Kessil®
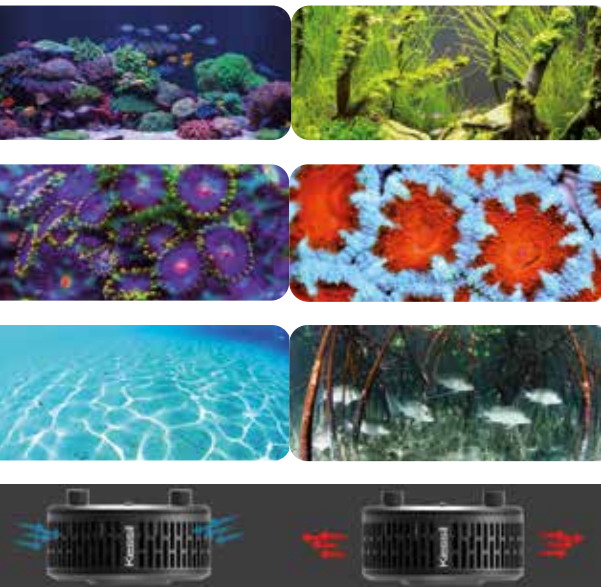## LED Aquarium Lights

TUNZE®

Aquatic Eco Engineering

English

Kessil® Features

The patented Kessil® Dense Matrix LED technology concentrates multiple LED chips into a single array (cluster / bundle), creating a powerful and penetrating light source with wide coverage, even light distribution and natural, vibrant lighting effects. The lens on the matrix ensures that it is not too bright directly under the lamp and yet, at the same time not too dark at the edges. Penetration can be further enhanced by positioning multiple units in close proximity to each other.

Kessil® Logic™ maintains persistent output across the entire adjustable spectrum (10,000 K to Actinic for Tuna Blue, 6.000 to 9.000 K for Tuna Sun) and thereby also consistent coral and plant growth.

Different wavelengths are seamlessly blended within a single LED array, emitting uniform color across the coverage range.

A proprietary blend of UV light enhances coral growth and color.

Beautiful, unrivaled shimmer replicates the look of natural sunlight reflecting from the water.

The innovative heat management system in all Kessil® LEDs enhances longevity and efficiency of the fixture.

WiFi Dongle

The Kessil® WiFi Dongle plugs into the K-Link port of a Kessil® A360X or A500X LED and, together with an Android / iOS Smartphone, gives the ability to effectively remotely control a wide array of features through Kessil®'s intuitive app.

Same as the K-Link communication method, but wirelessly, the WiFi Dongle even networks up to 32 X lights, thereby minimizing signal interference and leading to a faster, more reliable connection.

The Kessil® app provides access to advanced manual controls and program customization such as individual adjustment of individual color channels without changing the core spectrum and the ability to synchronize groups of lights. Features include full color control, customized light intensity to acclimatize new "residents", lunar cycle, weather effects and many more!

A summary page on the dashboard of the app provides an overview of the status of all connected WiFi Dongles and X-lights in one glance, to group and assign them to different programs for advanced settings.

Kessil® X series LEDs can be connected via WiFi dongle (or directly in the case of AP9X) to the APEX app from Neptune. The APEX IoTA interface enables perfect integration into the Neptune system and convenient control of all functions of the Kessil® lights.

WiFi Dongle
Operating frequency:
IEEE 802.11 b/g/n (2,4GHz)
Dimensions (L x W x H):
2.08" x 1.26" x 0.67" (53 x 32 x 17 mm)
Weight: 0.41lb (20 g)
KSAWD01

Spectral Controller X

Spectral Controller X
For A360X, A500X,
A360, A160, A80, H160, H80 with 0–10 V control.
Dimensions (L x W x H):
5.6" x 2.5" x 0.56" (142 x 63 x 14 mm)
Weight: 0.26 lb (120 g)
KSASC02

Scope of delivery:
1x Spectral Controller X
1x Magnetic Back Plate
1x Micro USB Cable
1x K-Link Cable - 10 feet (3 m)
2x Screws
2x Nylon Anchor

Not included:
USB power adapter
0-10V Unit Link Cable
for 0-10V lights

→ The intuitive Kessil® Spectral Controller X for Kessil A360X and A500X LEDs as well as all the 0-10 V Kessil® lights features touch control with a vivid color display and offers effortless light control programming for endless customization options.

