST15-BR	PST18-BR
Copper	PST12-CU	PST15-CU	PST18-CU



Example: To order a Brass 5.5" Traditional Hat with 12" Stem and Halco ProLED JC20/2WW/LED Lamp, the order code would be **PTH055-BR-12-JC20/2WW/LED**



PTH075-AB-15

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# Path Lights

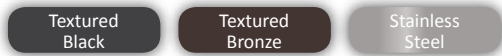
## PSH Straight Hat

Housing	Architectural Aluminum or Stainless Steel
Lens	Clear Tempered Glass
Collar	Architectural Aluminum or Brass (SS Model)
Stem Options	12", 15" and 18"
Wiring	3 ft. 18-2 Lead Wire
Lamp	T3 Bi-Pin (20W Max)
Mounting Accessory	8" Ground Stake Included with Stem

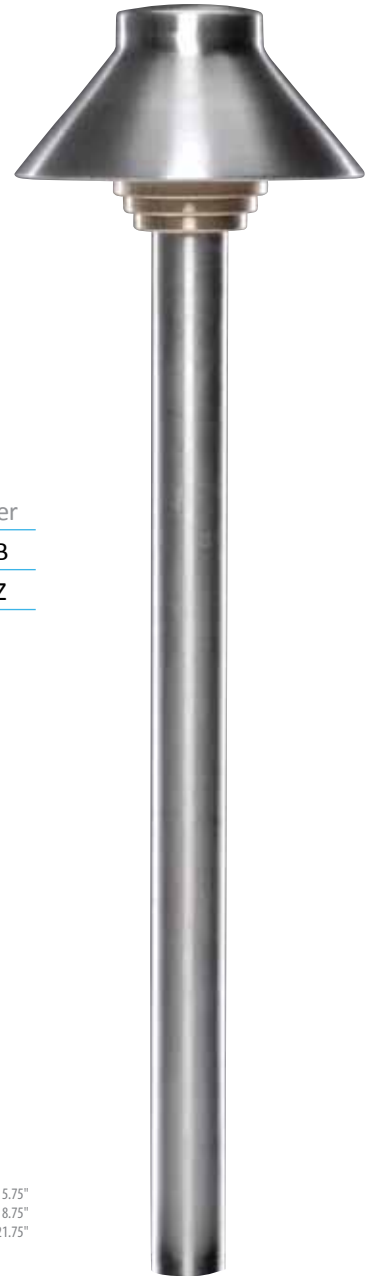
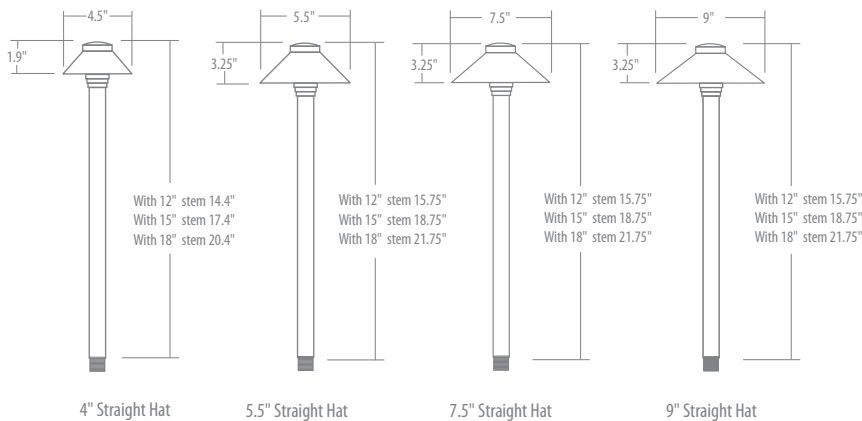
Hat Order Codes	4" Diameter	5.5" Diameter	7.5" Diameter	9" Diameter
Textured Black	PSH040-TB	PSH055-TB	PSH075-TB	PSH090-TB
Textured Bronze	PSH040-TZ	PSH055-TZ	PSH075-TZ	PSH090-TZ
Stainless Steel	PSH040-SS	PSH055-SS	PSH075-SS	

Stem Order Codes	12" Stem	15" Stem	18" Stem
Textured Black	PST12-TB	PST15-TB	PST18-TB
Textured Bronze	PST12-TZ	PST15-TZ	PST18-TZ
Stainless Steel	PST12-SS	PST15-SS	PST18-SS



