

Elements

Essential Outdoor Lighting



July 2014

The Elements range is the perfect starting point for many landscape lighting projects. With a wide choice of luminaires, construction materials and lamp options, the Elements range is a practical and flexible product family that can be utilised alongside many different architectural styles and landscape settings.

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Luminaire Material Selection

Stainless Steel

Stainless Steel 304 & 316 options are available in many Element models, complimenting more modern gardens and offering good durability in a variety of locations. If your project is near the coast or a water source, it's good to consider selecting 316-grade Stainless Steel. All stainless steel product may "tea-stain" over time without regular maintenance.



Pure Copper

Copper is a time-tested material for many outdoor applications and lighting is no exception. The copper used in the Elements range is un-coated or varnished, meaning it will naturally oxidize to a dark brown/green patina over time. How long this takes depends on how exposed the fitting is to the weather.



Brass

Brass, as an alloy of copper and zinc, features many of the same benefits as copper with increased hardness and mechanical stability. Brass will also age when exposed to the environment, however some Elements brass models are available in "Aged Brass" meaning that they have been through an accelerated aging process. This delivers the structural stability of brass without the change in appearance over time.



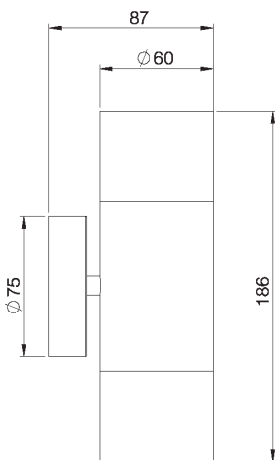
Australian Quality

The Elements range is 100% quality-controlled in Australia. We ensure that no light leaves our factory without having undergone a thorough quality check and any necessary improvements are made before the light is shipped.

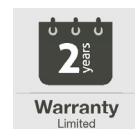
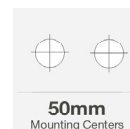
Aqualux Lighting

Lighting is fundamental to how we perceive the world around us - it enables us to see, it impacts our productivity and it can even alter our mood. Effective lighting in an outdoor area can transform a dark and disused night time garden into a functional after-dark space of subtle beauty and functionality. The art of effective illumination is a combination of skill and experience yet it is also critical to select the best product for the application.

Aqualux Lighting was started from the desire to introduce to the market a range of premium quality outdoor luminaires suitable for both the architectural and residential markets. Through a combination of attention to detail and a desire to respond to the needs of the market and the installers of our fittings, we have developed a series of product families that represent the best available products in their class.

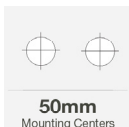
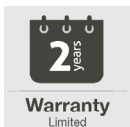
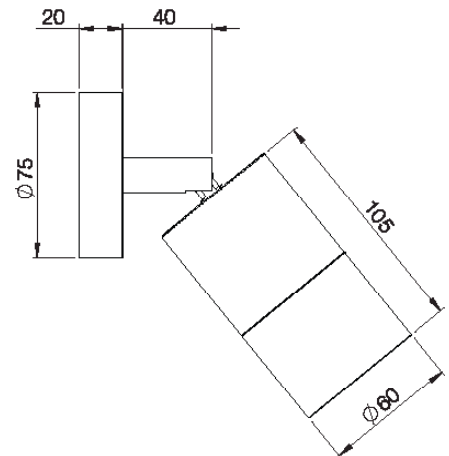


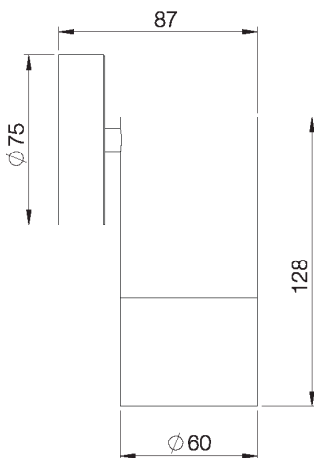
	AWL-03-SS	
	AWL-03-SS-316	
PRODUCT CODES	AWL-03-SS-316-240	
PRODUCT FAMILY	Elements	
MOUNTING	Surface / Wall Mount	
	AWL-03-SS	Stainless Steel 304
	AWL-03-SS-316	Stainless Steel 316
CONSTRUCTION	AWL-03-SS-316-240 Stainless Steel 316	
	AWL-03-SS	GU5.3 SELV
	AWL-03-SS-316	GU5.3 SELV
ELECTRICAL	AWL-03-SS-316-240 GU10 240VAC	
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		



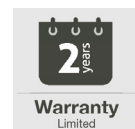
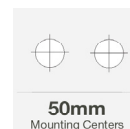


	AWL-05-SS	
	AWL-05-SS-316	
PRODUCT CODES	AWL-05-SS-316-240	
PRODUCT FAMILY	Elements	
MOUNTING	Surface / Wall Mount Adjustable	
	AWL-05-SS	Stainless Steel 304
	AWL-05-SS-316	Stainless Steel 316
CONSTRUCTION	AWL-05-SS-316-240 Stainless Steel 316	
	AWL-05-SS	GU5.3 SELV
	AWL-05-SS-316	GU5.3 SELV
ELECTRICAL	AWL-05-SS-316-240 GU10 240VAC	
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		



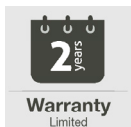
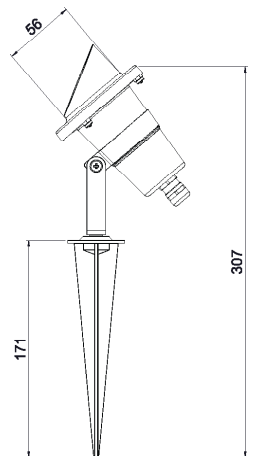


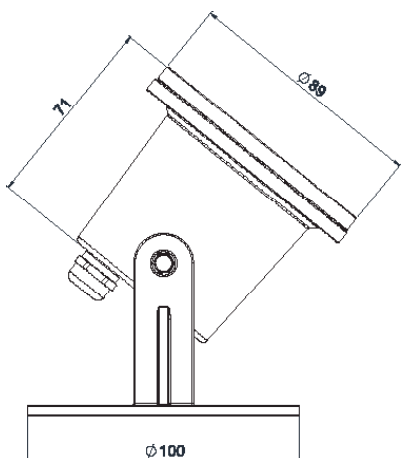
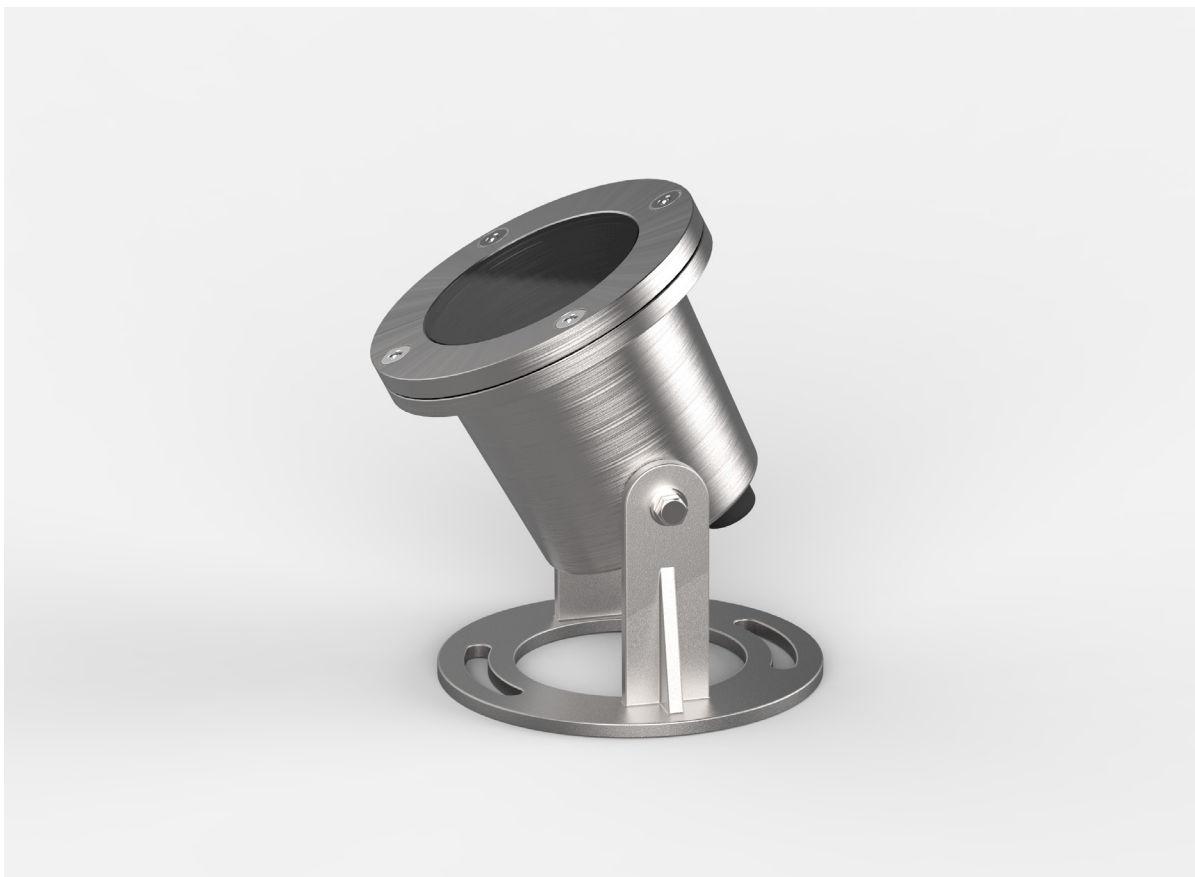
PRODUCT CODES	AWL-06-SS-316 AWL-06-SS-316-240	
PRODUCT FAMILY	Elements	
MOUNTING	Surface / Wall Mount Fixed	
CONSTRUCTION	AWL-06-SS-316 AWL-06-SS-316-240	Stainless Steel 316 Stainless Steel 316
ELECTRICAL	AWL-06-SS-316 AWL-06-SS-316-240	GU5.3 SELV GU10 240VAC
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		



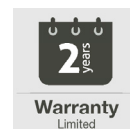


PRODUCT CODES	ASL-05-SS	
PRODUCT FAMILY	Elements	
MOUNTING	Surface / Wall Mount	
CONSTRUCTION	ASL-05-SS	Stainless Steel 304
ELECTRICAL	ASL-05-SS	GU5.3 SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		





	ASL-04-SS	
PRODUCT CODES	ASL-04-SS-316	
PRODUCT FAMILY	Elements	
MOUNTING	Surface Mount Spot	
	ASL-04-SS	Stainless Steel 304
CONSTRUCTION	ASL-04-SS-316	Stainless Steel 316
	ASL-04-SS	GU5.3 SELV
ELECTRICAL	ASL-04-SS-316	GU5.3 SELV
CABLE	4M Twin Core	
IP RATING	IP68	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL	Longer lead available	

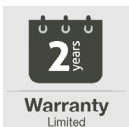
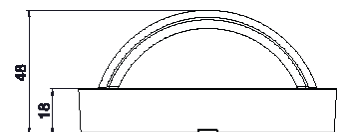
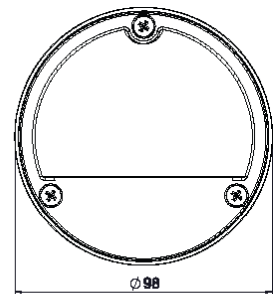


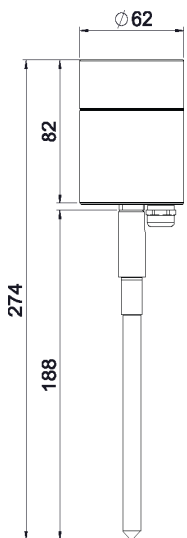


AWL-01 Step Light

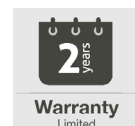


PRODUCT CODES	AWL-01-SS-316	
PRODUCT FAMILY	Elements	
MOUNTING	Surface Mount Steplight	
CONSTRUCTION	AWL-01-SS	Stainless Steel 316
ELECTRICAL	AWL-01-SS	GU4 JC-Type SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL	12~24V CREE LED Option	



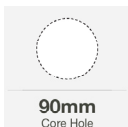
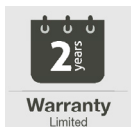
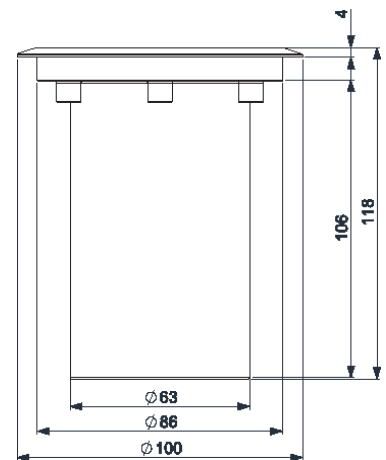


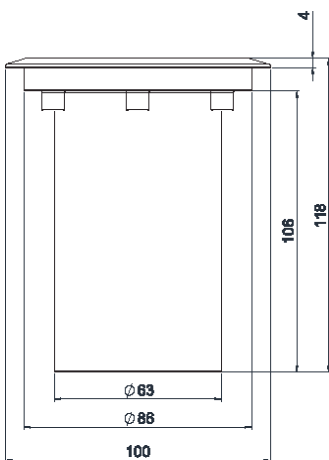
PRODUCT CODES	AUL-02-SS AUL-02-SS-316	
PRODUCT FAMILY	Elements	
MOUNTING	Spike Spot	
CONSTRUCTION	AUL-02-SS	Stainless Steel 304
	AUL-02-SS-316	Stainless Steel 316
ELECTRICAL	AUL-02-SS	GU5.3 SELV
	AUL-02-SS-316	GU5.3 SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL	600mm Extension Available	



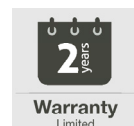
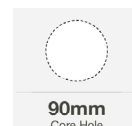


PRODUCT CODES	AUL-03-SS-316	
PRODUCT FAMILY	Elements	
MOUNTING	Recessed Uplight	
CONSTRUCTION	AUL-03-SS-316	Stainless Steel 316
ELECTRICAL	AUL-03-SS-316	GU5.3 SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		





PRODUCT CODES	AUL-04-SS-316	
PRODUCT FAMILY	Elements	
MOUNTING	Square Recessed Uplight	
CONSTRUCTION	AUL-04-SS-316	Stainless Steel 316
ELECTRICAL	AUL-04-SS-316	GU5.3 SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		

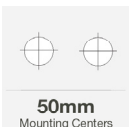
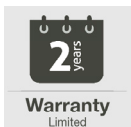
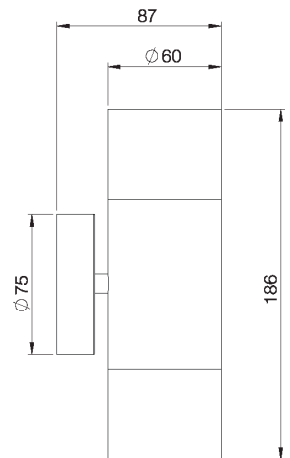


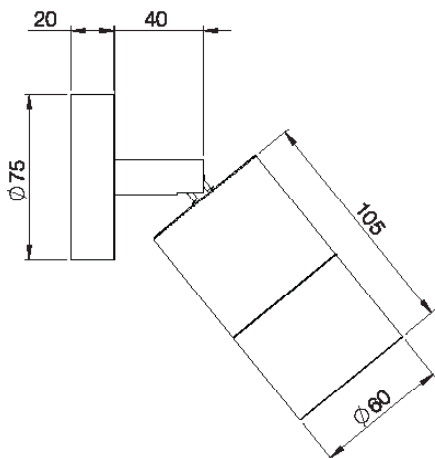


AWL-03-CP Copper Wall Light

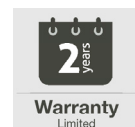
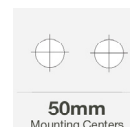


	AWL-03-CP	
PRODUCT CODES	AWL-03-CP-240	
PRODUCT FAMILY	Elements	
MOUNTING	Surface / Wall Mount	
	AWL-03-CP	Pure Copper
CONSTRUCTION	AWL-03-CP-240	Pure Copper
	AWL-03-CP	GU5.3 SELV
ELECTRICAL	AWL-03-CP-240	GU10 240VAC
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		





	AWL-05-CP	
PRODUCT CODES	AWL-05-CP-240	
PRODUCT FAMILY	Elements	
MOUNTING	Surface / Wall Mount Adjustable	
	AWL-05-CP	Pure Copper
CONSTRUCTION	AWL-05-CP-240	Pure Copper
	AWL-05-CP	GU5.3 SELV
ELECTRICAL	AWL-05-CP-240	GU10 240VAC
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		

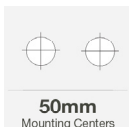
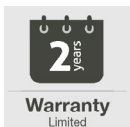
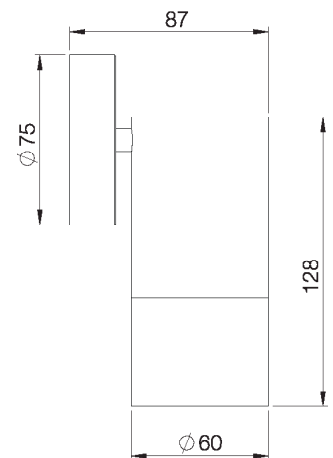


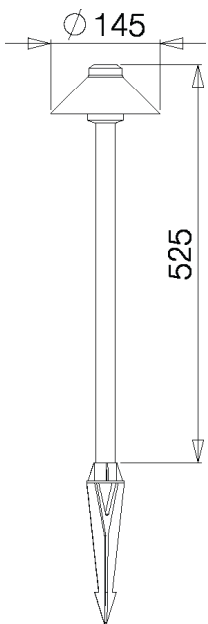


AWL-06-CP Fixed Copper Wall Light

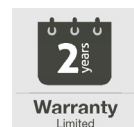


	AWL-06-CP	
PRODUCT CODES	AWL-06-CP-240	
PRODUCT FAMILY	Elements	
MOUNTING	Surface / Wall Mount Fixed	
CONSTRUCTION	AWL-06-CP	Pure Copper
	AWL-06-CP-240	Pure Copper
ELECTRICAL	AWL-06-CP	GU5.3 SELV
	AWL-06-CP-240	GU10 240VAC
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		





PRODUCT CODES	ABL-01-CP-LED	
PRODUCT FAMILY	Elements	
MOUNTING	Spiked Bollard	
CONSTRUCTION	ABL-01-CP-LED	Pure Copper
ELECTRICAL	ABL-01-CP-LED	12 - 24V AC / DC
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL	Integrated CREE LED 3000K	

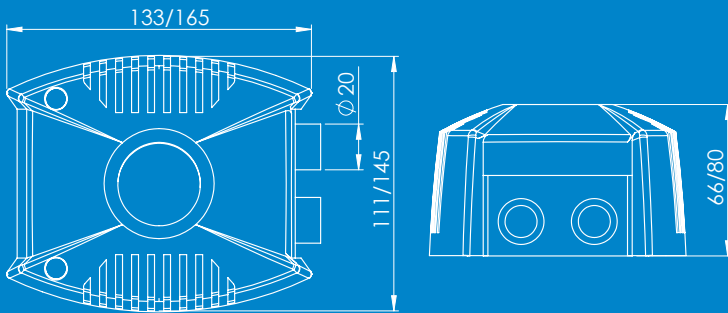


Australia's leading outdoor IP67 power supply for over 10 years, the Aqualtran AQO is known as the ultimate in durability and long-lasting performance.