→ The K-Link communication method is an upgrade of the easy plug & play 0-10 V, allowing to network multiple X lights together (up to 32 fixtures per chain) and set individual groups to run their own programs. K-Link is also a two-way communication, meaning the Spectral Controller X can detect the number of lights in the network, the status of the lights, etc.

→ One controller, two ports: The controller is equipped with one K-Link port and one 0-10 V output port. The K-Link port allows users to connect to an X light, while the 0-10 V port is for Kessil®'s 0-10 V light fixture. A USB power adapter (not included) is needed when using the Spectral Controller X for 0-10 V lights only.

→ Using the Quick Set Mode, it is possible to create unique dawn and dusk effects by altering light intensity and color throughout eight different time points.

→ The Acclimation Mode simplifies the introduction of new lights to a tank or new corals or plants to an existing setup. The acclimation timeline can be customized to suit specific needs.

→ In the Manual Mode, light spectrum, color temperature and light intensity are adjusted to the requirements of the biotope.
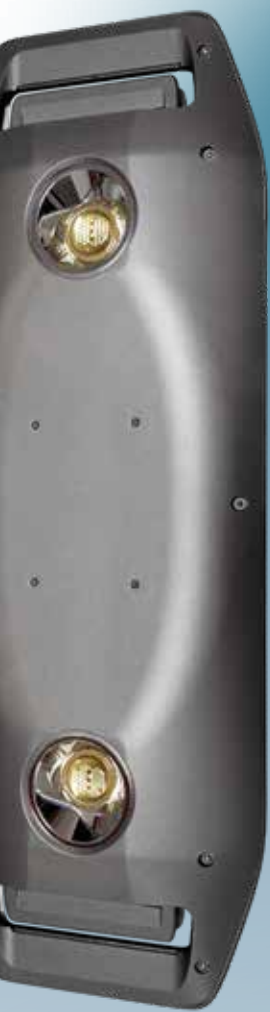
AP9X

The Kessil® AP9X LED is a 185 Watt panel platform for saltwater aquariums with touch and WiFi control as well as with digital K-Link control by the Spectral Controler X. Thanks to the variably combinable spectrum and an outstanding coverage area, it ensures excellent coral growth and coloring. It is also characterized by innovative heat management with exhaust air devices on the sides. The heat sink and an efficient vortex fan reduce the accumulation of dust and dirt, which extends the service life and increases efficiency.

The featured touch control is intended to easily adjust intensity and color, and to select the moonlight mode.

Built-in WiFi provides even greater control and ease of customization. The Kessil® app (iOS / Android) gives access to advanced manual control and program customization, as well as offering the ability to sync groups of lights. The app features include full color wheel control, acclimation, lunar cycle, weather effects, and more.

The AP9X can also be directly connected to the Neptune APEX app. The APEX IoTA interface enables perfect integration into the Neptune system and convenient control of all functions of Kessil® lights.

In addition to the Kessil® signature Tuna Blue spectrum, the AP9 features the full range of individually adjustable color channels red, green and purple (Violet + Indigo) that can be accessed via the Kessil® app (iOS / Android). Kessil Logic™, a specially designed lens and reflector combination maintains a broad delivery of light and superior penetration and, thus provides persistent output across the entire adjustable spectrum and thereby ensures consistent coral growth and excellent coloration. Shading is eliminated, hot spots are minimized.

In addition, Kessil Logic™ in combination with the Kessil® app ensures that cosmetic color settings do not interfere with the core spectrum, allowing users to dial in a preferred color without disturbing coral health. The AP9X also includes 395nm LED chips, which emit True UVA light for maximum coral coloration. Multiple-fixture setups can be controlled via individual WiFi connections or daisy-chained together to access up to 32 lights via one master fixture.