Example: To order a Textured Black 9" Straight Hat with 15" Stem and Halco ProLED JC20/2WW/LED Lamp, the order code would be **PSH090-TB-15-JC20/2WW/LED**



PSH040-SS-18

# Path Lights

## PDO Dome Hat

Housing	Architectural Aluminum
Lens	Clear Tempered Glass
Collar	Architectural Aluminum
Stem Options	12", 15" and 18"
Wiring	3 ft. 18-2 Lead Wire
Lamp	T3 Bi-Pin (20W Max)
Mounting Accessory	8" Ground Stake Included

### Hat Order Codes

Textured Black	PDO083-TB
Textured Bronze	PDO083-TZ

### Stem Order Codes

	12" Stem	15" Stem	18" Stem
Textured Black	PST12-TB	PST15-TB	PST18-TB
Textured Bronze	PST12-TZ	PST15-TZ	PST18-TZ

Textured Black

Textured Bronze

Example: To order a Textured Bronze 8.3" Dome Hat with 18" Stem and Halco ProLED JC20/2WW/LED Lamp, the order code would be **PDO083-TZ-18-JC20/2WW/LED**



PDO083-TZ-15

## PMU Mushroom

Housing	Architectural Aluminum
Lens	Clear Tempered Glass with Dual Silicone Gaskets
Stem Options	15" Included
Wiring	3 ft. 18-2 Lead Wire
Lamp	T3 Bi-Pin (20W Max)
Mounting Accessory	8" Ground Stake Included

### Order Codes

Textured Black	PMU050-TB
Textured Bronze	PMU050-TZ

Textured Black

Textured Bronze

Example: To order a Textured Black 5" Mushroom with Halco ProLED JC20/2WW/LED Lamp, the order code would be **PMU050-TB-JC20/2WW/LED**



PMU050-TB

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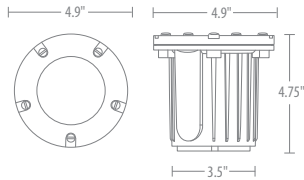
# In-Grounds & Well Lights



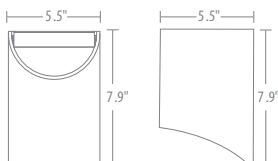
IGG049-BR



IGT049-SS



WPO055-CB



## IGG049 In-Ground with Rock Guard

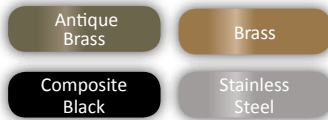
Housing	Single-Piece Compression Molded Polyester Composite
Lens	Shock and Heat-Resistant Clear Tempered Glass
Cover	Brass, Composite or Stainless Steel
Aiming	Adjustable Lamp Bracket Provides +/- 15° of Tilt
Wiring	3 ft. 18-2 Lead Wire
Lamp	MR16 (57W Max)

## IGT049 In-Ground with Trim Ring

Housing	Single-Piece Compression Molded Polyester Composite
Lens	Shock and Heat-Resistant Clear Tempered Glass
Cover	Brass, Composite or Stainless Steel
Aiming	Adjustable Lamp Bracket Provides +/- 15° of Tilt
Wiring	3 ft. 18-2 Lead Wire
Lamp	MR16 (57W Max)

### Order Codes

	With Rock Guard	With Trim Ring
Antique Brass	IGG049-AB	IGT049-AB
Brass	IGG049-BR	IGT049-BR
Composite Black	IGG049-CB	IGT049-CB
Stainless Steel	IGG049-SS	IGT049-SS

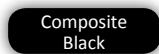


## WPO055 Well Light

Housing	Composite Black ABS
Lamp Holder	Adjustable Height and Angle
Aiming	360° Lamp Rotation
Wiring	3 ft. 18-2 Lead Wire with Slip-on Connectors
Lamp	PAR36 (50W Max)

### Order Codes

Well Light	WPO055-CB
Replacement Bracket	WPO055-BRACKET





# Step Lights

## SBT048 Step Light with Trim

Housing	Die Cast Aluminum with Adjustable Mounting Brackets
Faceplate	Brass, Copper, Stainless Steel, or Architectural Grade Aluminum
Faceplate Mounting	Adjustable Nylon Mounts Correct Undesired Tilt
Lens	Shock and Heat-Resistant Frosted Tempered Glass
Aiming	Adjustable Socket for Proper Lamp Centering
Wiring	3 ft. 18-2 Lead Wire
Lamp	T3 Bi-Pin (20W Max)