- Contemporary design and housing
- IP67 Rated for full protection in outdoor use
- Resettable thermal cutout
- High Quality Toroid
- Cable exit shrouds accommodate conduit connection
- Rugged Polycarbonate Enclosure
- Thermal and UV stable epoxy resin encapsulate
- Approved to AS/NZS/EN 61558.2.6
- 1.8M Flex Lead & Plug
- 0.8M 8mm² Low Voltage Lead

Models

12V AC	VA	24V AC	VA
AQO12-020	20		
AQO12-050	50	AQO24-050	50
AQO12-100	100	AQO24-100	100
AQO12-150	150		
AQO12-200	200	AQO24-200	200
AQO12-300	300	AQO24-300	300
AQO12-400	400	AQO24-400	400



AQS-260 LED Strip

AQS-260 LED Strip is designed for 24V AC or DC applications including both outdoor and indoor installations.

AC-Compatible

Compatible with our AQO range of toroidal 24V SELV Power Supplies, AQS-260 strip will run off the same AC-trunk cable as other SELV luminaires in the Aqualux range - greatly simplifying cabling and installation issues. With no dedicated DC driver required, system and installation costs are also reduced.

IPX6 Rated

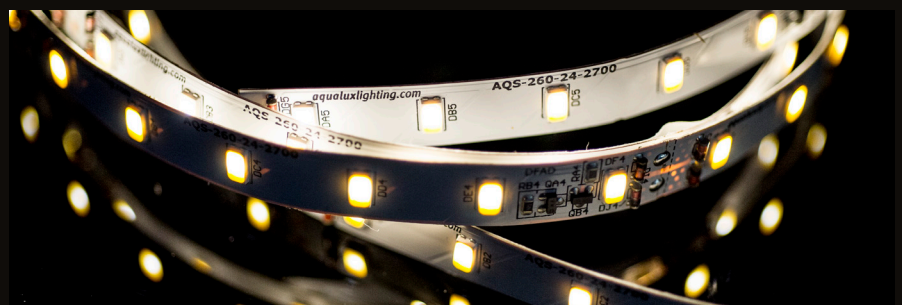
Coated in a Parylene-C CVD process, AQS-260 is IPX6 rated, providing protection in most damp and exposed locations. Should mechanical protection be required, we recommend installation into one of our aluminium profiles.

Dimming

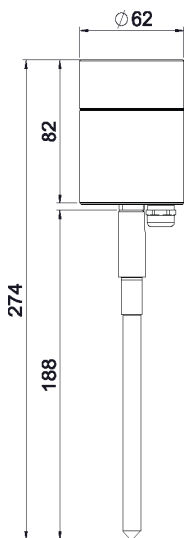
Dimmable via a standard Universal Dimmer in conjunction with our AQO24 range of power supplies, smooth dimming from 0% - 90% is available with unprecedented ease of installation - no more 1-10V/PWM/Resistance confusion.

Technical

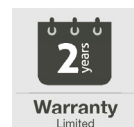
Product Codes	AQS-260-24-2700	2700 K
	AQS-260-24-5500	5500 K
Input Voltage	24V AC	24V DC
Watts / M	11.6	14.8
Lumens / M	690	1085
Lumens / W	59.5	73.3
IP Rating	IPX6	
Protective Coating	Parylene-C	
Max. Run Length	10M	7M
Cut Interval	100mm	
Power Supply	24V AC Magnetic	24V DC
Dimming Support	Universal 32E450UDM	



1. Exposure to direct sunlight (i.e. intense UV) should be avoided.
2. Performance will vary based on dimmer/transformer compatibility. For best results, we recommend Clipsal 32E450UDM
3. Due to the Parylene coating process, solder points should be lightly abraded/scraped to remove coating before attempting to solder. Re-coat using silicone based conformal spray.



PRODUCT CODES	AUL-02-CP	
PRODUCT FAMILY	Elements	
MOUNTING	Spike Spot	
CONSTRUCTION	AUL-02-CP	Pure Copper
ELECTRICAL	AUL-02-CP	GU5.3 SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		

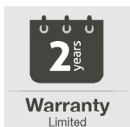
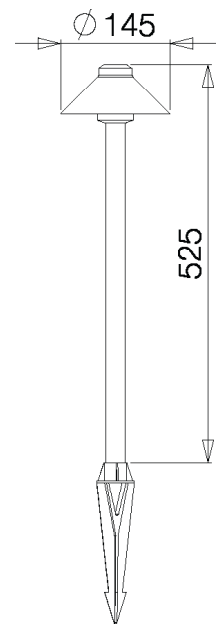


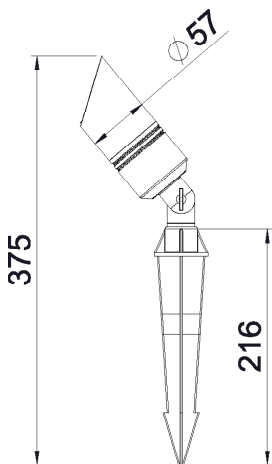


ABL-01-BR-LED Pathlight

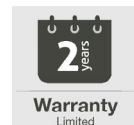


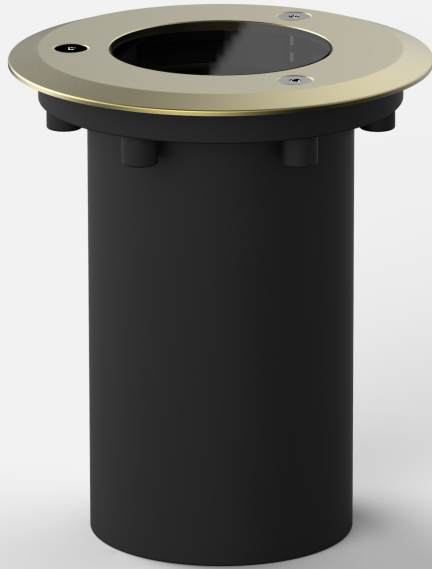
PRODUCT CODES	ABL-01-BR-LED	
PRODUCT FAMILY	Elements	
MOUNTING	Spiked Bollard	
CONSTRUCTION	ABL-01-BR-LED	Aged Brass
ELECTRICAL	ABL-01-BR-LED	12 - 24V AC / DC
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL	Integrated CREE LED 3000K Surface Mount Available	



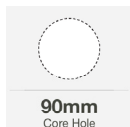
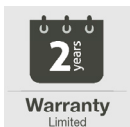
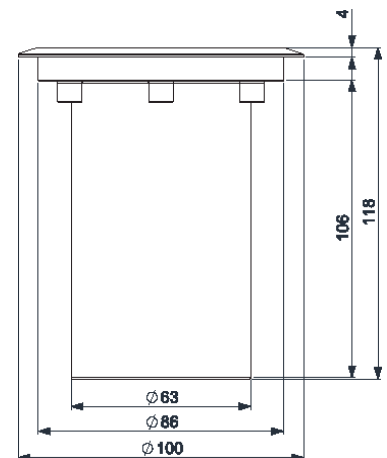


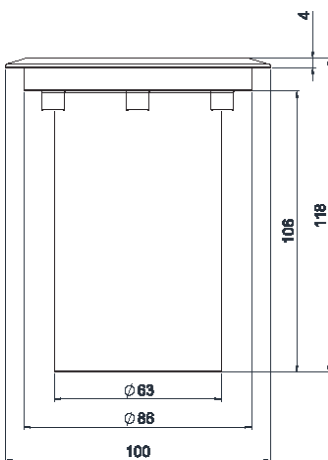
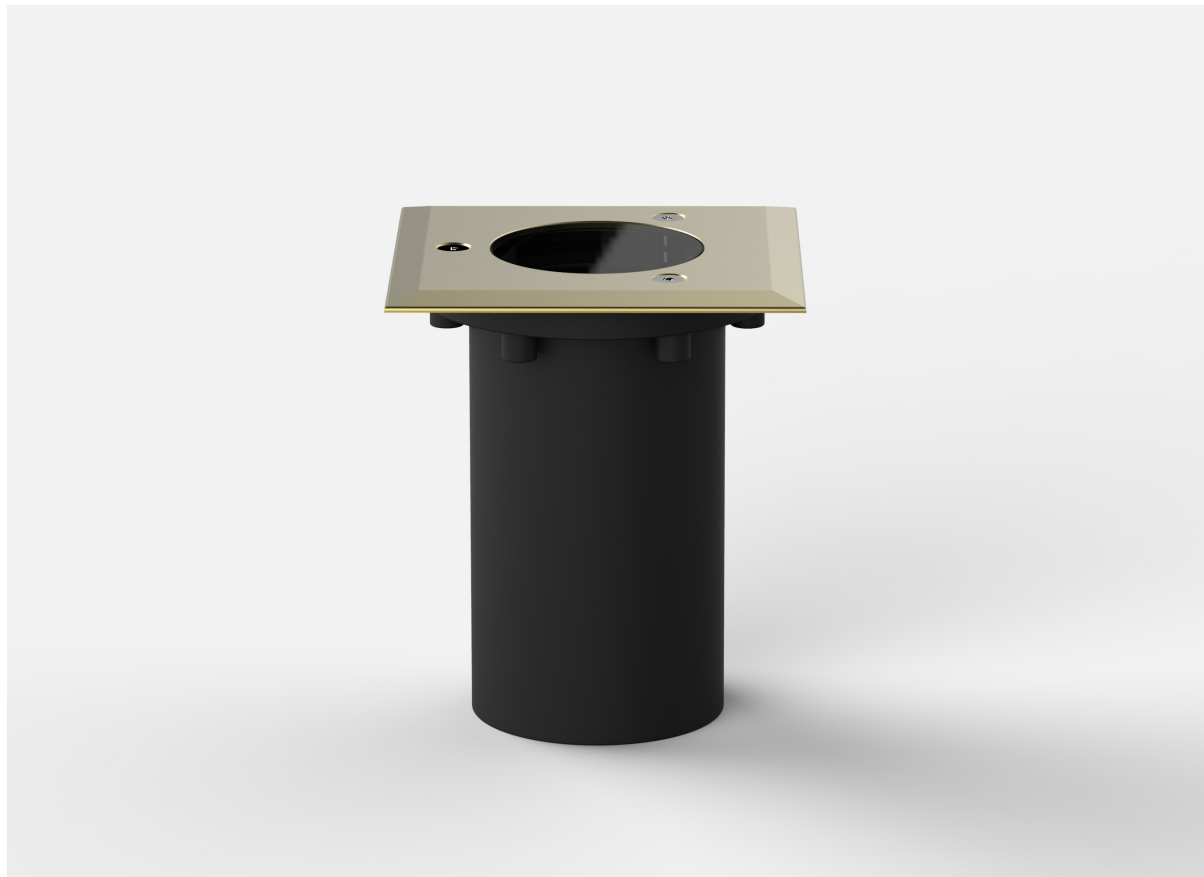
PRODUCT CODES	ASL-01-BR	
PRODUCT FAMILY	Elements	
MOUNTING	Spike Spot	
CONSTRUCTION	ASL-01-BR	Aged Brass
ELECTRICAL	ASL-01-BR	GU5.3 SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL	Surface Mount Plates Available 38cm & 60cm Extensions	



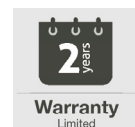
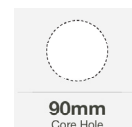


PRODUCT CODES	AUL-03-BR	
PRODUCT FAMILY	Elements	
MOUNTING	Recessed Uplight	
CONSTRUCTION	Canister	Stainless Steel 304
	AUL-03-BR	Brass
ELECTRICAL	AUL-03-BR	GU5.3 SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		



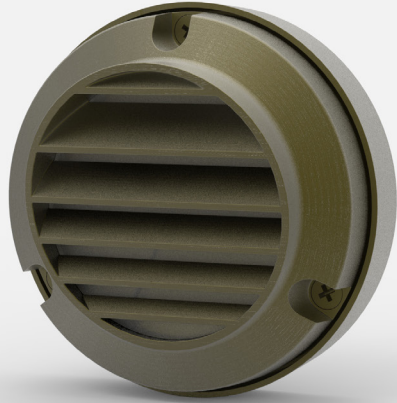


PRODUCT CODES	AUL-04-BR	
PRODUCT FAMILY	Elements	
MOUNTING	Square Recessed Uplight	
CONSTRUCTION	Canister	Stainless Steel 304
	AUL-04-BR	Brass
ELECTRICAL	AUL-04-BR	GU5.3 SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL		

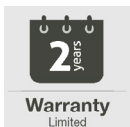
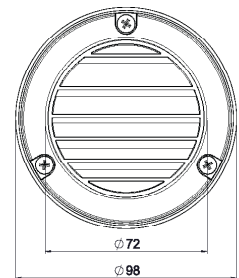




AWL-02-BR Steplight

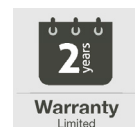
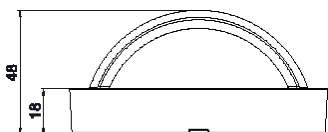
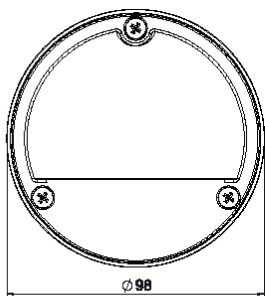


PRODUCT CODES	AWL-02-BR	
PRODUCT FAMILY	Elements	
MOUNTING	Slotted Brass Steplight	
CONSTRUCTION	AWL-02-BR	Aged Brass
ELECTRICAL	AWL-02-BR	G4 JC-Type SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL	12~24V CREE LED Option	





PRODUCT CODES	AWL-01-BR	
PRODUCT FAMILY	Elements	
MOUNTING	Slotted Brass Steplight	
CONSTRUCTION	AWL-01-BR	Aged Brass
ELECTRICAL	AWL-01-BR	G4 JC-Type SELV
CABLE	200mm Twin Lead	
IP RATING	IP65	
WARRANTY	Aqualux 2-Year Limited Warranty	
ADDITIONAL	12~24V CREE LED Option	



Elements

Essential Outdoor Lighting

LED Globes for Landscape Lighting

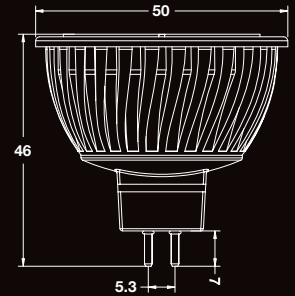
The best choice for LED MR16 Replacement outdoor luminaires.

True MR16 GX5.3 Form → Fits all MR16 / GX5.3 Luminaires.

4W Mid-Power LED Technology → Thermally optimised for enclosed fittings.

3000K / 5000K / Amber-Yellow 592nm → Lighting design flexibility.

12 ~ 24V AC/DC MultiVoltage™ Compatible → Voltage drop compensating.