Scope of delivery:
1x AP9X LED
1x Power Adapter
1x Adapter Cable
4x Metal Screw Hook & Hanging Bracket
3x QR Code Stickers

Coverage for mixed reef:
24" x 48" (60 x 120 cm)
Attachment 15"- 18" (38 - 45 cm) above the water surface

Coverage for SPS dominant systems:
24" x 35" (60 x 90 cm)
Attachment 5" - 7" (13 - 18 cm) above the water surface

LED AP9X

Spectrum: Tuna Blue + Red + Green + Purple (Violett+Indigo)
Power Consumption: 185 W
Power Supply: 100-240 V AC (input), 48V DC (output)
Dimensions (L x W x H):
16.5" x 5.7" x 1.4" (418 x 145 x 36 mm)
Weight: 2.29 lbs (1.04 kg)
KSAP9X

A500X

The Kessil® A500X is a powerful 185 W high intensity LED designed specifically for experienced SPS coral growers. This fixture integrates the latest Dense Matrix LED technology with the proprietary Kessil® Logic™, and delivers a concentrated light with well blended spectrum for optimum SPS coral growth, health, and coloration. The beam of the A500X can be adjusted with the included reflector 55° or optionally with the reflector 35° (available seperately).

The LED is controllable by manual knobs or Spectral Controller X. The unit can also be K-Linked with other X-Series fixtures respectively with the WiFi Dongle. Allof the Kessil® X series LEDs can also be connected via WiFi dongle to the APEX app from Neptune. The APEX IoTA interface enables perfect integration into the Neptune system and convenient control of all functions of the Kessil® lights.

Penetration for SPS dominant systems:
130° / 55°: 35" x 35" / 90 x 90 cm
35°: 48" / 120 cm

LED A500X
Spectrum: Tuna Blue + Red + Green + Purple (Violett+Indigo)
Power Consumption: max. 185 W
Power Supply: 100-240 V AC (input),
48V DC (output)
Dimensions (H x Ø): 3.7" x 5.2" (94 x 133 mm)
Weight: 1.72 lbs (780 g)
KSA500XTB

Scope of delivery:
1x A500X LED
1x Power Adapter
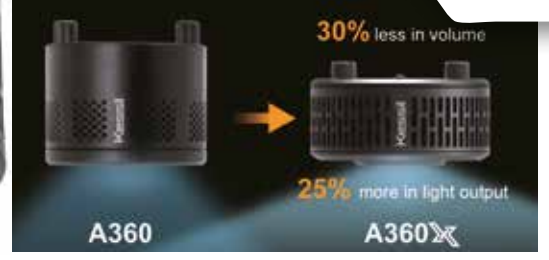1x AC Adapter Cable
1x Hanging Ring
2x Metal Screw Hook
2x Hanging Bracket
1x Reflector -55

A360 X

The Kessil® A360X is an outstanding LED with low profile design and a great light output with extended color control options, opening unlimited color combinations for aesthetics while maintaining the performance of the core spectrum. A360X features smoother color transitioning and dimming, including moonlight effects.

→ The smart K-Link communication method allows to network multiple A360X together and set individual groups to run their own programs. A360X can be used with optical accessories to shape and modify mood lighting.

→ Latest optics along with the Dense Matrix LED array provide a broad delivery of light with even distribution of the light and natural, vivid lighting effects. The lens on the matrix ensures that it is not too bright directly under the lamp and at the same time not too dark at the edges. The maximum penetration can reach 30" (75 cm) beyond the water's surface.

→ Using the Kessil® Reflector -55 (optional accessory), center light intensity can be further enhanced by up to three times for further penetration and even fife times by Reflector -35 (optional accessory) – perfect for deep aquariums. Contrast, depth and dynamics of an aquarium get more impressive.

→ The Tuna Blue / Sun spectrum promotes coral or plant growth and enhances coloration.

→ Different wavelengths are seamlessly blended within a single LED array, emitting uniform color across the coverage range.

→ In addition to the Tuna Blue / Sun spectrum, Red, Green, and Violet+Indigo (Purple) can be added by using the Spectral Controller X or the Kessil® WiFi Dongle.