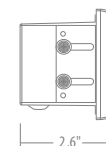
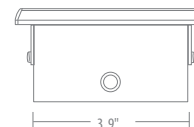
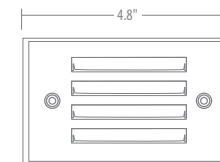
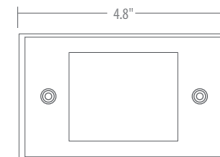
SBT048-TZ

## SBL048 Step Light with Louver

Housing	Die Cast Aluminum with Adjustable Mounting Brackets
Faceplate	Brass, Copper, Stainless Steel, or Architectural Grade Aluminum
Faceplate Mounting	Adjustable Nylon Mounts Correct Undesired Tilt
Lens	Shock and Heat-Resistant Frosted Tempered Glass
Aiming	Adjustable Socket for Proper Lamp Centering
Wiring	3 ft. 18-2 Lead Wire
Lamp	T3 Bi-Pin (20W Max)



SBL048-BR



### Order Codes

	With Trim	With Louver
Brass	SBT048-BR	SBL048-BR
Copper	SBT048-CU	SBL048-CU
Stainless Steel	SBT048-SS	SBL048-SS
Textured Black	SBT048-TB	SBL048-TB
Textured Bronze	SBT048-TZ	SBL048-TZ

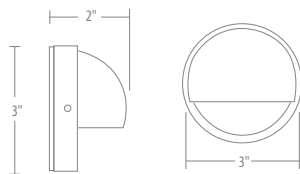


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# Deck & Under-Step Lights



DPL033-TZ



Deck Post Light



DUS060-CU



6" Deck Under-Step Light



12" Deck Under-Step Light



DUS120-SS

## DPL033 Deck Post Light

Housing	Die Cast Aluminum
Lens	Shock and Heat-Resistant Frosted Tempered Glass
Mounting	Surface Mounting Plate
Wiring	3 ft. 18-2 Lead Wire
Lamp	T3 Bi-Pin (20W Max)

### Order Codes

Textured Black	DPL033-TB
Textured Bronze	DPL033-TZ

Textured Black

Textured Bronze

## DUS060/DUS120 Deck Under-Step

Housing	Die Cast Aluminum
Cover	Natural Copper or Stainless Steel
Lens	Shock and Heat-Resistant Frosted Tempered Glass
Mounting	Optional Stainless Steel Mounting Plate for Hardscape Installations
Wiring	3 ft. 18-2 Lead Wire
Lamp	912 Wedge (20W Max) - DUS120 Operates Two Lamps

### Order Codes

	6" Length	12" Length
Copper	DUS060-CU	DUS120-CU
Stainless Steel	DUS060-SS	DUS120-SS
Mounting Plate	MP06	MP12

Copper

Stainless Steel

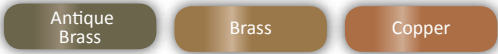
# Hanging Light

## HLS043 Hanging Light

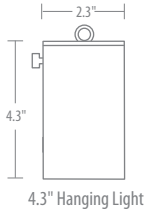
Housing	Cast Brass or Natural Copper
Lens	Clear Tempered Glass
Base	Cast Brass
Wiring	3 ft. 18-2 Lead Wire
Lamp	MR16 (37W Max)
Mounting Accessory	6 ft. Stainless Steel Hanger Included

### Order Codes

Antique Brass	HLS043-AB
Brass	HLS043-BR
Copper	HLS043-CU



HLS043-CU



4.3" Hanging Light

## Accessories



### TMA

- Analog Timer
- 24-hour clock
  - Multiple on/off settings



### TMDA

- Digital Astronomic Timer
- Up to 28 on/off programs
  - Sunrise, sunset, daily, weekend and weekday settings



### DMT027

- Deck Mount
- 2.7"
  - Antique Brass (AB) Brass (BR) Textured Black (TB), Textured & Bronze (TZ) finishes