	Warm White	Warm White GU10	Cool White
POWER	4W	4W	4W
OUTPUT	250lms	250lms	260lms
EFFICACY	62.5lm / W	62.5lm / W	65lm / W
CCT	3000K	3000K	5000K
CRI	83 (Ra)	83 (Ra)	83 (Ra)
LED	SSC 3030	SSC 3030	SSC 3030
BEAM ANGLE	35 Degrees	35 Degrees	35 Degrees
LIFETIME	30,000 Hours	30,000 Hours	30,000 Hours
VOLTAGE	12V ~ 24V AC / DC	240 VAC	12V ~ 24V AC / DC
BASE	GX5.3	GU 10	GX5.3
DIMENSIONS	50mm D x 46mm H	50mm D x 60mm H	50mm D x 46mm H
PART CODE	AGL-MR16-LED-4W-WW	AGL-GU10-LED-4W-WW	AGL-MR16-LED-4W-CW



Aqualux Lighting

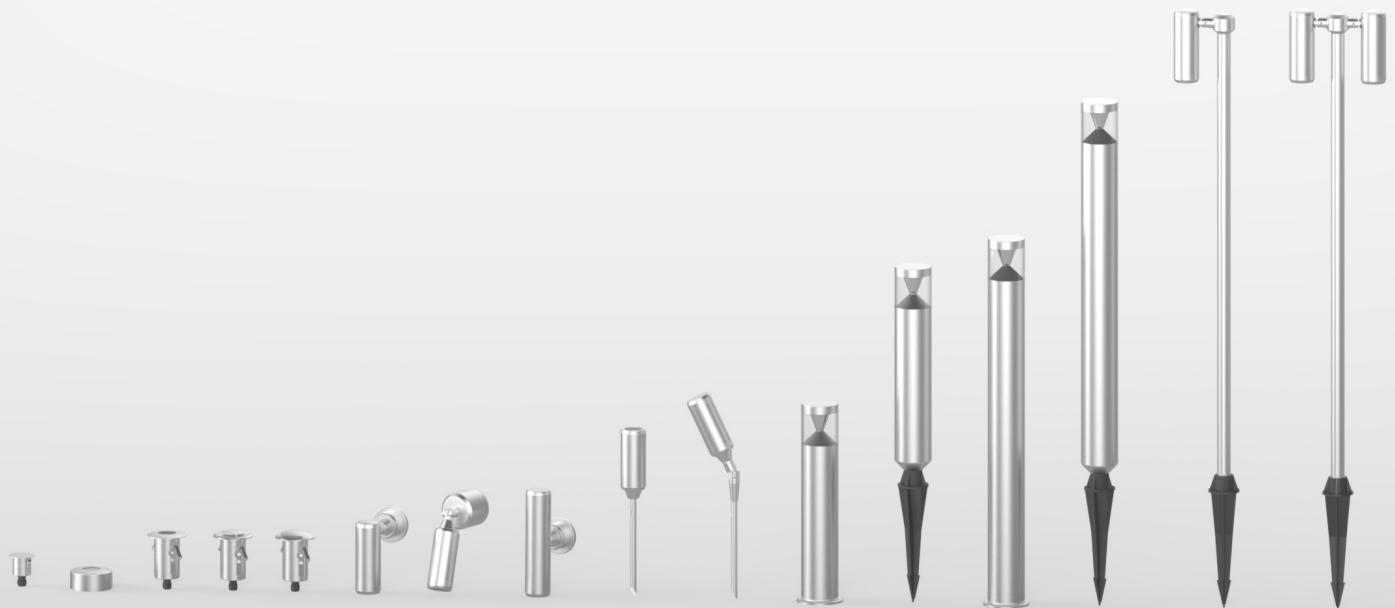
1300-662-644 / +61294547900 / sales@aqualux.com.au / www.aqualux.com.au
 Unit 4 / 12A Rodborough Road, Frenchs Forest, NSW, 2086, Australia
 PO Box 6059, Frenchs Forest, NSW, 2086, Australia

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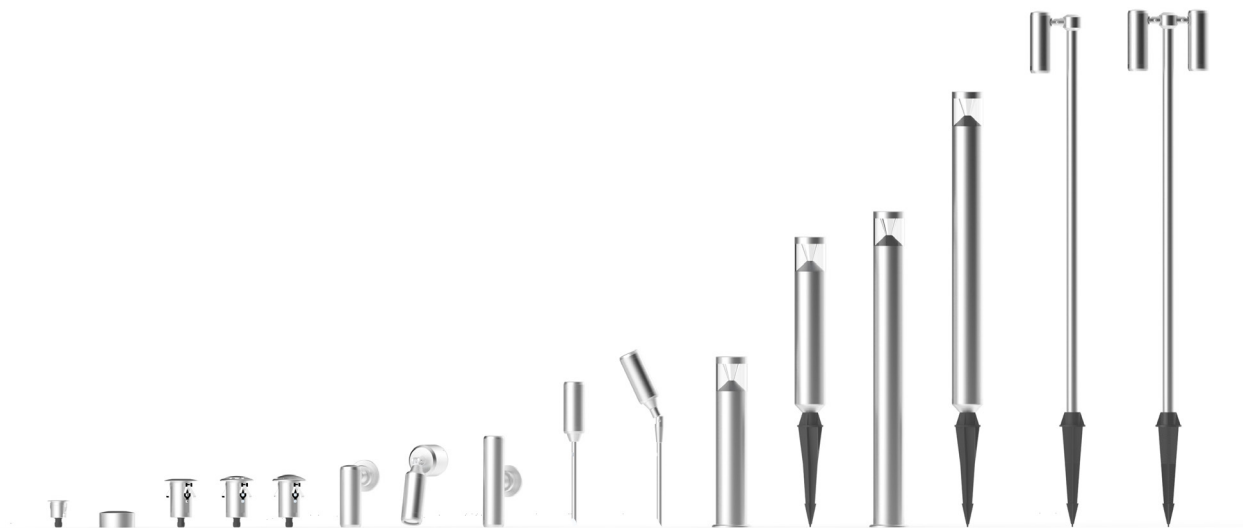
Aqualux is engaged in continual product refinement and improvement. Details contained in this document are subject to change.

Lumena

Landscape Lighting System



July 2014



Lumena System

The Lumena System is a complete family of landscape lighting products that enables the design of advanced outdoor lighting installations. With a range of luminaires that covers almost every application, Lumena is able to bring to life the most demanding landscape lighting requirements.

AQL-105	Fixed Inground Spike	AQL-135	GEKKO 300mm Mini Bollard - Spike	AQL-206	Fixed Wall Downlight - 240V
AQL-115	Adjustable Inground Spike	AQL-136	GEKKO 300mm Mini Bollard - Surface	AQL-215	Adjustable Wall Light
AQL-120	Single Fixed Pathlight	AQL-155	Recessed Uplight	AQL-216	Adjustable Wall Light - 240V
AQL-121	Single Adjustable Pathlight	AQL-165	Recessed 2-Way Runway Light	AQL-220	Adjustable Surface Spotlight
AQL-125	Twin Fixed Pathlight	AQL-166	Recessed 4-Way Runway Light	AQL-305	Up/Down Wall Light
AQL-126	Twin Adjustable Pathlight	AQL-175	Surface Mount 'Puck' Light	AQL-306	Up/Down Wall Light - 240V
AQL-130	GEKKO 300mm Mini Bollard - Spike	AQL-195	Micro Decklight		
AQL-131	GEKKO 300mm Mini Bollard - Surface	AQL-205	Fixed Wall Downlight		

Aqualux Lighting

Lighting is fundamental to how we perceive the world around us - it enables us to see, it impacts our productivity and it can even alter our mood. Effective lighting in an outdoor area can transform a dark and disused night time garden into a functional after-dark space of subtle beauty and functionality. The art of effective illumination is a combination of skill and experience yet it is also critical to select the best product for the application.

Aqualux Lighting was started from the desire to introduce to the market a range of premium quality outdoor luminaires suitable for both the architectural and residential markets. Through a combination of attention to detail and a desire to respond to the needs of the market and the installers of our fittings, we have developed a series of product families that represent the best available products in their class.

Landscape Lighting

The Lumena collection of advanced landscape luminaires is designed for high-performance and long-lasting durability in all outdoor environments.

Constructed from Aerospace-grade aluminium and utilising the latest in LED technology from CREE, the Lumena range is suitable for a wide variety of architectural and landscape lighting projects.



Aerospace-Grade Aluminium & Anodising

The Lumena range is precision CNC machined from extruded profiles of AL6061-T3 Aluminium and then anodised in a selection of colours. Similar materials and processes are utilised in the aerospace, marine and automotive racing industries. Anodised aluminium has superior long-term durability, thermal conductivity and low-maintenance qualities when compared to Stainless Steel, making it an ideal material for LED luminaires.



LEDs



Lumena utilises CREE LED's exclusively in a variety of platforms and packages.

By choosing to use only CREE, Lumena is able to demonstrate leading lumen / watt ratios and deliver superior overall efficacy.

Assembled in Australia

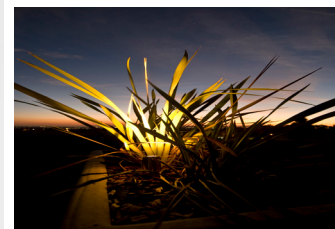


By choosing to retain our full assembly capacity in Sydney, Australia, Aqualux is able to ensure the highest build quality standards are adhered to. From prototype through to mass-production, our assembly team is able to deliver products on time and to the standards our customers expect.

Sustainable Lighting



Our commitment to delivering sustainable products is present throughout our organisation. From our Sydney factory running on 100% Renewable Energy, through to sustainable product design & packaging choices - not to mention the development of lighting products that use 20% of the energy of their previous halogen equivalents!

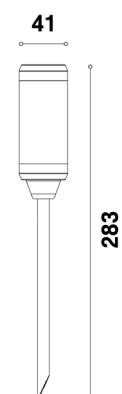


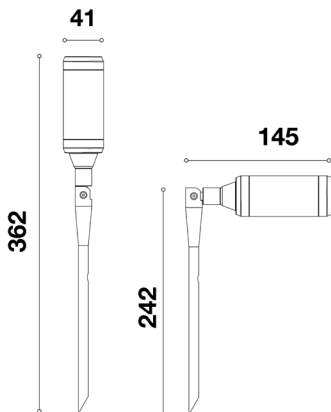
TECHNICAL

PRODUCT CODE	AQL-105
PRODUCT FAMILY	Lumena
MOUNTING	Inground Spike
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		





TECHNICAL

PRODUCT CODE	AQL-115
PRODUCT FAMILY	Lumena
MOUNTING	Adjustable Inground Spike
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		

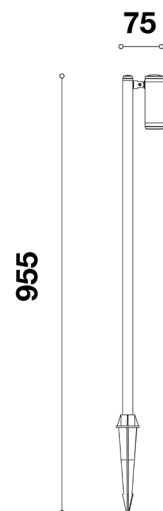


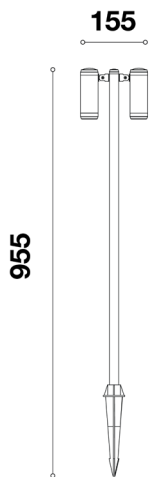
TECHNICAL

PRODUCT CODE	AQL-120 (Fixed) / AQL-121 (Adjustable)
PRODUCT FAMILY	Lumena
MOUNTING	Spike Pathlight
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		





TECHNICAL

PRODUCT CODE	AQL-125 (Fixed) / AQL-126 (Adjustable)
PRODUCT FAMILY	Lumena
MOUNTING	Twin Spike Pathlight
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		





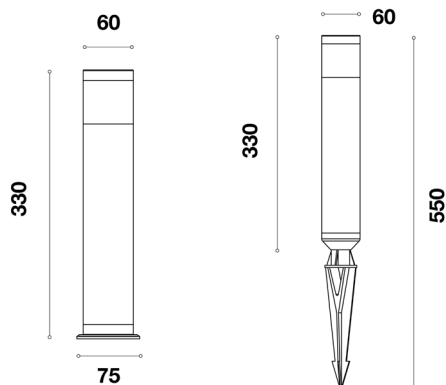


TECHNICAL

PRODUCT CODE	AQL-130 (Spike) / AQL-131 (Surface Mount)
PRODUCT FAMILY	Lumena
MOUNTING	Mini Bollard
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
LED	X03: CREE XBD	3000K	320 lms	4W
OPTIC	Diffuse	360°		
CABLE	Quick Connect Option	QC		



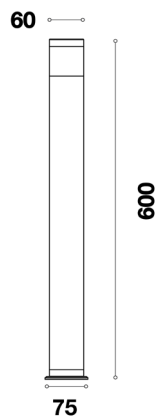
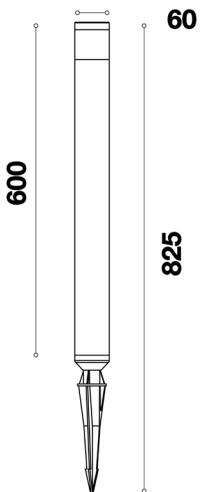


TECHNICAL

PRODUCT CODE	AQL-135 (Spike) / AQL-136 (Surface Mount)
PRODUCT FAMILY	Lumena
MOUNTING	Mini Bollard
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
LED	X03: CREE XBD	3000K	320 lms	4W
OPTIC	Diffuse	360°		
CABLE	Quick Connect Option	QC		



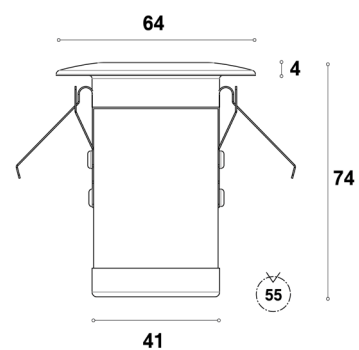


TECHNICAL

PRODUCT CODE	AQL-155
PRODUCT FAMILY	Lumena
MOUNTING	Recessed Uplight
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
	Asymmetric	15 Off-Axis		
CABLE	Quick Connect Option	QC		



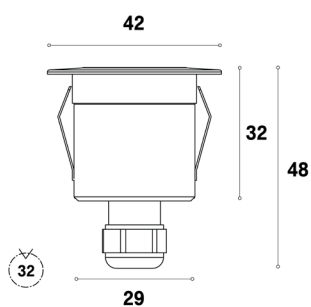


TECHNICAL

PRODUCT CODE	AQL-195
PRODUCT FAMILY	Lumena
MOUNTING	Micro Uplight
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XPE	3000K / 6000K	100 lms	1.5W
	Red / Green / Blue / Amber	-		1.5W
OPTIC	Diffuse	-	-	
CABLE	Quick Connect Option	QC		







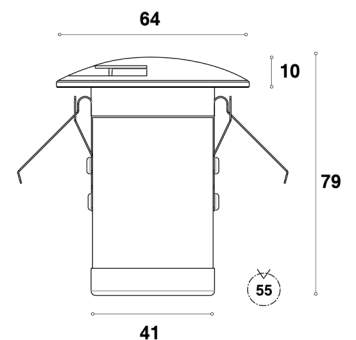


TECHNICAL

PRODUCT CODE	AQL-165
PRODUCT FAMILY	Lumena
MOUNTING	2-Way Runway Light
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	100 lms	2.5W
	X12: CREE MKR	3000K / 6000K	150 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Diffuse	-	-	
CABLE	Quick Connect Option	QC		



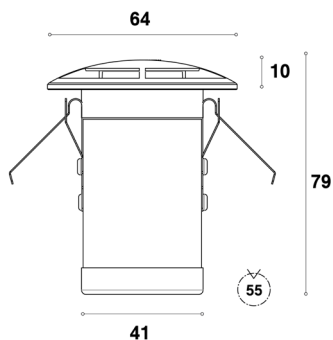


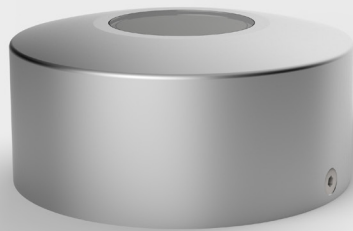
TECHNICAL

PRODUCT CODE	AQL-166
PRODUCT FAMILY	Lumena
MOUNTING	4-Way Runway Light
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Diffuse	-	-	
CABLE	Quick Connect Option	QC		



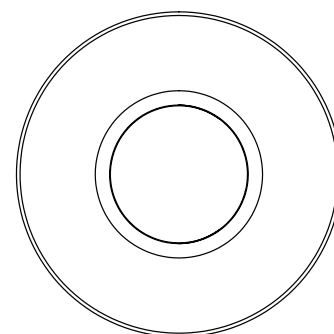
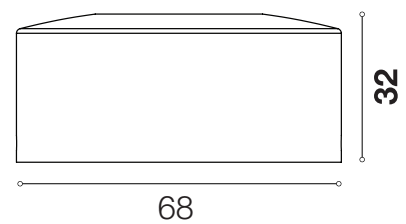


TECHNICAL

PRODUCT CODE	AQL-175
PRODUCT FAMILY	Lumena
MOUNTING	Surface Mount Light
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		



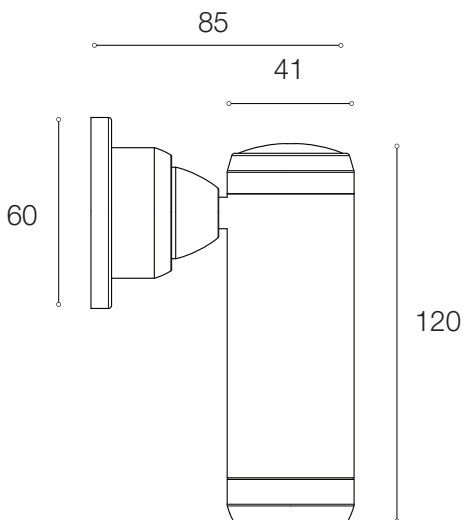


TECHNICAL

PRODUCT CODE	AQL-205
PRODUCT FAMILY	Lumena
MOUNTING	Fixed Wall Light
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		