Scope of delivery: 1x A360X Tuna Blue / Tuna Sun LED, 1x Power Adapter, 1x AC Adapter Cable, 1x DC Extension Cable, 1x Hanging Ring, 2x Metal Screw Hook, 2x Hanging Bracket
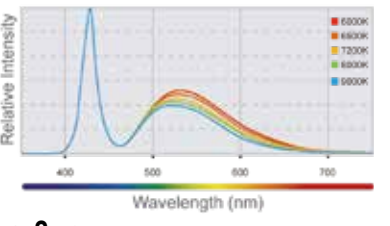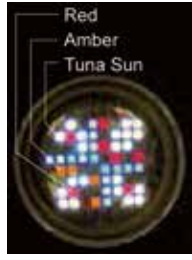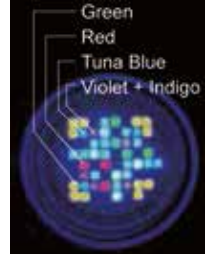
Tuna Blue
For saltwater aquariums
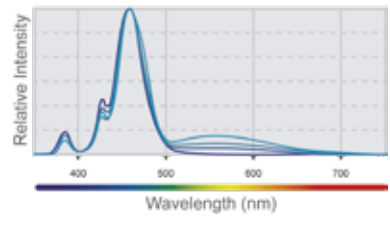
LED A360X Tuna Blue
Spectrum: Deep Ocean Blue to Sky Blue + RGB
Coverage:130°; 24"x24" (60 x 60 cm) for SPS dominant systems
Power Consumption: 90 W max
Power Supply: 100-240V AC (input), 19V DC (output)
Dimensions(DxH): 4.3"x 2.1"(110x53mm) | Weight: 0.8 lb(370g)

KSA360XTB

Tuna Sun
For freshwater aquariums

LED A360X Tuna Sun
Spectrum: 6,000 to 9,000 K + RY
Coverage:130°; 24"x24" (60 x 60 cm) for heavily planted systems
Power Consumption: 90 W max
Power Supply: 100-240V AC (input), 19V DC (output)
Dimensions (D x H): 4.3" x 2.1" (110 x 53 mm)
Weight: 0.8 lb (370 g)

KSA360XTS

BLUE | BLOOM | RED

Kessil® A360X Refugium including the Reflector -55 is a powerful and penetrating long range light source for refugiums. The spectrum adapts depending on the development phase of the algae, soft corals or plants of a refugium.

→ The BLUE spectrum (420 – 490 nm) accelerates the growth of algae / soft corals / plants at any stage by encouraging prolific stem extension.
→ The GROW spectrum improves vegetative growth of many different macroalgae.
→ The BLOOM spectrum increases yield.
→ The RED spectrum (650 – 750 nm) promotes root growth and productivity.
→ The green light can be used to monitor the plants without disturbing the plant's growth cycle. (only available with WiFi-Dongle).
→ The daylight mode can be used to clean the tank or to take photos.

The supplied Kessil® Reflector -55 triples the light intensity of the central light beam for more penetration without light scattering.
Compatible with Spectral Controller X and WiFi Dongle.

LED A360X Refugium
Spectrum: RGB, bloom, grow, daylight
Reduced light spread with Reflector -55:
24" x 24" (60 x 60 cm) Mixed Reef / Moderately Planted;
20" x 20" (50 x 50 cm) SPS / Heavily Planted / Refugium
Power Consumption: 90 W max
Power Supply: 100-240 V AC (input) 19V DC (output)
Dimensions: 4.3" x 2.67" (110 x 68 mm)
Weight: 0.86 lb (390 g)
KSA360XRF

Kessil® H80 and H160 Tuna Flora are full spectrum LED refugium lights which are intensity and spectrum controllable, perfect for most refugium algaes such as chaetomorpha and caulerpa and most plants. The light is perfectly blended, with wavelengths including near UVA and Infrared (ranging from 380-780 nm), enhancing photosynthetic efficiency.