### GS08

### GS12

- Ground Stake
- 8" Black ABS
  - 12" Black ABS
  - Slot cutout for wires



### PC15

### PCS

- Photocell
- 6" Lead
  - 15' Lead

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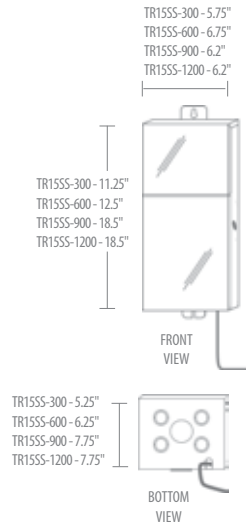
# Commercial Transformers



TR15SS-INT-900



TR15SS-INT-600



Max VA	Order Codes
300VA	TR15SS-300
600VA	TR15SS-600
900VA	TR15SS-900
1200VA	TR15SS-1200

- Corrosion-resistant stainless steel
- Removable cover for easy access
- Lockable, hinged door
- Bottom panel contains 1½" conduit inlet and (4) ¾" knockouts for low voltage exit
- Input Voltage: 120V
- Output Voltage Taps: 12/13/14/15V
- In-line primary overload protection prevents system damage with auto thermal shut-off
- In-line secondary magnetic breaker prevents short circuit protection with reset
- Mounting brackets are located on top and bottom of the console
- Plug-in ready
- 6-foot, grounded, water-resistant, heavy gauge power cord
- Limited lifetime warranty

# Integrated Transformers



TR12PC-INT-100

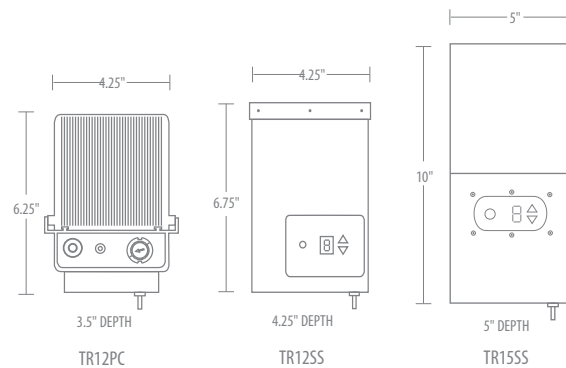


TR12SS-INT-120  
TR12SS-INT-200



TR15SS-INT-300

Max VA	Voltage	
	Taps	Order Codes
100VA	12V	TR12PC-INT-100
120VA	12V	TR12SS-INT-120
200VA	12V	TR12SS-INT-200
300VA	12V, 13V, 14V, 15V	TR15SS-INT-300



- Corrosion-resistant stainless steel finish (TR12SS)
- Black polycarbonate finish (TR12PC)
- Integral photocell and timer allow light fixtures to operate manually, automatically or on a timer
- Automatic operation turns lights on at dusk and off at dawn
- TR12PC Timer turns lights on at dusk and turns them off 4 hours, 6 hours or 8 hours after dusk
- TR12SS Timer turns lights on at dusk and turns them off 1 to 9 hours after dusk
- Resettable circuit breaker prevents overloads and short circuits
- Plug-in ready with 6-foot, grounded, water-resistant, heavy gauge power cord
- Limited 2-year warranty

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# ProLED® Volt-Ampere Guide

## Selecting a Transformer for LED Lighting Installations

Halco ProLED lamps are more efficient and have significantly longer life compared to traditional light sources while providing high quality light. Unlike halogen and incandescent lamps, which produce light by heating a filament, light from LED lamps is produced by the energy that results from forcing electrons through a semiconductor material.

True power consumed is measured in watts and is what customers are charged for on their utility bill. A lamp's true power (wattage) is listed on the lamp's packaging. When an LED is powered, the lamp's driver converts alternating current (AC) to direct current (DC), which consumes reactive and harmonic power on top of the true power that is required to produce light. The utility must generate additional energy above and beyond the lamp's true power in order to operate the lamp. The total amount of power that must be generated by the utility is measured in volt-amperes (VA) and is referred to as apparent power. Power factor - the ratio of true power to apparent power - is the measure of how efficiently electrical power is consumed. Dividing a lamp's wattage by the lamp's power factor results in the VA drawn on the line:

$$\text{Wattage/Power Factor} = \text{Volt-Amperes}$$

Halogen and incandescent lamps have a power factor of one, which means that the lamp uses 100% of the input power to produce light and heat. Consequently, filament lamps' wattage and VA are equivalent. For example, a 20W MR16 BAB draws 20VA from the line.