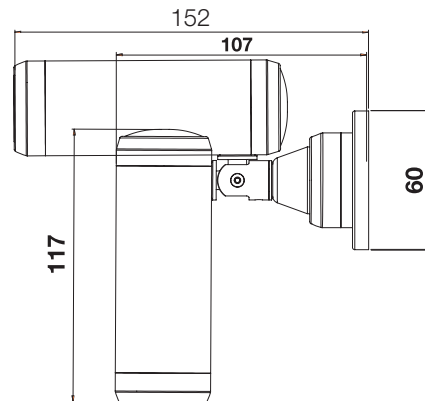


TECHNICAL

PRODUCT CODE	AQL-215
PRODUCT FAMILY	Lumena
MOUNTING	Adjustable Wall Light
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		



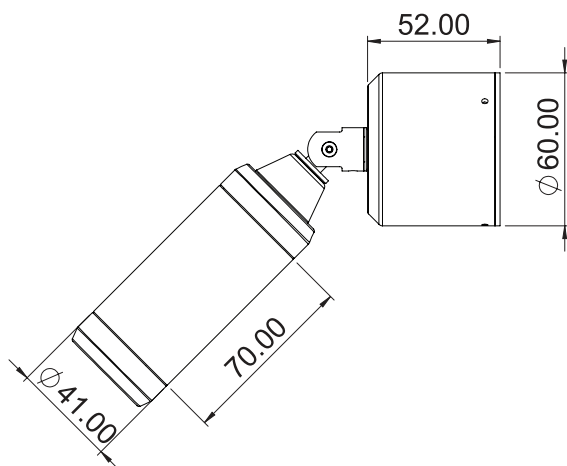


TECHNICAL

PRODUCT CODE	AQL-220
PRODUCT FAMILY	Lumena
MOUNTING	Surface Mount Spot
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium 12 ~ 24V AC / DC MultiSource Driver
ELECTRICAL	240V Integral Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		



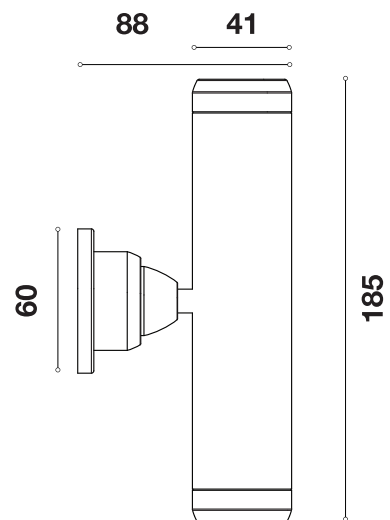


TECHNICAL

PRODUCT CODE	AQL-305
PRODUCT FAMILY	Lumena
MOUNTING	Up/Down Wall Light
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		





TECHNICAL

PRODUCT CODE	AQL-306
PRODUCT FAMILY	Lumena
MOUNTING	Up/Down Wall Light
CONSTRUCTION	CNC Machined & Anodised 6061 Aluminium
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver 240V Integral Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP67
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

BODY	Anodised Black	BK		
	Satin Chrome	SC		
	Antique Bronze	AB		
	Gunmetal Grey	GG		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		

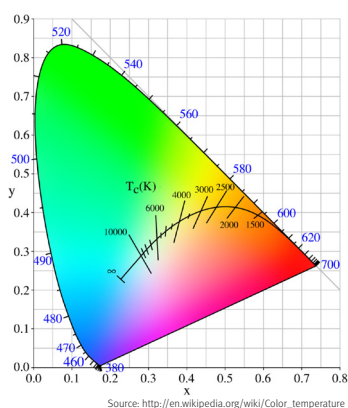
IP Rating Ingress Protection

The IP (Ingress Protection) rating system provides a means of classifying the degrees of protection from foreign bodies and liquids afforded by electrical equipment and enclosures. The degrees of protection against the ingress of foreign bodies and liquids are indicated by the first two numerals as detailed in the table below.

1st Digit	Description	2nd Digit	Description
0	No Protection	0	No Protection
1	Protected against ingress of objects => 50mm in diameter.	1	Protected against vertically falling drops of water.
2	Protected against ingress of objects => 12.5mm in diameter.	2	Protected against falling drops of water, when enclosure tilted 15 degrees.
3	Protected against ingress of objects => 2.5mm in diameter.	3	Protected against spraying water.
4	Protected against ingress of objects => 1mm in diameter.	4	Protected against splashing water.
5	Dust Protected	5	Protected against water jets.
6	Dust Tight	6	Protected against powerful water jets.
		7	Protected against the effects of temporary immersion in water.
		8	Protected against the effects of continuous immersion in water.

CCT Correlated Colour Temperature

Color Temperature is the chromacity of a light source as determined by it's position on an imaginary line drawn through a colour space. This line is often referred to as a 'blackbody locus', as it is the locus (line) resulting from graphing the chromacity of a perfect blackbody radiator as it changes temperature. In general, "hotter" CCT's appear "cooler/bluer" whilst "colder" CCT's appear "warmer/more red"



CCT

- 2000°
- 2470°
- 2565°
- 2665°
- 2755°
- 2900°
- 3100°
- 3250°
- 3400°
- 3900°
- 4200°
- 4700°
- 5100°
- 5500°
- 6100°
- 6700°
- 7400°
- 8300°
- 30,000°

Example

- Gaslight
- 15 watt incandescent bulb
- 60 watt incandescent bulb
- 100 watt incandescent bulb
- 500 watt incandescent bulb
- 500 watt Krypton bulb
- Projector type filament bulb
- Photo Flood
- Halogen
- Carbon arc
- Moonlight
- Industrial smog
- Hazy weather
- Sun 30° above horizon
- Sun 50° above horizon
- Electronic Flash
- Overcast sky
- Foggy weather
- Blue sky

Luminaire Construction Materials

Aluminium

Aluminium can be grouped into two different categories with respect to outdoor lighting - Machined or Cast. Machined aluminium, unlike cast aluminium, is a superior alloy and can be effectively anodized, a process which integrates a layer of extra-hard aluminium oxide into the surface of the metal and protects against corrosion.

Machined & Anodised aluminium is used in a number of demanding applications, such as yacht masts, window framing and the aerospace industry, to name a few.

All Aqualux Lumena parts are constructed from high-quality, machined and anodised 6000-Series Aluminium.

Stainless Steel

Stainless Steel is a popular choice for luminaire construction and fits well with many of the contemporary home and garden designs seen today. Featuring resistance to corrosion and a variety of surface finishes possible, Stainless Steel for luminaire construction comes in two common grades, 304 & 316 ("Marine Grade").

Stainless Steel must be maintained in order for it to retain it's "stainless" appearance. Tea staining, dirt, salt and even rust can build up on any type of "Stainless" fitting unless it is properly maintained by wiping it down every few months with a damp cloth.

Copper

Copper is a popular option for more traditional settings and will naturally oxidize over time, turning a dark green colour as the metal reacts with oxygen in the air, unless it is continuously polished. Copper is one of the most expensive materials used in the construction of light fittings but also one of the most enduring.

Brass

An alloy of tin & copper, brass is a material in common use for a wide variety of outdoor light fittings. Highly resistant to corrosion, brass will oxidize lightly over time but will generally not degrade structurally even in highly corrosive environments. Most brass fittings are generally cast and then machined.

Aqualux System Guide

The information below details the current nominal performance parameters of the Aqualux LED range. This information is subject to change at any time based on our desire to continually improve product performance. Please check our website for the latest version of this guide.

	Lumen Output (lm) ¹	Wattage (W) ¹	Input Voltage ³	LED Chipsets
X01	50	1	11 ~ 28V AC / DC	CREE XP-C/XP-E/XB-D
X03	120	2.5	11 ~ 28V AC / DC	CREE XT-E / XR-C
X06	220	3	11 ~ 28V AC / DC	CREE XB-D / MX-6
X12	320	4.5	11 ~ 28V AC / DC	CREE MK-R / MC-E / XB-D
D12	50 ~ 320 ²	4.5	24V AC / DC	CREE MK-R

1. Nominal values given for lumen output and wattages will vary based on the particular optical configuration (lens or diffuser choice), LED colour temperature and input voltage.
2. The maximum & minimum output of the dimmable driver will vary based on the exact dimmer selected & power source used. 0% dimming is not currently possible.
3. Check specific luminaire specification before completing system design.

Optical

Aqualux fittings can generally be configured with a choice of optical lenses. The images and photometric charts below show the difference between the standard choices. In some products a diffuse or frosted option is available - this delivers a much broader, non-focussed light.

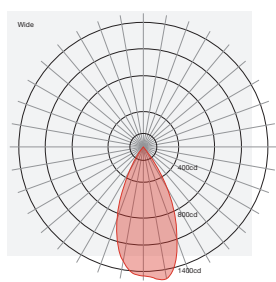
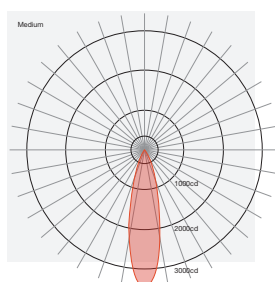
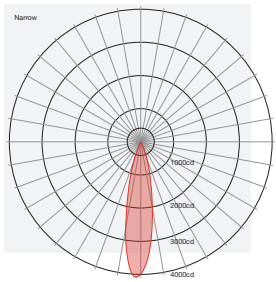
X12 Narrow



X12 Medium



X12 Wide



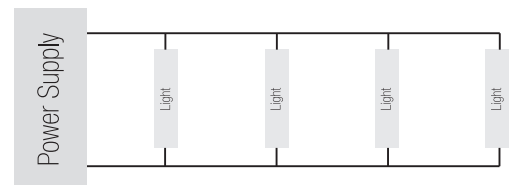
Power Supply

Aquatran AQO SELV

All Aqualux LED fittings should be used with the Aquatran AQO SELV power supply. This is a standard magnetic step-down transformer and provides superior reliability over the long-term.

Parallel Wiring

All Aqualux LED luminaires must be wired in parallel. This is the most common electrical wiring approach used for standard residential & commercial installations.



In AC circuits there is no polarity.

If using a DC supply with Aqualux fittings, polarity does not apply as our driver will automatically correct. DC wiring must be in parallel.

24V AC : Nominal System Voltage

- Aqualux luminaires can be used with the appropriate power supply on any voltage within the range specified in the above table.
- 24V is the preferred voltage for voltage drop and LED supply reasons. If you can choose, choose 24V AC.
- 12V system compatibility is provided for mixed system, LED / halogen applications.



Lumena



Aqualux Lighting

1300-662-644 / +61294547900 / sales@aqualux.com.au / www.aqualux.com.au
Unit 4 / 12A Rodborough Road, Frenchs Forest, NSW, 2086, Australia
PO Box 6059, Frenchs Forest, NSW, 2086, Australia

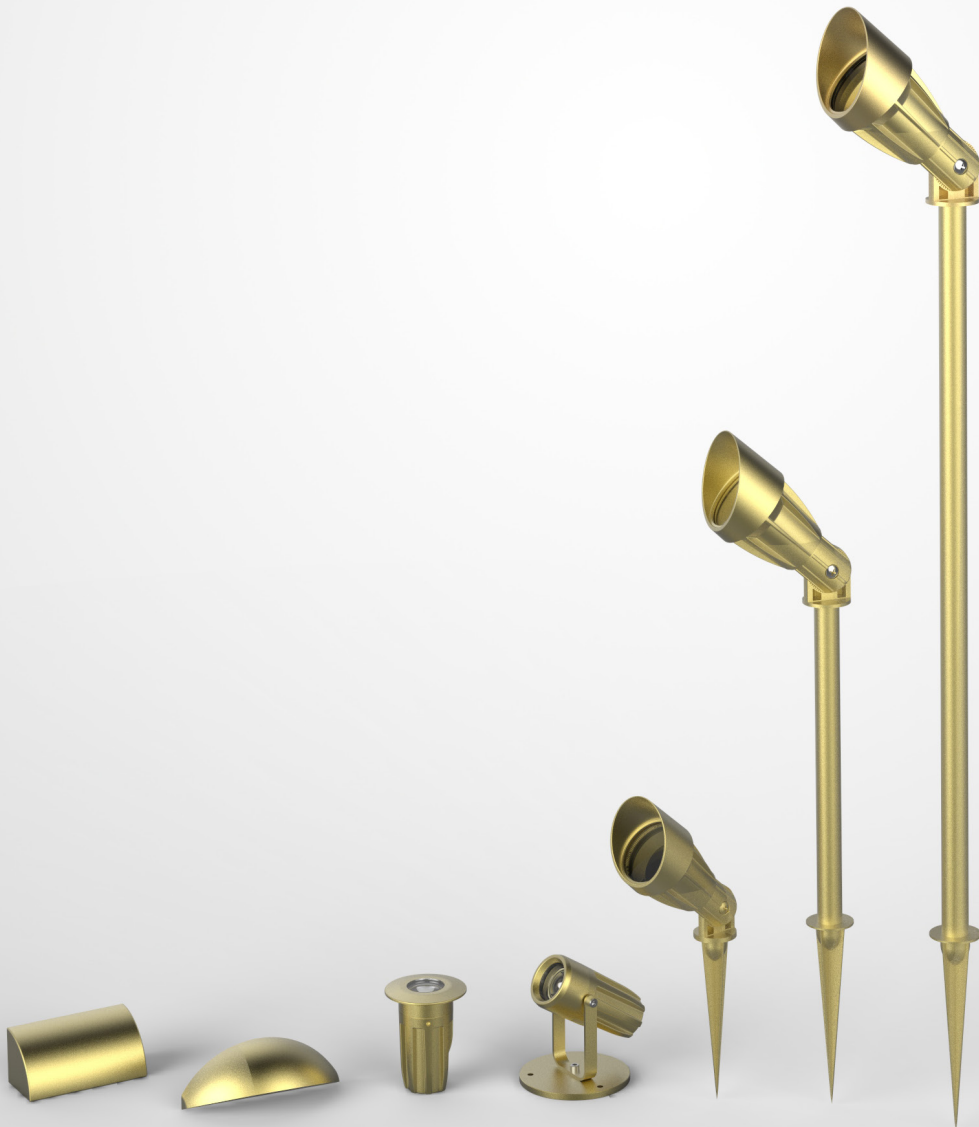
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Aqualux is engaged in continual product refinement and improvement. Details contained in this document are subject to change.



Phoenix

Cast Brass Lighting



June 2014

The Phoenix family of cast brass luminaires is designed with the ultimate in reliability and structural stability. Brass, an alloy of copper and zinc, is an ideal material for the creation of long-lasting objects and is used in many different harsh environments.

Available in a range of surface finishes to increase design versatility, the natural appearance of the raw brass will age over time, developing a light green then darker green patina over the course of several years.

The Phoenix range is continually refined with new models and features in development.

Lumena System

The Lumena System is a comprehensive range of CNC-machined Aluminium light fittings that are assembled on-demand in Sydney, Australia. See the website for more information or call to request a Lumena brochure.



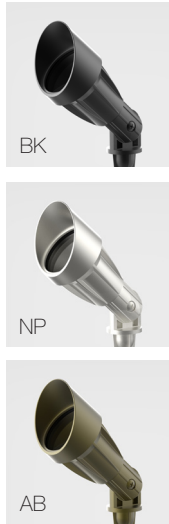
Assembled In Australia

The Lumena, Phoenix and Artisan product families are assembled in Sydney, Australia upon receipt of an order. Our rapid manufacturing facilities allow us to complete most orders within 2-3 days.

Aqualux Lighting

Lighting is fundamental to how we perceive the world around us - it enables us to see, it impacts our productivity and it can even alter our mood. Effective lighting in an outdoor area can transform a dark and disused night time garden into a functional after-dark space of subtle beauty and functionality. The art of effective illumination is a combination of skill and experience yet it is also critical to select the best product for the application.

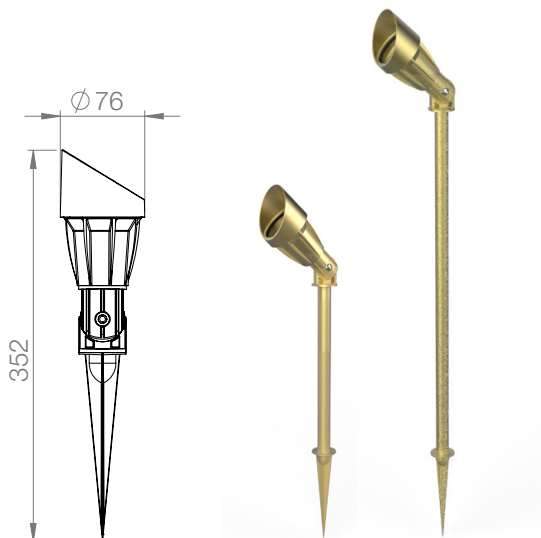
Aqualux Lighting was started from the desire to introduce to the market a range of premium quality outdoor luminaires suitable for both the architectural and residential markets. Through a combination of attention to detail and a desire to respond to the needs of the market and the installers of our fittings, we have developed a series of product families that represent the best available products in their class.