→ The BLUE spectrum (420 – 490 nm) quickly develops the frame of a plant during every stage by promoting prolific stem extension.
→ The GROW spectrum is designed to produce all-around vegetative growth throughout the life cycles of many different plants.
→ The BLOOM spectrum boosts yield by encouraging plentiful flowering during the plants' crucial reproductive stage.
→ The RED spectrum (650 – 750 nm) is designed for tissue culture and cloning by producing maximum root growth during the plant's whole life. During the finishing stage, the RED spectrum also increases the plants' productivity and the quality of the harvest.
→ Dense Matrix LED technology produces a concentrated single point source in the H80 / H160 LEDs with enough power to penetrate past the canopy and deliver light to the entire plant.
→ Controllable by Spectral Controller X.
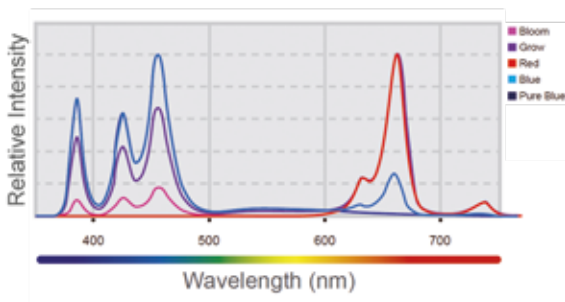
LED H80 Tuna Flora
Spectrum: Blue, Grow (Purple), Bloom (Magenta), Red
Coverage: Up to 24" (60 cm) surface diameter
Power Consumption: 15 W
Power Supply: 100-240V AC (input), 24V DC (output)
Dimensions (D x H): 4.88" x 0.98" (124 x 25 mm)
Weight: 0.88 lb (400 g)
KSH80TF
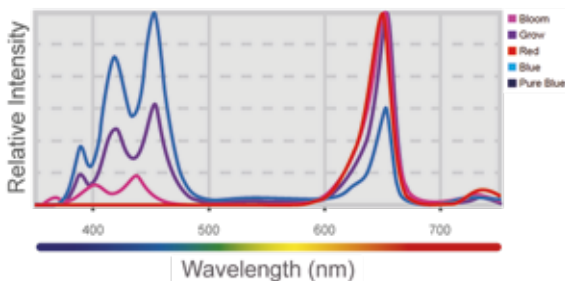
LED H160 Tuna Flora
Spectrum: Blue, Grow (Purple), Bloom (Magenta), Red
Coverage: Up to 24" (60 cm) surface diameter
Power Consumption: 40 W
Power Supply: 100-240V AC (input), 19V DC (output)
Dimensions (H x D): 4" x 2.48" (102 x 63 mm)
Weight: 0.88 lb (400 g)
KSH160TF

A160 A80

The elegant fanless design of the A80 Tuna Blue and Sun LEDs is combined with a unique and compact Dense Matrix array and optics design which ensures efficient coverage and penetration.

The Kessil® A160 LEDs are powerful and penetrating light sources with a wide coverage for most reefs or plants (24"-30" / 60-75 cm).

The coverage area of all A80 and A160 LEDs is up to a surface diameter of 24" (60 cm).

The range of all A80 and A160 can be further improved by lining up several lights.
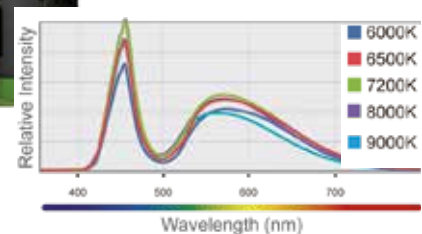
Spectrum and intensity can be set individually directly on the lamp housing. User-friendly color controls allow switching between the spectrum and intensity requirements depending on the desired lighting mood.

More setting options available with Spectral Controller X.

Tuna Blue
For saltwater aquariums

Tuna Sun
For freshwater aquariums

LED A160WE Tuna Blue
Spectrum: Deep Ocean Blue to Sky Blue
Power Consumption: 40 W
Power Supply: 100-240V AC (input),
19-24V DC (output)
Dimensions (H x D): 4" x 2.48" (102 x 63 mm)
Weight: 0.69 lb (320 g)
KSA160WETB

LED A160WE Tuna Sun
Spectrum: 6,000 to 9,000 K
Power Consumption: 40 W
Power Supply: 100-240V AC (input),
19-24V DC (output)
Dimensions (H x D): 4" x 2.48" (102 x 63 mm)
Weight: 0.69 lb (320 g)
KSA160WETS
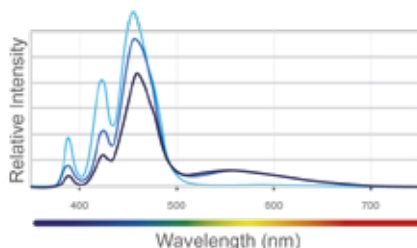
LED A80 Tuna Blue
Spectrum: 10.000 K to Actinic
Power Consumption: 15 W
Power Supply: 100-240V AC (input),
24V DC (output)
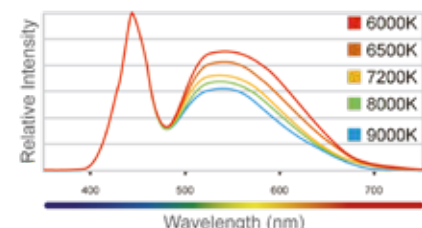Dimensions (D x H): 4.88" x 0.98" (124 x 25 mm)
Weight: 0.88 lb (400 g)
KSA80TB