For LED installations, apparent power (VA) must be taken into consideration because transformer size is actually based on apparent power (VA), not true power (W). To specify the correct transformer size, the system's total load must be calculated to ensure that the total volt-ampere draw does not exceed the transformer's rating.

The LED installation example below shows system load (total VA), true power consumed (W) and annual energy cost calculations.

1. Calculate Load of LED System	Lamp VA	x # Lamps	= Total Fixture Load
Well Light with 10W ProLED PAR36	12.0	8	= 96.0
Modern Bullet with 4.5W ProLED MR16	7.3	4	= 29.2
<b>Total System Load</b>			<b>125.2</b>

## 2. Select the Applicable Transformer for the LED System Load

- TR12PC-INT-100    
  TR12SS-INT-200    
  TR15SS-300    
  TR15SS-900  
 TR12SS-INT-120    
  TR15SS-INT-300    
  TR15SS-600    
  TR15SS-1200

3. Calculate Energy of LED Energy Consumption	Lamp Wattage	x # Lamps	= Power Consumption
Well Light with 10W ProLED PAR36	10	8	= 80
Modern Bullet with 4.5W ProLED MR16	4.5	4	= 18
<b>Total System Power Consumption</b>			<b>98</b>

## 4. Calculate the LED System's Annual Energy Cost

Consumption	x	Utility Cost <sup>1</sup>	x	Annual Operating Hours <sup>2</sup> /1000	= Annual Energy Cost
98W		\$0.115 kWh		2190 hrs	= \$24.68

<sup>1</sup>Utility Cost based on national average per U.S. Energy Information Administration <http://www.eia.gov/electricity/data.cfm#summary> at the time of printing.

<sup>2</sup>Annual Operating Hours based on 6 hours/day and 365 days/year.

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# Warranty

Sollos Landscape Lighting (hereinafter called "Sollos"), 2940 Pacific Drive, Norcross, GA 30071, warrants to the original purchaser that Sollos fixtures will be free from defects in materials and or workmanship for five years from the date of purchase except as indicated below:

<u>Category</u>	<u>Warranty</u>
Integrated transformers	2 Years
Commercial grade transformers	Lifetime
Brass fixtures	Lifetime
Antique Brass fixtures	Lifetime
Copper fixtures	15 Years
Stainless Steel fixtures	Lifetime
Composite fixtures	10 Years

## **Explicit Operating Conditions:**

All products must be installed according to Sollos Installation Instructions and ProLED lamps must be operated in recommended conditions. This warranty is issued to the original purchaser and is non-transferable.

Should any product fail to meet the warranty specified above, Sollos, at its option, shall correct any defect by repair or replacement. This warranty is conditioned upon proper storage, installation, use and maintenance. Remedy is expressly limited to repair or replacement only.

This warranty is not applicable to any product subjected to abnormal stresses and operating conditions.

Sollos reserves the right to examine all products prior to the determination of warranty status.

All products must be retained for warranty claims. The warranty period starts on the date of original purchase.

## **NO IMPLIED STATUTORY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY BEYOND THE AFOREMENTIONED WARRANTY PERIOD.**

The foregoing warranty is exclusive of all other statutory, written or oral warranties, and no other warranties of any kind, statutory or otherwise, are given or herein expressed. The warranty sets forth Sollos' responsibilities regarding the products and claimant's exclusive remedy.

**LIMITATION OF LIABILITY.** Sollos will not under any circumstances, whether as a result of breach of contract, breach of warranty, tort, strict liability or otherwise, be liable for consequential, incidental, special or exemplary damages including, but not limited to, loss of profits or revenues, loss of use of product or any other goods or associated equipment or damage to any associated equipment, cost of capital, cost of substitute products, facilities of service, down time cost, or claims of claimant's customers. Sollos' liability on any claim of any kind for any loss or damages arising out of, resulting from or concerning any aspect of this agreement from the products or services furnished hereunder shall not exceed the price of the specific product or lamps which gives rise to the claim.

Some states do not allow the exclusion or limitation of damages or the length of time for an implied warranty. Therefore, the limitations or exclusions of consequential or incidental damages and implied warranties may not apply to certain claimants. This warranty gives the claimant specific legal rights. The claimant may also have other rights, which vary from state to state.

# sollos®

LANDSCAPE LIGHTING

A Halco Lighting Technologies Company



## THE ART OF OUTDOOR ILLUMINATION

**Sollos** Landscape Lighting

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