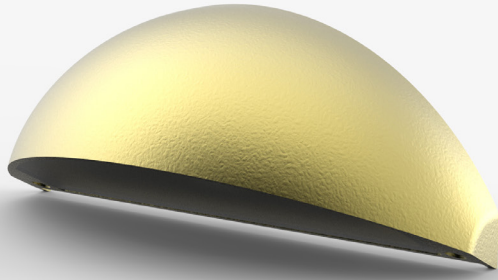
TECHNICAL

PRODUCT CODE	AQL-503
PRODUCT FAMILY	Phoenix
MOUNTING	Adjustable Inground Spike
CONSTRUCTION	Solid Cast Brass
ELECTRICAL	12 – 24V AC / DC MultiSource Driver or GU5.3 Drop-In
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP66
WARRANTY	3-Year Electrical + 3-Year Construction Available with QuickConnect Rapid Installation Option
ADDITIONAL	300mm & 600mm Riser Poles Available

CONFIGURE



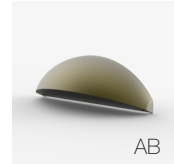
BODY	Natural Brass	BR			
	Black Powder Coat	BK			
	Nickle Plate	NP			
	Antique Bronze	AB			
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W	
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W	
	Red / Green / Blue / Amber	-	-	2.5W	
MR16	GU5.3 Lampholder Option	LED Drop-in / 20W Halogen			
	Narrow	10°	FWHM		
	Medium	25°	FWHM		
OPTIC	Wide	40°	FWHM		
CABLE	Quick Connect Option	QC			



BK



NP



AB

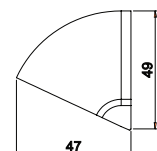
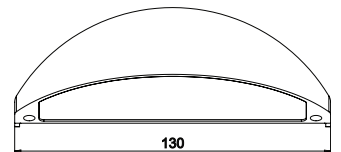
BR

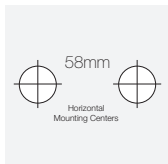
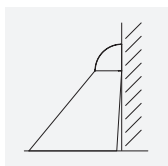
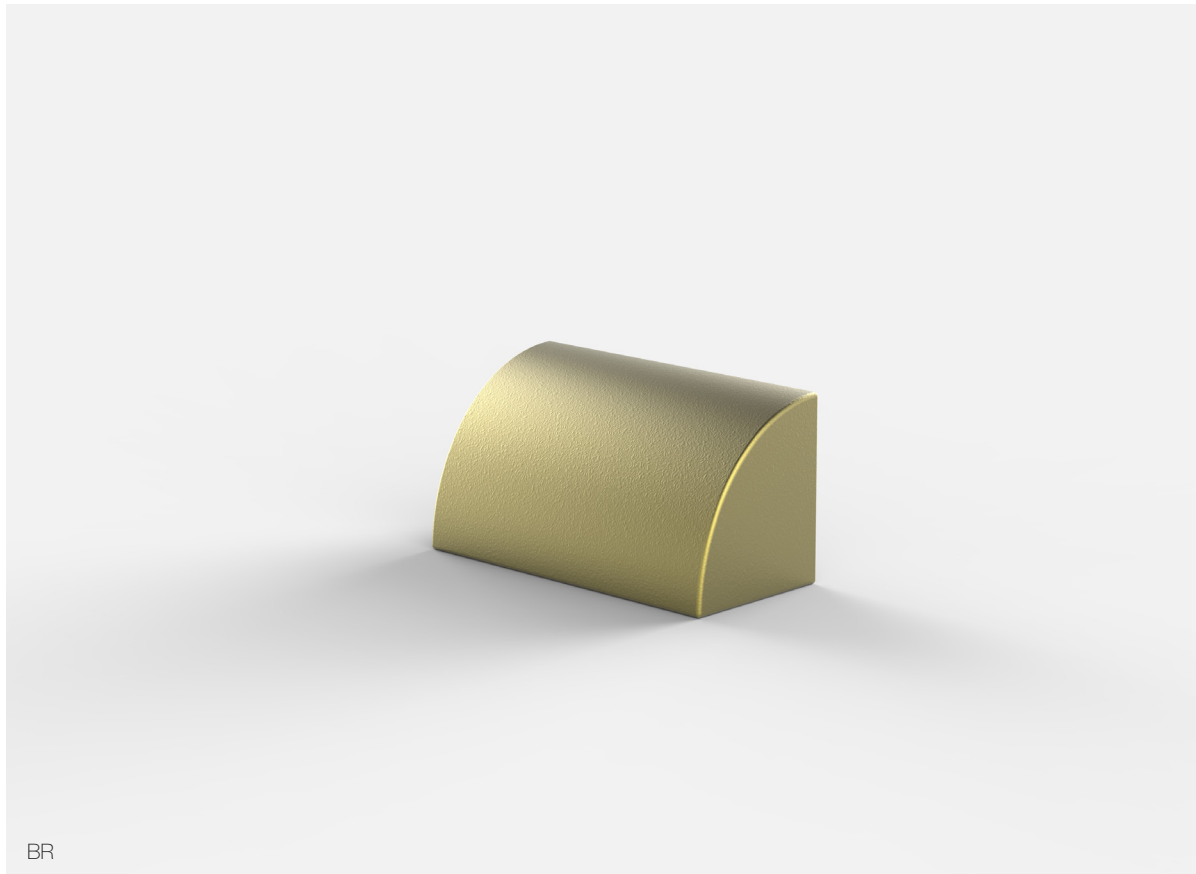
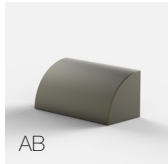
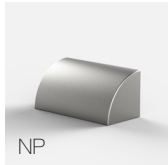
TECHNICAL

PRODUCT CODE	AQL-510
PRODUCT FAMILY	Phoenix
MOUNTING	Wall / Surface Mount
CONSTRUCTION	Solid Cast Brass
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP66
WARRANTY	3-Year Electrical + 3-Year Construction Available with QuickConnect Rapid Installation Option
ADDITIONAL	IP67 Resin Filled Option

CONFIGURE

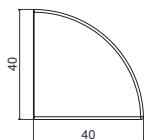
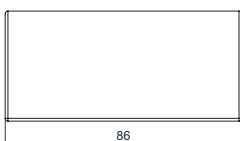
BODY	Natural Brass	BR		
	Black Powder Coat	BK		
	Nickle Plate	NP		
	Antique Bronze	AB		
LED	X06: CREE XBD	3000K	250 lms	4W
OPTIC	Clear	-		
	Frosted	-		
CABLE	Quick Connect Option	QC		





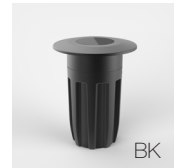
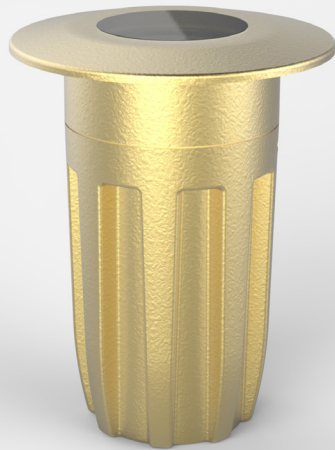
TECHNICAL

PRODUCT CODE	AQL-520
PRODUCT FAMILY	Phoenix
MOUNTING	Wall / Surface Mount
CONSTRUCTION	Solid Cast Brass
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP66
WARRANTY	3-Year Electrical + 3-Year Construction Available with QuickConnect Rapid Installation Option
ADDITIONAL	IP67 Resin Filled Option



CONFIGURE

BODY	Natural Brass	BR		
	Black Powder Coat	BK		
	Nickle Plate	NP		
	Antique Bronze	AB		
LED	X06: CREE XBD	3000K	250 lms	4W
OPTIC	Clear	-		
	Frosted	-		
CABLE	Quick Connect Option	QC		



BR

BK

NP

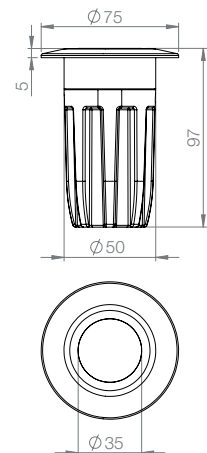
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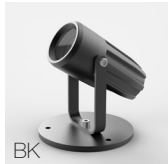
TECHNICAL

PRODUCT CODE	AQL-530
PRODUCT FAMILY	Phoenix
MOUNTING	Inground / Recessed Uplight
CONSTRUCTION	Solid Cast Brass
ELECTRICAL	12 ~ 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP68
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option

CONFIGURE

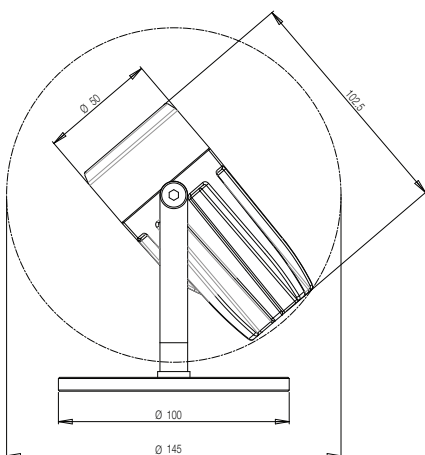
BODY	Natural Brass	BR		
	Black Powder Coat	BK		
	Nickle Plate	NP		
	Antique Bronze	AB		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
	RGBW	-	-	4.0W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		





TECHNICAL

PRODUCT CODE	AQL-540
PRODUCT FAMILY	Phoenix
MOUNTING	Surface Mount Spot Light
CONSTRUCTION	Solid Cast Brass
ELECTRICAL	12 – 24V AC / DC MultiSource Driver
CABLE	900mm Aqualux 2-Core Dual Silicon / PTFE
IP RATING	IP68
WARRANTY	3-Year Electrical + 3-Year Construction
ADDITIONAL	Available with QuickConnect Rapid Installation Option



CONFIGURE

BODY	Natural Brass	BR		
	Black Powder Coat	BK		
	Nickle Plate	NP		
	Antique Bronze	AB		
LED	X03: CREE XTE	3000K / 6000K	180 lms	2.5W
	X12: CREE MKR	3000K / 6000K	360 lms	4.5W
	Red / Green / Blue / Amber	-	-	2.5W
	RGBW	-	-	4.0W
OPTIC	Narrow	10°	FWHM	
	Medium	25°	FWHM	
	Wide	40°	FWHM	
CABLE	Quick Connect Option	QC		

AQS-260 LED Strip is designed for 24V AC or DC applications including both outdoor and indoor installations.

AC-Compatible

Compatible with our AQO range of toroidal 24V SELV Power Supplies, AQS-260 strip will run off the same AC-trunk cable as other SELV luminaires in the Aqualux range - greatly simplifying cabling and installation issues. With no dedicated DC driver required, system and installation costs are also reduced.

IPX6 Rated

Coated in a Parylene-C CVD process, AQS-260 is IPX6 rated, providing protection in most damp and exposed1 locations. Should mechanical protection be required, we recommend installation into one our aluminium profiles.

Dimming

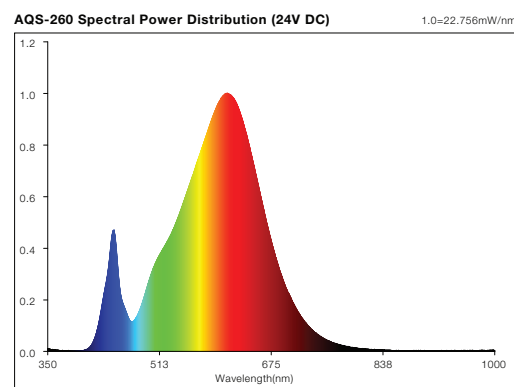
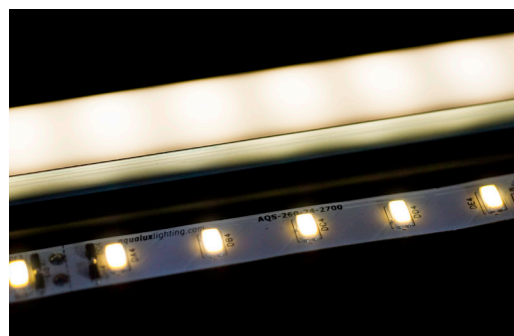
Dimmable via a standard Universal Dimmer in conjunction with our AQO24 range of power supplies, smooth dimming from 0% - 90% is available with unprecedented ease of installation - no more 1-10V/PWM/Resistance confusion.

1. Exposure to direct sunlight (i.e. intense UV) should be avoided.
2. Performance will vary based on dimmer/transformer compatibility. For best results, we recommend Clipsal 32E450UDM
3. Due to the Parylene coating process, solder points should be lightly abraded/scraped to remove coating before attempting to solder. Re-coat using silicone based conformal spray.

- LED strip should be mounted on a compatible surface such as smooth, clean metal or sealed timber. Will not mounted to concrete, raw timber or many plastics.

Technical

Product Code	AQS-260-24-2700	
Input Voltage	24V AC	24V DC
Watts / M	11.6	14.8
Lumens / M	690	1085
Lumens / W	59.5	73.3
LED	LG 5630	
CCT	2765 K (Duv -0.0020)	
Chromaticity	x=0.4512 y=0.4031 / u'=0.2603 v'=0.5231	
CRI	83 (Ra)	
IP Rating	IPX6	
Protective Coating	Parylene-C	
Max. Run Length	10M	7M
Cut Interval	100mm	
Power Supply Compatibility	24V AC Magnetic	24V DC Constant Voltage
Dimming Support	Universal 32E450UDM	
Notes	Also available in 5500K CCT	

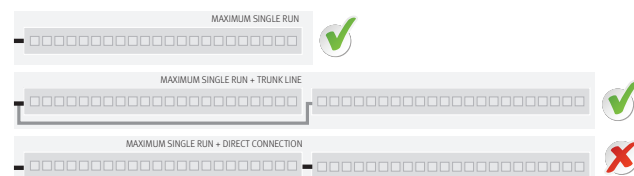


Ordering Information

Code: AQS-260-24-2700
 10M Reels.
 100mm Standard Tail Lengths
 Cutting & complete run prep service available.

Installation Note

Do not exceed maximum single run length. Use trunking cable.





AQL-540 Spotlight

AQL-510 Steplight

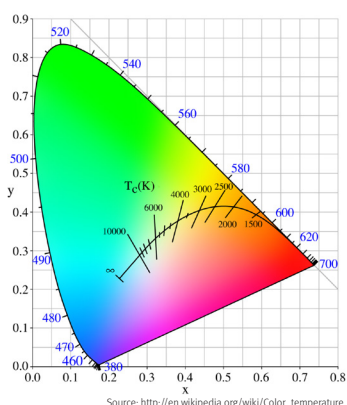
IP Rating Ingress Protection

The IP (Ingress Protection) rating system provides a means of classifying the degrees of protection from foreign bodies and liquids afforded by electrical equipment and enclosures. The degrees of protection against the ingress of foreign bodies and liquids are indicated by the first two numerals as detailed in the table below.

1st Digit	Description	2nd Digit	Description
0	No Protection	0	No Protection
1	Protected against ingress of objects => 50mm in diameter.	1	Protected against vertically falling drops of water.
2	Protected against ingress of objects => 12,5mm in diameter.	2	Protected against falling drops of water, when enclosure tilted 15 degrees.
3	Protected against ingress of objects => 2,5mm in diameter.	3	Protected against spraying water.
4	Protected against ingress of objects => 1mm in diameter.	4	Protected against splashing water.
5	Dust Protected	5	Protected against water jets.
6	Dust Tight	6	Protected against powerful water jets.
		7	Protected against the effects of temporary immersion in water.
		8	Protected against the effects of continuous immersion in water.

CCT Correlated Colour Temperature

Color Temperature is the chromacity of a light source as determined by it's position on an imaginary line drawn through a colour space. This line is often referred to as a 'blackbody locus', as it is the locus (line) resulting from graphing the chromacity of a perfect blackbody radiator as it changes temperature. In general, "hotter" CCT's appear "cooler/bluer" whilst "colder" CCT's appear "warmer/more red"



CCT

- 2000°
- 2470°
- 2565°
- 2665°
- 2755°
- 2900°
- 3100°
- 3250°
- 3400°
- 3900°
- 4200°
- 4700°
- 5100°
- 5500°
- 6100°
- 6700°
- 7400°
- 8300°
- 30,000°

Example

- Gaslight
- 15 watt incandescent bulb
- 60 watt incandescent bulb
- 100 watt incandescent bulb
- 500 watt incandescent bulb
- 500 watt Krypton bulb
- Projector type filament bulb
- Photo Flood
- Halogen
- Carbon arc
- Moonlight
- Industrial smog
- Hazy weather
- Sun 30° above horizon
- Sun 50° above horizon
- Electronic Flash
- Overcast sky
- Foggy weather
- Blue sky

Luminaire Construction Materials

ALUMINIUM

Aluminium can be grouped into two different categories with respect to outdoor lighting - Machined or Cast. Machined aluminium, unlike cast aluminium, is a superior alloy and can be effectively anodized, a process which integrates a layer of extra-hard aluminium oxide into the surface of the metal and protects against corrosion. Machined & Anodised aluminium is used in a number of demanding applications, such as yacht masts, window framing and the aerospace industry, to name a few.

All Aqualux Lumina parts are constructed from high-quality, machined and anodised 6000-Series Aluminium.