LED A80 Tuna Sun
Spectrum: 6,000 to 9,000 K
Power Consumption: 15 W
Power Supply: 100-240V AC (input),
24V DC (output)
Dimensions (D x H): 4.88" x 0.98" (124 x 25 mm)
Weight: 0.88 lb (400 g)
KSA80TS

Accessories

AP9X Mounting Arm

The AP9X Mounting Arm is a sleek low profile mounting option for the AP9X. With a new integrated swivel joint, shadowing is a thing of the past. This single arm mount allows for 180 degrees of horizontal rotation and 60 degrees of vertical rotation. The AP9X Mounting Arm is also adjustable in heights and from back to front (for 18" - 24" / 46-60 cm wide tank). Internal cable management routes cords through the arm making it the perfect mounting option for rimmed and rimless tanks.

Dimensions:
ø1" x 12.32" - 15.43" W x 20.78" H (ø25 mm x W 313 - 390 mm x H 528 mm)
Maximum Height: 18" (43 cm) above surface | Weight: 2 lb (900 g)

KSAGN04

AP9X Mounting Arm Extended Slide Bar

The AP9X Mounting Arm Extended Slide Bar with easy installation and sturdy construction extends the reach of the AP9X mounting arm by up to 8" (20 cm) (18" or 45 cm total distance from the back of the tank to the lamp). This accessory allows users with wider tanks (up to 36" or 90 cm) to mount their AP9X exactly where they want to.

Dimensions: ø0.43" x L 13.01" (ø10,9 mm x L 330,5 mm)
Weight: 0.49 lb (222 g)

KSASB03

Mounting Arm

Kessil®'s Mounting Arm is a premium mounting option that allows you to install Kessil® aquarium lights directly to your tank. The Mounting Arm is adjustable in heights and from back to front (for 18" - 24" / 46 - 61 cm wide tank), together with advanced cable management to house the cable inside the arm, providing a perfect and sleek mounting option for rimmed and rimless tanks. It is compatible with A160, A360X, A500X, AP9X.

Dimensions: ø 1" x W 12.32" - 15.43" x H 20.78"
(ø 25 mm x W 313 - 392 mm x H 528 mm)
Weight: 1.76 lb (800 g)

KSAGN02

Extended Slide Bar

The Kessil® Extended Slide Bar lengthens the reach of the Mounting Arms by up to 3.5" (89 mm). This accessory gives users with wider tanks (25"-32" / 64-80 cm) the ability to mount their Kessil® lights precisely where needed. Easy installation and sturdy construction make the Extended Slide Bar a great accessory for large tanks.

Dimensions: ø 0.86" x L 12.4" (ø 21.8 mm x L 31.5 cm)
Weight: 0.42 lb (190 g)

KSASB02

Extension Mount

The Kessil® Extension Mount is designed to be used with the Mounting Arm and provides customers with additional mounting option. It is designed specifically for acrylic or euro-braced tanks, by affixing the mounting arms to the tank stand. The Extension Mount comes with two extension tubes, allowing a total length of 57.5" (1.46 m).

Dimensions: ø 1" x H 37.8" (ø 25 mm x H 96 cm)
Weight: 1.32 lb (600 g)

KSAEM01

Accessories

A-Serie Gooseneck

Kessil®'s A Series Gooseneck is a versatile mounting option that allows you to customize the positioning of your A160 or H160 LED. Designed to be used on most glass tanks, its 24 inch malleable but sturdy arm provides a strong, adaptable solution to install your Kessil® aquarium light.
Dimensions: ø 0.6" x H 23.6" (ø 15 mm x H 599 mm) | Weight: 1.92 lb (870 g)
KSAGN01

Gooseneck only for Kessil® A80 LEDs

Kessil®'s Mini A Series Gooseneck is a versatile mounting option that allows you to customize the positioning of your light. The 10 inch arm attaches the Kessil® A80 aquarium light securely to the top of a tank without a canopy.
Dimensions: ø 0.57" x H 10" (ø 15 mm x H 254 mm)
Weight: 0.73 lb (330 g)
KSAGN03