STAINLESS STEEL

Stainless Steel is a popular choice for luminaire construction and fits well with many of the contemporary home and garden designs seen today. Featuring resistance to corrosion and a variety of surface finishes possible, Stainless Steel for luminaire construction comes in two common grades, 304 & 316 ("Marine Grade").

Stainless Steel must be maintained in order for it to retain it's "stainless" appearance. Tea staining, dirt, salt and even rust can build up on any type of "Stainless" fitting unless it is properly maintained by wiping it down every few months with a damp cloth.

COPPER

Copper is a popular option for more traditional settings and will naturally oxidize over time, turning a dark green colour as the metal reacts with oxygen in the air, unless it is continuously polished. Copper is one of the most expensive materials used in the construction of light fittings but also one of the most enduring.

BRASS

An alloy of tin & copper, brass is a material in common use for a wide variety of outdoor light fittings. Highly resistant to corrosion, brass will oxidize lightly over time but will generally not degrade structurally even in highly corrosive environments. Most brass fittings are generally cast and then machined.

The information below details the current nominal performance parameters of the Aqualux LED range. This information is subject to change at any time based on our desire to continually improve product performance. Please check our website for the latest version of this guide.

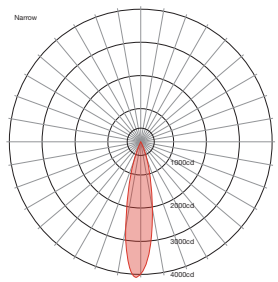
	Lumen Output (lm) ¹	Wattage (W) ¹	Input Voltage ³	LED Chipsets
X01	50	1	11 ~ 28V AC / DC	CREE XP-C/XP-E/XB-D
X03	120	2.5	11 ~ 28V AC / DC	CREE XT-E / XR-C
X06	220	3	11 ~ 28V AC / DC	CREE XB-D / MX-6
X12	320	4.5	11 ~ 28V AC / DC	CREE MK-R / MC-E / XB-D
D12	50 ~ 320 ²	4.5	24V AC / DC	CREE MK-R

1. Nominal values given for lumen output and wattages will vary based on the particular optical configuration (lens or diffuser choice), LED colour temperature and input voltage.
2. The maximum & minimum output of the dimmable driver will vary based on the exact dimmer selected & power source used. 0% dimming is not currently possible.
3. Check specific luminaire specification before completing system design.

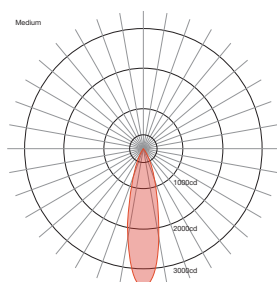
Optical

Aqualux fittings can generally be configured with a choice of optical lenses. The images and photometric charts below show the difference between the standard choices. In some products a diffuse or frosted option is available - this delivers a much broader, non-focussed light.

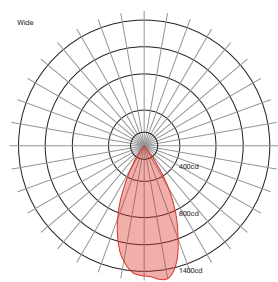
X12 Narrow



X12 Medium



X12 Wide



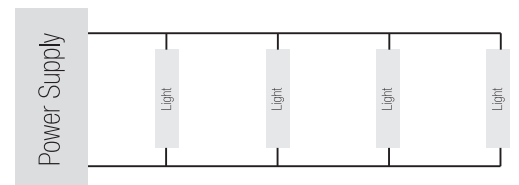
Power Supply

Aquatran AQO SELV

All Aqualux LED fittings should be used with the Aquatran AQO SELV power supply. This is a standard magnetic step-down transformer and provides superior reliability over the long-term.

Parallel Wiring

All Aqualux LED luminaires must be wired in parallel. This is the most common electrical wiring approach used for standard residential & commercial installations.



In AC circuits there is no polarity.

If using a DC supply with Aqualux fittings, polarity does not apply as our driver will automatically correct. DC wiring must be in parallel.

24V AC : Nominal System Voltage

- Aqualux luminaires can be used with the appropriate power supply on any voltage within the range specified in the above table.
- 24V is the preferred voltage for voltage drop and LED supply reasons. If you can choose, choose 24V AC.
- 12V system compatibility is provided for mixed system, LED / halogen applications.



Phoenix

Cast Brass Lighting



Landscape Lighting

LED Globes

Warm White	2700K
Cool White	5700K
Red	627nm typ.
Green	530nm typ.
Blue	470nm typ.
Amber	590nm typ.

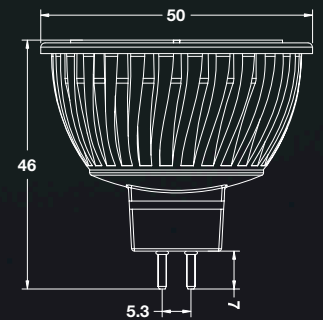
Aqualux has developed a range of LED drop-in globes that are designed especially for Landscape Lighting. Useful in a wide variety of applications, the 4W range is perfect for both retro-fitting of old luminaires as well as new installations.

True MR16 GX5.3 Form → Fits all MR16 / GX5.3 Luminaires.

4W Mid-Power LED Technology → Thermally optimised for enclosed fittings.

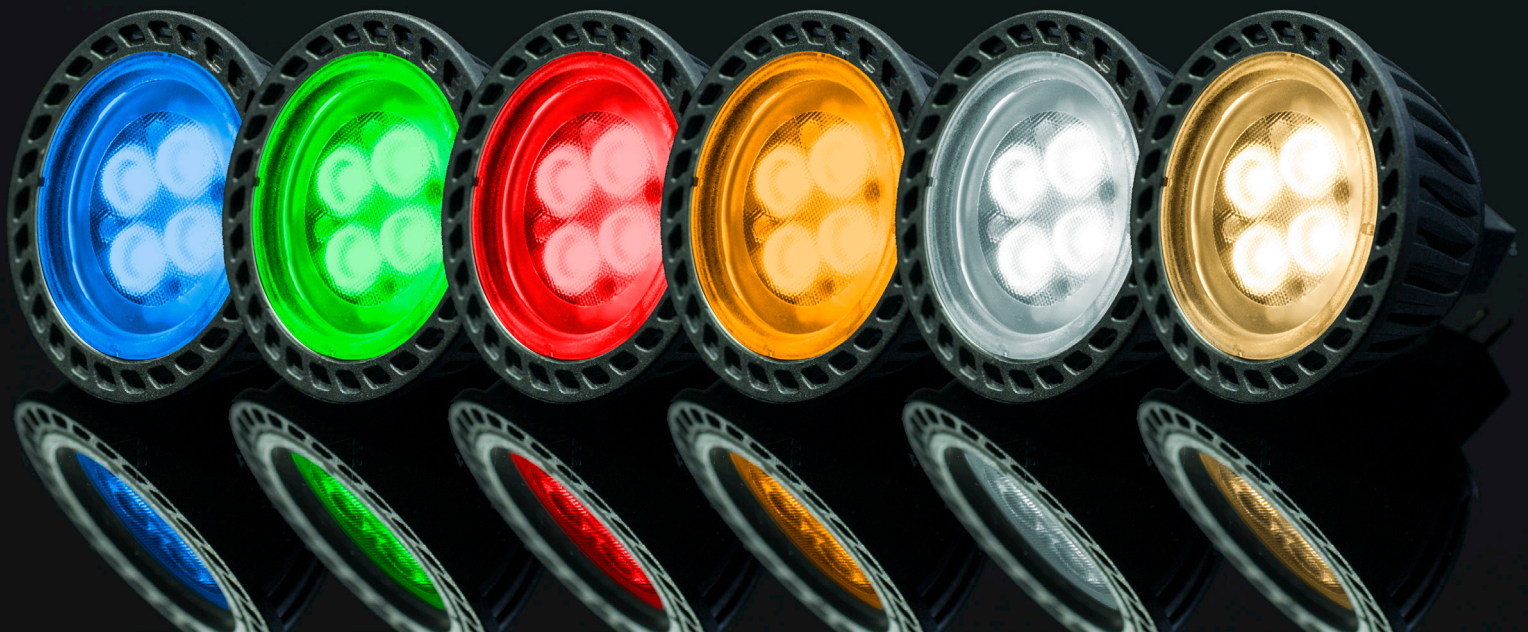
3000K / 5000K / Amber / Red / Green / Blue → Lighting design flexibility.

12 ~ 24V AC/DC MultiVoltage™ Compatible → Voltage drop compensating.



Technical

	Warm White	Warm White GU10	Cool White	Amber	Red	Green	Blue
POWER	4W	4W	4W	4W	4W	4W	4W
OUTPUT	250lms	250lms	260lms	-	-	-	-
EFFICACY	62.5lm / W	62.5lm / W	65lm / W	-	-	-	-
CCT	3000K	3000K	5000K	592 nm typ.	627 nm typ.	530nm typ.	470nm typ.
CRI	83 (Ra)	83 (Ra)	83 (Ra)	-	-	-	-
LED	SSC 3030	SSC 3030	SSC 3030	Luxeon Z	Luxeon Z	Luxeon Z	Luxeon Z
BEAM ANGLE	35 Degrees	35 Degrees	35 Degrees	35 Degrees	35 Degrees	35 Degrees	35 Degrees
LIFETIME	30,000 Hours	30,000 Hours	30,000 Hours	30,000 Hours	30,000 Hours	30,000 Hours	30,000 Hours
VOLTAGE	12V ~ 24V AC / DC	240 VAC	12V ~ 24V AC / DC	12V ~ 24V AC / DC	12V ~ 24V AC / DC	12V ~ 24V AC / DC	12V ~ 24V AC / DC
BASE	GX5.3	GU 10	GX5.3	GX5.3	GX5.3	GX5.3	GX5.3
DIMENSIONS	50mm D x 46mm H	50mm D x 60mm H	50mm D x 46mm H	50mm D x 46mm H	50mm D x 46mm H	50mm D x 46mm H	50mm D x 46mm H
PART CODE	AGL-MR16-LED-4W-WW	AGL-GU10-LED-4W-WW	AGL-MR16-LED-4W-CW	AGL-MR16-LED-4W-AY	AGL-MR16-LED-4W-AY	AGL-MR16-LED-4W-AY	AGL-MR16-LED-4W-AY





Polaris MS

High Power RGB Flood Lights & Control Systems



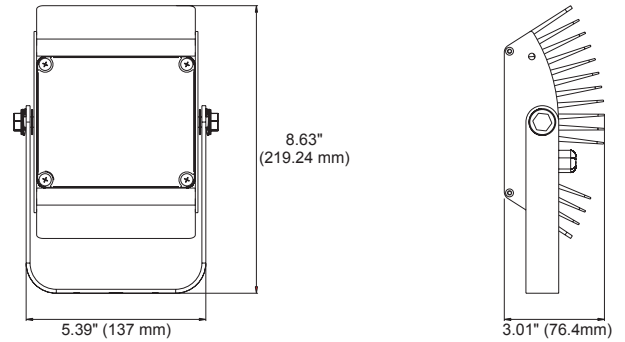
Polaris MS

AQL-910-MS Architectural RGB Flood Lights & Control Systems

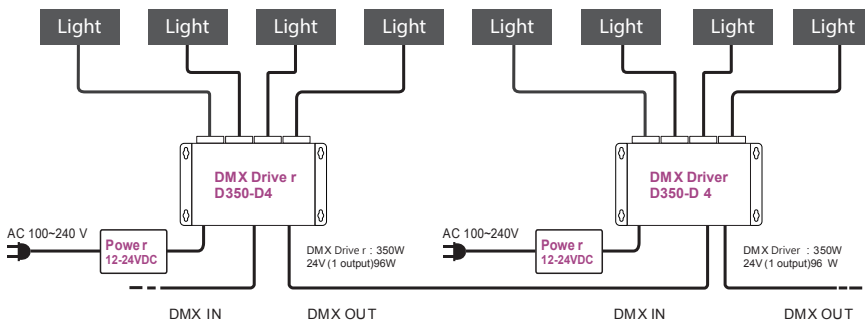
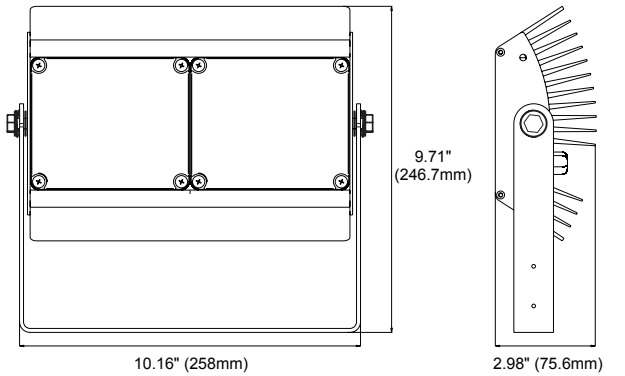
Base Product Code	AQL-910-MS-001	AQL-910-MS-002	AQL-910-MS-011	AQL-910-MS-012
LED System	6 x RGBW	6 x RGBW	12 x RGBW	12 x RGBW
Voltage	24 VDC	24 VDC	24 VDC	24 VDC
Power (+/- 10%)	50W	50W	100W	100W
Optical System	30 Degree	50 Degree	30 Degree	50 Degree
Output Lumens	5560 lms	5560 lms	2780 lms	2780 lms
Construction	CNC Machined & Anodised Aluminium			
LED Source	RGBW LED (W = 4000K)			
Driver Options	24V DC Power Supply Required			
Control Options	D350-D4 Control Unit Required / DMX512 Compatible			
IP Rating	IP67 (Lights)			
Installation Style	Surface Mount U-Bracket Supplied			
Output Cable	2M 5-Core Cable / 20M Option			
Warranty	3-Year Aqualux Warranty			
Operating Temp	-10C ~ 40C			
Optical Options	30D / 50D / 70D			



MS-1 / 50W



MS-2 / 100W

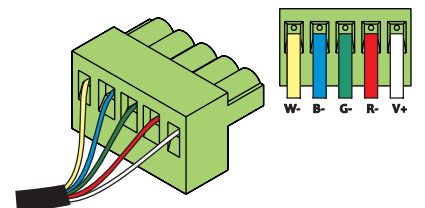


Power & Control Systems

D350-D4 Control Interface

- USITT DMX512-A Compatible
- 5-Way Terminal Blocks
- Built in Colours
- Built in Fade Effects
- IR Remote Control

Model	Type	Power	Ports
D350-D4	Controller	350W Max	4 x 24VDC
AQD-100-24-060	Power Supply	60W	24VDC Power Supply
AQD-MW-HLG-320H-24	Power Supply	320W Max	24VDC Power Supply



Connector : Terminal Block



Polaris Mono

High Power White Flood Lights & Control Systems



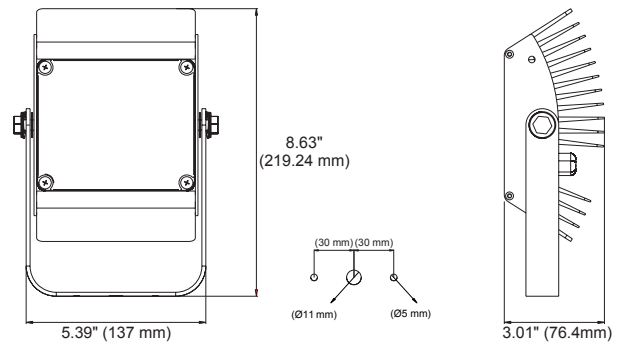
Polaris Mono

AQL-910-MS Architectural White Flood Lights

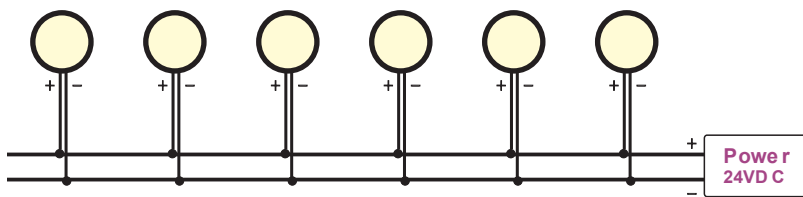
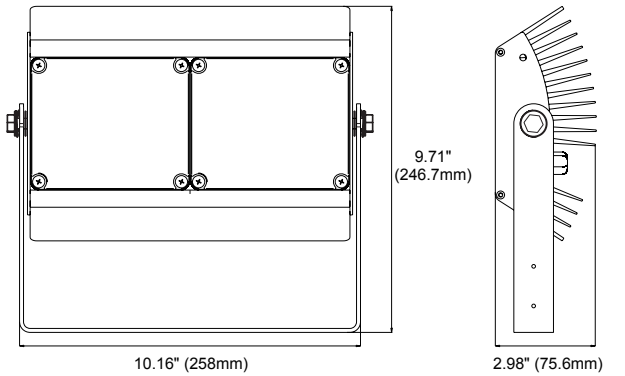
Base Product Code	AQL-910-MS-[CCT] 50W [BEAM]	AQL-910-MS-[CCT] 100W [BEAM]
LED System	18 x Nichia 219 LED	36 x Nichia 219 LED
Voltage	24 VDC	24 VDC
Power (+/- 10%)	50W	100W
Optical System	25 / 40 / 60 Degree	25 / 40 / 60 Degree
Output Lumens	2700K: 4200 lms / CRI 80 5000K: 4600 lms / CRI 70	2700K: 8400 lms / CRI 80 5000K: 9200 lms / CRI 70
Example Product Code	AQL-910-MS-27K50W25D = 2700K / 50W / 25D	
Construction	CNC Machined & Anodised Aluminium	
LED Source	Nichia 219 SMD LED / 2700K / 5000K	
Driver Options	24V DC Power Supply Required	
Control Options	D350-D4 Control Unit Required / DMX512 Compatible for Dimming Purposes	
IP Rating	IP67 (Lights)	
Installation Style	Surface Mount U-Bracket Supplied	
Output Cable	2M 2 Core Cable / 20M Option Available	
Warranty	3-Year Aqualux Warranty	
Operating Temp	-10C ~ 40C	
Optical Options	25 / 40 / 60 / 60x120 Degree	