90° Gooseneck Bracket

For A Series Gooseneck to maintain a low profile look. The Bracket can be installed in less than 1 minute to the A360X or A Series Gooseneck.
Dimensions (L x W x H): 4.7" x 0.8" x 1.1" (119 x 20 x 28 mm)
Weight: 0.13 lb (60 g)
KSAGB90

Full Angle Adapter

Compatible with Mounting Arm, 90° Gooseneck Adapter, DIY mounting solutions. It allows lights to be angled or tilted,
Dimensions: ø1.12" x H 2.09" (ø28.5 mm x H 53 mm) | Weight: 0.15 lb (70 g)
KSAGA360

Hanging Kit for AP9X

The Hanging Kit allows the Kessil® AP9X LED to be hung from your ceiling or even within your canopy. Our recommendation is to hang the AP9X 15" - 18" (38 - 46 cm) above water surface to obtain a 48" x 24" (120 x 60 cm) coverage for mixed reef tanks, and 5" - 7" (13 - 18 cm) above water surface for a 36" x 24" (90 x 60 cm) coverage for SPS dominant tanks.
Length: 118" (300 cm) (Unit x2) | Weight 0.37 lb (170 g)
KSAHM01

Reflector - 35

The Kessil® Reflector - 35 strengthens the light beam of the A360X or A500X for further penetration and contrast. With an easy to attach magnetic design, the reflector increases the center light intensity by up to 5 times while adding a dynamic depth to your tank. This accessory is perfect for deep tanks up to 5 feet (150 cm) or SPS corals with strict light requirements. The Reflector focuses the light of the A360X or A500X to provide an abundance of light energy.
Beam Angle: 35°
Coverage Area: up to 20" x 20"
Mounting Height: 8"-12" (20-30 cm) above water surface
Penetration: up to 5 feet (150 cm) into water (excludes mounting height)
KSAOK04

Reflector - 55

The Kessil® Reflector - 55 strengthens the center light intensity of the A360X or A500X LEDs by up to three times for further penetration – perfect for deep aquariums or SPS coral dominated tanks with strict light requirements. Contrast, depth and dynamics of an aquarium get more impressive. Magnetic mounts allow a quick and easi attachment of the Reflector - 55.
Beam Angle: 55°
Mounting Height: 8"-12" (20-25 cm) above water surface
Penetration: up to 5 feet (150 cm) into water (excludes mounting height)
Dimensions: ø3.2" x H 0.7" (ø8.2 cm x H 1.8 cm) | Weight: 0.04 lb (20 g)
KSAOK03

Accessories

Type1 Control Cable (for Neptune Controller) - 6 feet (1,8 m)
Connection cable between external controller and Kessil® LED A80 / A160 / A360WE .
Length: 6 feet (1.8 m) excluding connectors
Plug Types: 1/8" (3.5 mm) stereo male phono plug to RJ45 plug
Compatible with Neptune Apex Controller.
KSACB01

Type2 Control Cable (for Digital Aquatics Controller) - 6 feet (1,8 m)
Connection cable between external controller and Kessil® LED A80 / A160 / A360W.
Length: 6 feet (1.8 m) excluding connectors
Plug Types: 1/8" (3.5 mm) stereo male phono plug to
two 2POS 3 mm single row plugs
Compatible with Digital Aquatics Controller.
KSACB02

K-Link Extension Cable - 10 feet (3 m)
Extension cable for either between lights or between controller and light.
Length: 10 feet (3 m) excluding connectors
Plug Types: 1/8" (3.5 mm) stereo male phono plug to
1/8" (3.5 mm) stereo female phono jack
Compatible with Spectral Controller X, A360X, A500X.
KSKEC10

90° K-Link USB Cable - 10 feet (3 m)
The Kessil® 90° K-Link Cable connects Kessil® X LEDs to each other or
to the Spectral Controller X.
Length: 10" (3 m) excluding connectors
Plug Types: USB Type-C connector to USB Type-C connector
Compatible with Spectral Controller X, A360X, A500X.
KSKLC90