50W



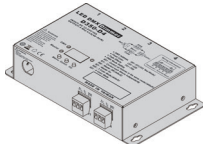
100W



Power & Control Systems

D350-D4 Control Interface

- USITT DMX512-A Compatible
- 5-Way Terminal Blocks
- IR Remote Control
- For dimming only with Mono Series



Model	Type	Power	Ports
D350-D4	Controller	350W Max	4 x 24VDC
AQD-100-24-060	Power Supply	60W	24VDC Power Supply
AQD-MW-HLG-320H-24	Power Supply	320W Max	24VDC Power Supply



Project Showcase

September 2014







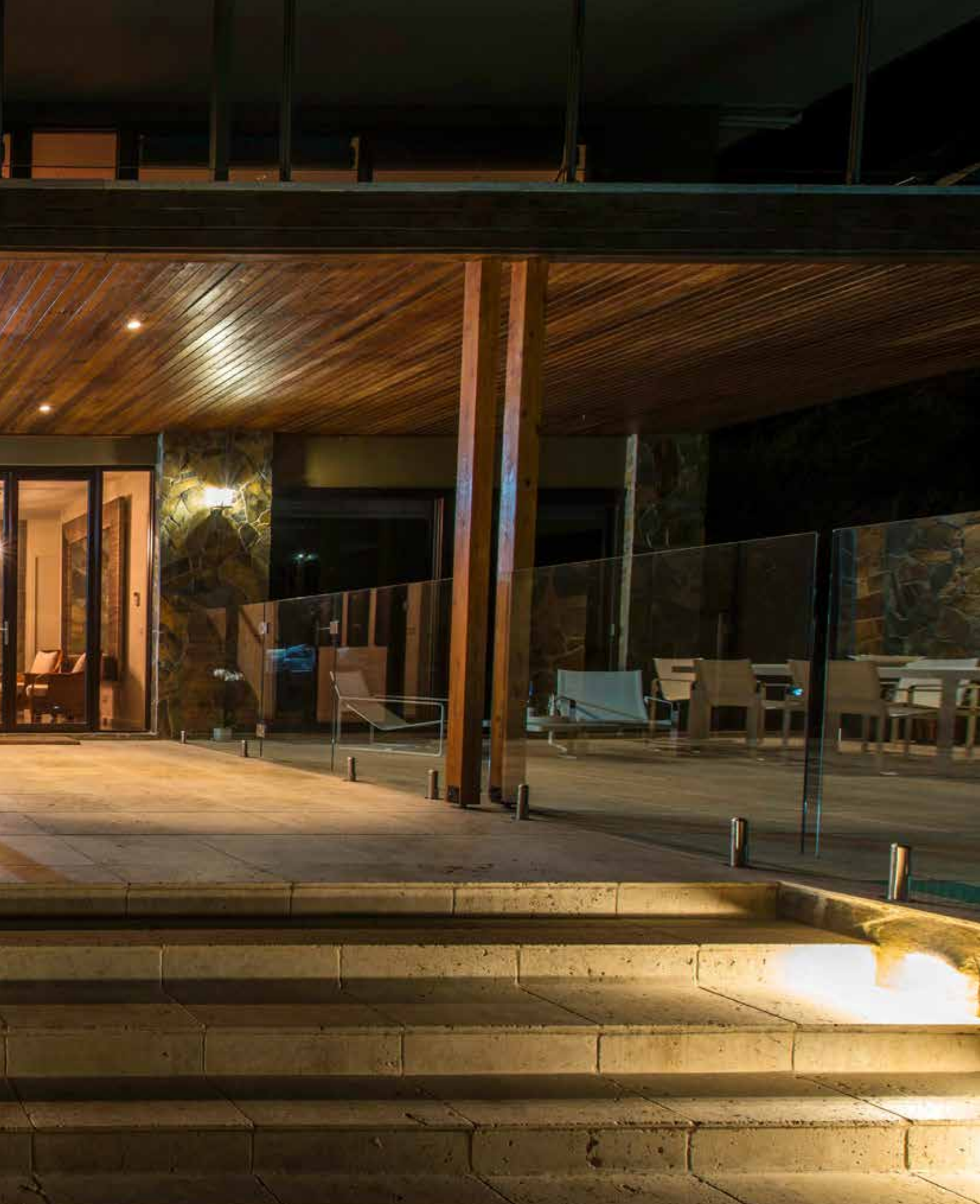
PROJECT HULL RD, MT MARTHA
DESIGNER COOLABAH LANDSCAPES
PRODUCTS USED AUL-02-SS / ASL-05-SS
IMAGE CREDIT COOLABAH LANDSCAPES





PROJECT	WEDDING RECEPTION AREA
DESIGNER	AQUALUX
PRODUCTS USED	AQL-910 LED FLOOD
IMAGE CREDIT	AQUALUX





AQL-510

PROJECT McCRAE, MELBOURNE
DESIGNER COOLABAH LANDSCAPES
PRODUCTS USED AQL-510 / AQL-540
IMAGE CREDIT COOLABAH LANDSCAPES





AQL-510

PROJECT McCRAE, MELBOURNE
DESIGNER COOLABAH LANDSCAPES
PRODUCTS USED AQL-510 / AQL-540
IMAGE CREDIT COOLABAH LANDSCAPES





AQL-510

PROJECT	THE BLOCK, MELBOURNE
DESIGNER	FRANKLIN LANDSCAPES
PRODUCTS USED	AQL-510 / AQL-503
IMAGE CREDIT	PATRICK REDMOND





AQL-510

PROJECT	GOULD ST, MELBOURNE
DESIGNER	FRANKLIN LANDSCAPES
PRODUCTS USED	AQL-510 / AQL-195
IMAGE CREDIT	PATRICK REDMOND





PROJECT	BIG TREE, BRISBANE
DESIGNER	AQUALUX
PRODUCTS USED	AQL-910-POL
IMAGE CREDIT	AQUALUX

PROJECT HAWTHORNE, QLD

DESIGNER CUSTOMER DESIGN / AQUALUX

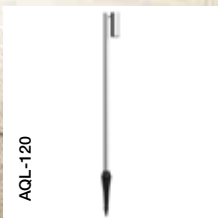
PRODUCTS USED AQL-205 / AQL-130 / AQL-165

IMAGE CREDIT BELKER PHOTOGRAPHY









AQL-120



AQL-510

PROJECT	HAWTHORNE, QLD
DESIGNER	CUSTOMER DESIGN / AQUALUX
PRODUCTS USED	AQL-120 / AQL-510
IMAGE CREDIT	BELKER PHOTOGRAPHY



PROJECT HAWTHORNE, QLD
DESIGNER CUSTOMER DESIGN / AQUALUX
PRODUCTS USED AQL-205 / AQL-165
IMAGE CREDIT BELKER PHOTOGRAPHY



AQL-205



AQL-165





AWL-01-BR



AQL-540



AQL-503



PROJECT

TENNYSON ST, VIC

DESIGNER

FRANKLIN LANDSCAPES

PRODUCTS USED

AWL-01-BR / AQL-540 / AQL-503-LED

IMAGE CREDIT

PATRICK REDMOND PHOTOGRAPHY







PROJECT	TENNYSON ST, VIC
DESIGNER	FRANKLIN LANDSCAPES
PRODUCTS USED	AWL-01-BR / AQL-540 / AQL-503-LED
IMAGE CREDIT	PATRICK REDMOND PHOTOGRAPHY





PROJECT AVONDALE GOLF COURSE, NSW

DESIGNER AQUALUX

PRODUCTS USED AQL-910 LED FLOOD

IMAGE CREDIT AQUALUX

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Aqualux Lighting

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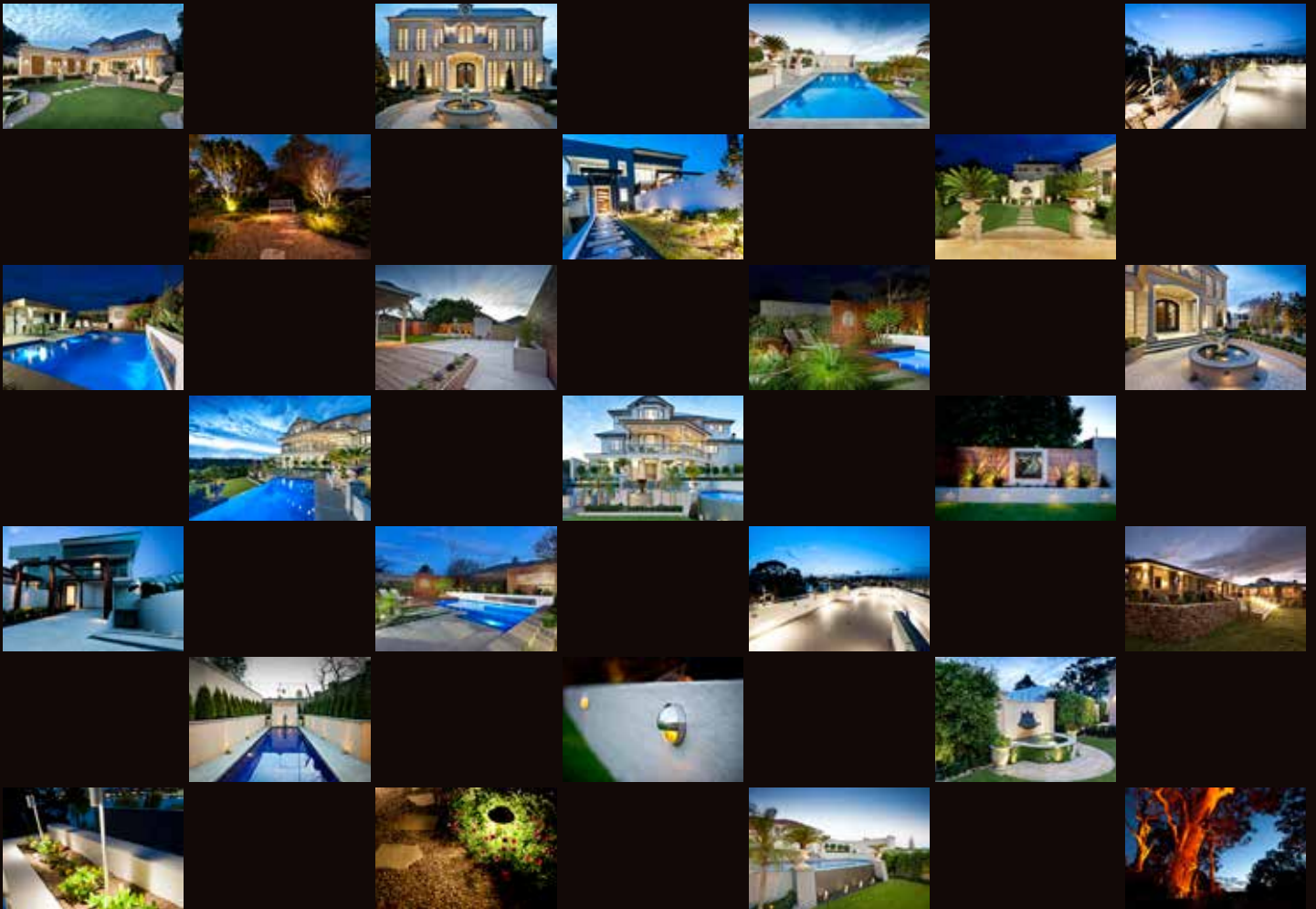
Aqualux is engaged in continual product refinement and improvement. Details contained in this document are subject to change.



Project Showcase

January 2013

Version 2013/3



PROJECT HAWTHORNE, QLD

DESIGNER CUSTOMER DESIGN / AQUALUX

PRODUCTS USED AQL-205 / AQL-130 / AQL-165

IMAGE CREDIT BELKER PHOTOGRAPHY









AQL-120



AQL-510

PROJECT	HAWTHORNE, QLD
DESIGNER	CUSTOMER DESIGN / AQUALUX
PRODUCTS USED	AQL-120 / AQL-510
IMAGE CREDIT	BELKER PHOTOGRAPHY



PROJECT HAWTHORNE, QLD
DESIGNER CUSTOMER DESIGN / AQUALUX
PRODUCTS USED AQL-205 / AQL-165
IMAGE CREDIT BELKER PHOTOGRAPHY



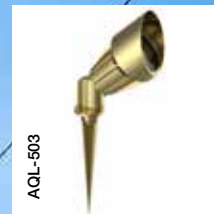






PROJECT	CHATSWOOD, NSW
DESIGNER	CUSTOMER DESIGN / AQUALUX
PRODUCTS USED	AWL-01-SS-316
IMAGE CREDIT	AQUALUX





PROJECT TENNYSON ST, VIC
DESIGNER FRANKLIN LANDSCAPES
PRODUCTS USED AWL-01-BR / AQL-540 / AQL-503-LED
IMAGE CREDIT PATRICK REDMOND PHOTOGRAPHY







PROJECT	TENNYSON ST, VIC
DESIGNER	FRANKLIN LANDSCAPES
PRODUCTS USED	AWL-01-BR / AQL-540 / AQL-503-LED
IMAGE CREDIT	PATRICK REDMOND PHOTOGRAPHY





AQL-503



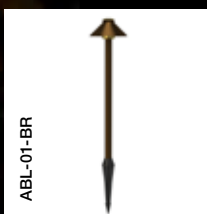
AUL-04-SS



AWL-01-BR

PROJECT	BRIGHTON, VIC
DESIGNER	FRANKLIN LANDSCAPES
PRODUCTS USED	AUL-04-SS / AWL-01-BR / AQL-503-LED
IMAGE CREDIT	PATRICK REDMOND PHOTOGRAPHY





ABL-01-BR

PROJECT	RAWSON ST, NSW
DESIGNER	AQUALUX
PRODUCTS USED	ABL-02-BR
IMAGE CREDIT	AQUALUX





AQL-503



AWL-01-BR

PROJECT PASCOE VALE, VIC

DESIGNER FRANKLIN LANDSCAPES

PRODUCTS USED AWL-01-BR / AQL-503-LED

IMAGE CREDIT PATRICK REDMOND PHOTOGRAPHY





PROJECT AVONDALE GOLF COURSE, NSW

DESIGNER AQUALUX

PRODUCTS USED AQL-910 LED FLOOD

IMAGE CREDIT AQUALUX





PROJECT SOUTH COAST, NSW
DESIGNER CUSTOMER / AQUALUX
PRODUCTS USED AQL-155 / AQL-305
IMAGE CREDIT CLAUDINE THORNTON PHOTOGRAPHY



www.aqualux.com.au

When installing low-voltage landscape lighting, there are a few options when it comes to wiring the individual lights onto a main trunk cable running from the power supply. These options are:

1. Split / Solder / Heatshrink Method
2. Cut / Twist & Cap Method
3. Use QuickConnect compatible lights & power supply

Option 1 is the method that we will detail in this document and is the generally accepted “best-practice” for attaching lights to a trunk cable in a way that will minimise any potential maintenance issues.

Option 2 is a simpler method that can be performed quickly and does not involve any soldering techniques, however it may be susceptible to mechanical stresses on the cable over time.

Option 3 is the quickest and easiest method of all, however it requires the selection of compatible lights and power supplies and is only available in LED systems.

Required Equipment

A list of the equipment necessary for this installation method includes the following:

- Soldering Iron
- Multi-Meter (optional, to check voltages and potential problem solving)
- Wire Cutters
- Hot-Air Gun
- Heatshrink (Resin Filled)
- Power Supply / Trunk Line.

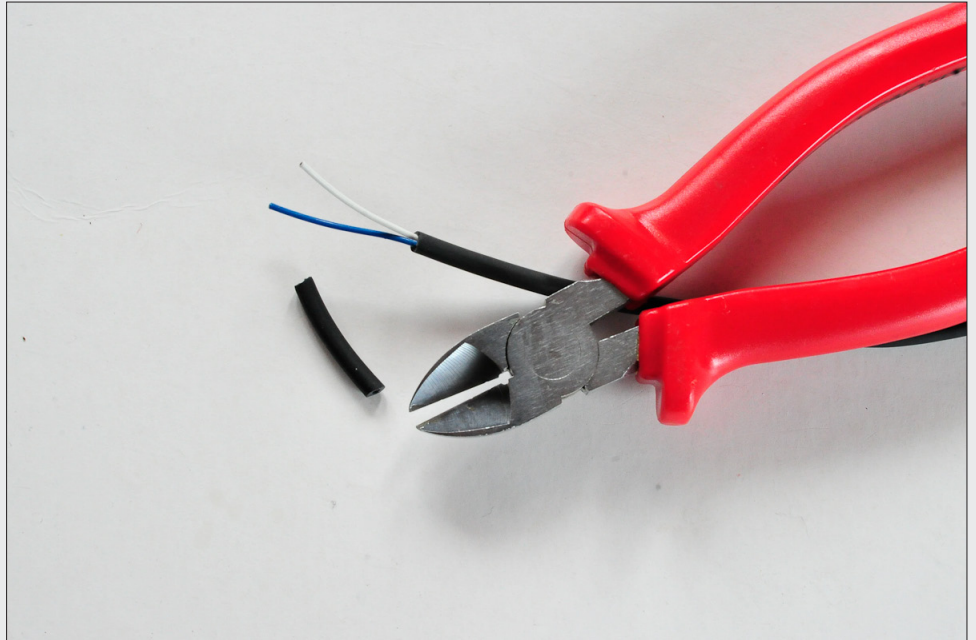
A knife will also come in handy.



Step 1

Cut approximately 25mm of outer insulation from the lighting cable lead, being careful not to damage the inner insulation.

Aqualux lighting cable has an outer silicon sheath (relatively soft) and inner teflon insulation (relatively hard), so it's fairly difficult to damage the inner insulation, but still take care.



Step 2

Strip around 15mm from the ends of the lighting leads and twist the inner conductor so it's not frayed.

It's a good idea to prepare all your lighting fittings at this point.

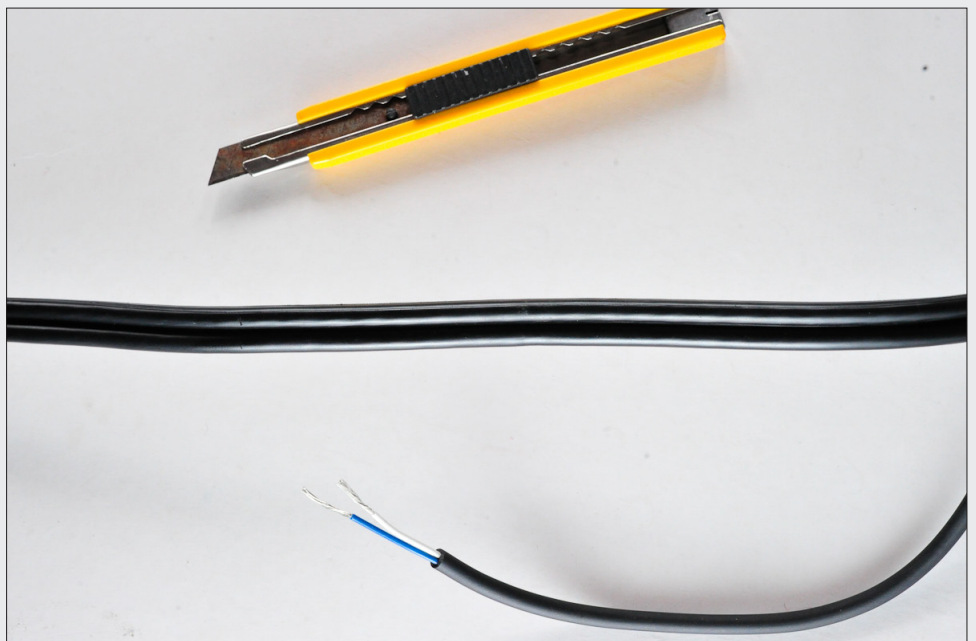


Step 3

Locate the position on the trunk cable near where the light is to be installed.

Bear in mind that you will need to run the heatshrink over the trunk cable to this point.

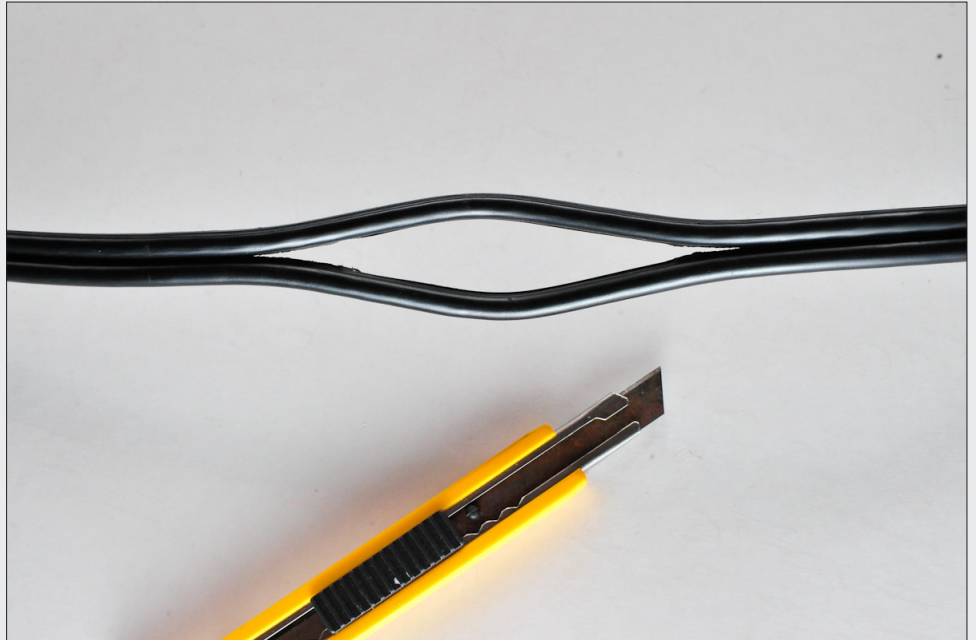
A good method to use is to run the trunk cable out and then run pre-cut heat shrink sections out into all the lighting positions prior to making any joins.



Step 4

Split the Figure 8 trunk cable down the center, being careful not to damage the insulation.

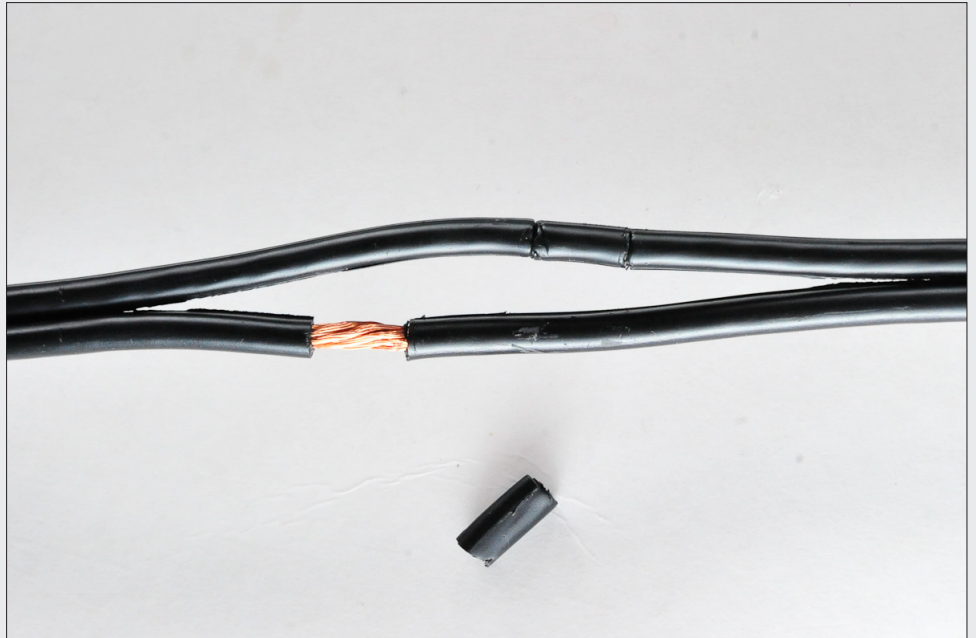
Split around 70mm.



Step 5

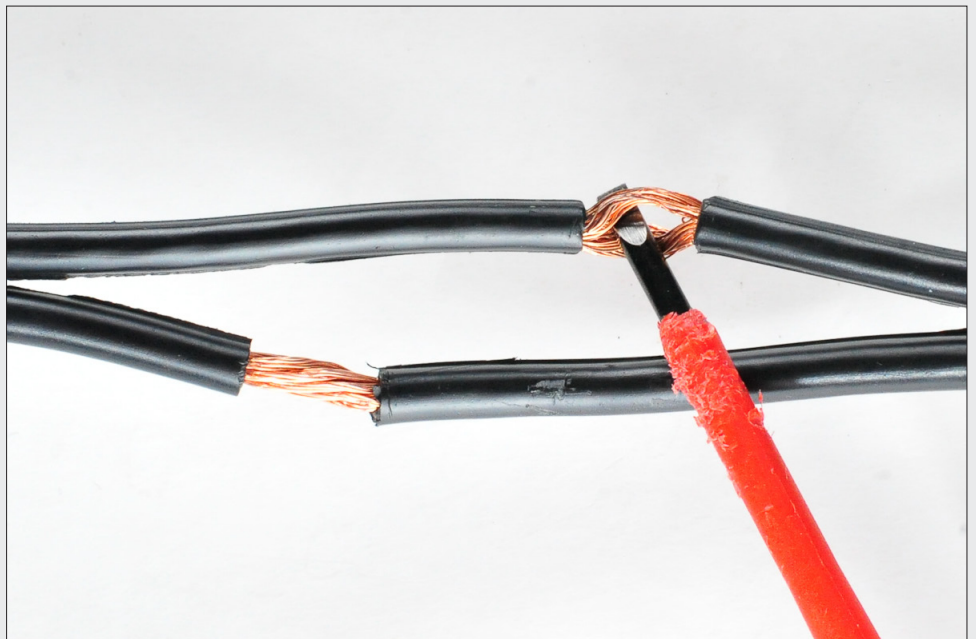
Cut two sections of trunk cable insulation, around 50mm apart. You can use either a knife or the wire cutters or scissors for this job.

Take care not to damage any conductor strands - 1 or 2 cut is OK, but the more that are damage this less power the cable will be able to carry past this point.



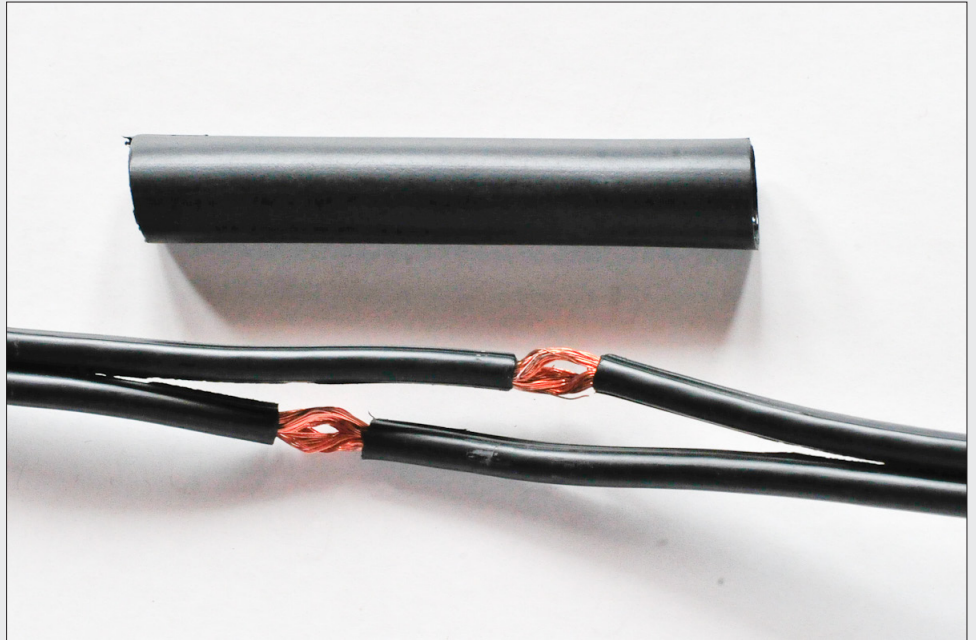
Step 6

Using a small screwdriver or nail, wedge a gap in the conductors to allow the lighting lead to pass through.



Step 7

When both conductor areas have been prepared, now is a good time to check the size of heatshrink that you've cut will cover the joined area.



Step 8

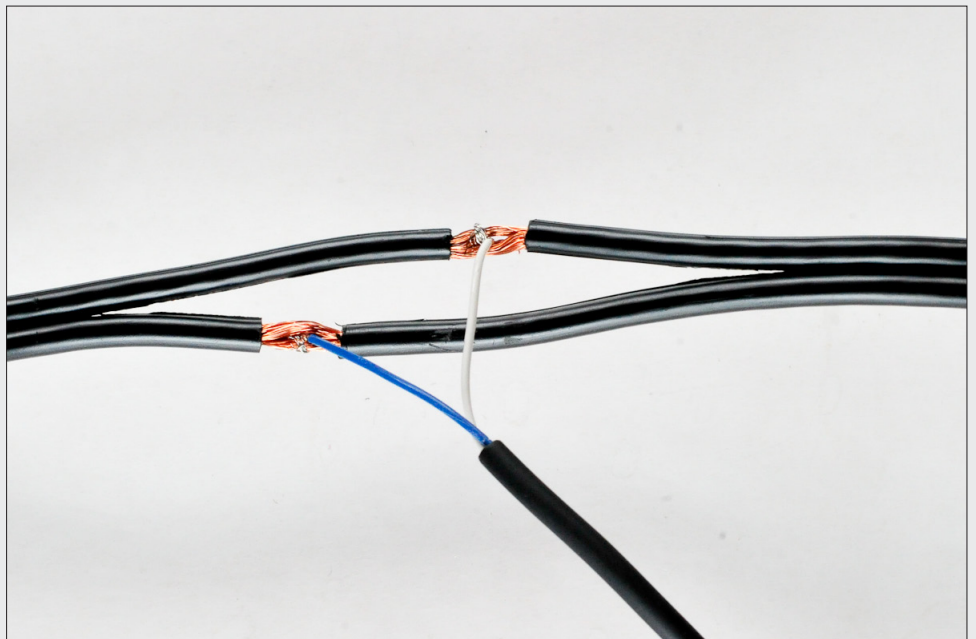
Run the heatshrink section up to the point of the join.



Step 9

Insert the stripped ends of the lighting lead into the gaps created in the trunk cable conductor. Twist them around so there is a good mechanical connection.

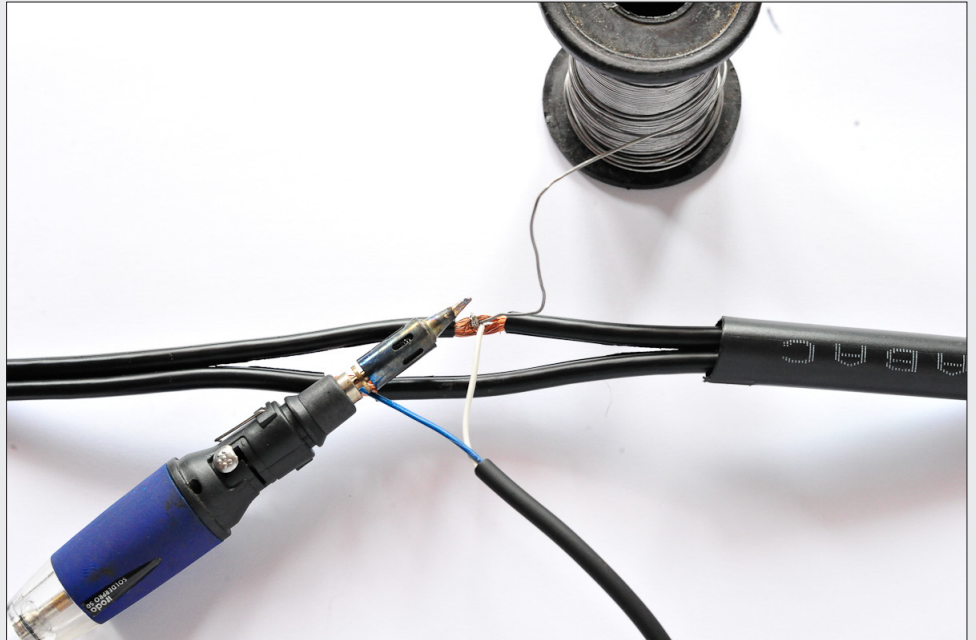
It's also possible to use some pliers to squeeze the lighting leads inside the trunk cable conductors after they are inserted.



Step 10

Fire up your soldering iron and allow it to heat up properly - around 30 secs - 1 minute.

A gas/butane soldering iron is your best bet. Not only is it easier to carry around to each solder point, but they are more powerful than most cheap electric irons, and not that expensive (\$50 should get you a good one)



Step 11

Insert the soldering iron tip into the cable join point and allow the join to heat up, around 20 secs.

Once the join has heated, apply the solder wire to the cable area and allow it to flow into the join.

Don't touch the solder wire to the iron tip! Allow the solder to melt directly into the cable join.



Step 12

Once both joins have been completed, fold the lighting cable back along the trunk cable and slide the heatshrink up to the join section.



Step 13

Slide the heatshrink over the join section, ensuring there is at least 15 - 20mms of heatshrink overhang on either side of the join.

Using resin filled heatshrink minimises the ingress of water into the join and the potential for water to be “siphoned” up the cable into the light fitting.



Step 14

Using a heatgun or blow torch, shrink the heatshrink evenly onto the join section.

If you are using a blow torch (or even a lighter) be careful not to burn the heatshrink!



Step 15

Finished!

A good join will last for decades and should be sturdy enough to resist accidental stresses on the cable.