Unit Extension Cable - 6 feet (1,8 m)
Extension cable for either between lights or between controller and light.
Length: 6 feet (1.8 m) excluding connectors
Plug Types: 1/8" (3.5 mm) stereo male phono plug to
1/8" (3.5 mm) stereo female phono jack
KSACB04

90° Unit Link Cable - 10 feet (3 m)
The Kessil® 90° Unit Link Cable connects any of 0-10 V- controllable Kessil® lights
to each other or to the Spectral Controller. Required to link canopy-mounted
Kessil® A80 LEDs.
Length: 10" (3 m) excluding connectors
Plug Types: 1/8" (3.5 mm) stereo male phono plug to
1/8" (3.5 mm) stereo male phono plug
KSULC10

19V DC Power Extension Cable - 6 feet (1,8 m)
KSUCB19

Power Supply 19V-90W for A360X D/F connector
KSUPS19

Power Supply 19V-65W für A160, H160 EU plug
KSUPS1965

Power Supply 24V-24W für A80, H80 EU plug
KSUPS2424

More Kessil® accessories and spare parts: **www.tunze.com**

Kessil®
LED Aquarium Lights

Data sheet Kessil® LED lights

Brand groups: **Tuna Blue** — For saltwater aquariums | **Tuna Sun** — For freshwater aquariums | **Tuna Flora**

	AP9X	A500X	A360X	A360X with Reflector -55/-35	A160 / H160	A80 / H80
Product	AP9X	A500X	A360X	A360X with Reflector -55/-35	A160 / H160	A80 / H80
Power consumption	185 W max.	185 W max.	90 W max.	90 W max.	40 W max.	15 W max.
Spectrum	Tuna Blue (Deep Ocean Blue – Sky Blue) + RG+ Purple (Violet+Indigo)	Tuna Blue (Deep Ocean Blue – Sky Blue) + RG+ Purple (Violet+Indigo)	Tuna Blue (Deep Ocean Blue – Sky Blue) + RGB / Tuna Sun (6.000 – 9.000 K) + RY	Tuna Blue (Deep Ocean Blue – Sky Blue) + RGB / Tuna Sun (6.000 – 9.000 K) + RY	Tuna Blue (Deep Ocean Blue – Sky Blue) + RGB / Tuna Sun (6.000 – 9.000 K) / Blue, Grow (Purple), Bloom (Magenta), Red	10.000 K – Actinic / 6.000 – 9.000 K / Blue, Grow (Purple), Bloom (Magenta), Red
Type of aquarium	mixed reef / SPS	SPS	mixed reef / SPS dominat / moderately / heavily planted	mixed reef / SPS dominat / moderately / heavily planted	mixed reef / soft coral / LPS / moderately / lightly planted	mixed reef / soft coral / LPS / fish only / moderately / lightly planted / fish only
Coverage area	120x60cm (mixed reef) / 90x60cm (SPS)	90x90cm	90x90cm (mixed reef) / 60x60cm (SPS) / 90x90cm (moderately planted) / 60x60cm (heavily planted)	50x50cm (mixed reef) / 45x45cm (SPS) / 50x50cm (moderately planted) / 45x45cm (heavily planted)	60x60cm (soft coral / LPS) / 50x50cm (mixed reef) / 60x60cm (lightly planted) / 50x50cm (moderately planted)	50x50cm (soft coral / LPS) / 35x35cm (mixed reef) / 50x50cm (lightly planted) / 35x35cm (moderately planted)
Mounting height from water level	38-45cm (mixed reef) / 13-18cm (SPS)	13-18cm (SPS)	20-30cm (mixed reef) / 10-15cm (SPS) / 20-30cm (moderately planted) / 10-15cm (heavily planted)	30cm (mixed reef) / 20cm (SPS) / 30cm (moderately planted) / 20cm (heavily planted)	20cm (soft coral / LPS) / 30cm (mixed reef) / 20cm (lightly planted) / 30cm (moderately planted)	15cm (soft coral / LPS) / 10cm (mixed reef) / 20cm (fish only) / 15-20cm (lightly planted) / 10cm (moderately planted)
Penetration	up to 75cm	60cm / 90 cm with Reflector -55 / 120cm with Reflector -35	60-75cm (mixed reef) / 60cm (SPS) / 60-75cm (moderately planted) / 60cm (heavily planted)	135/150cm (mixed reef) / 135cm (SPS) / 135/150cm (moderately planted) / 135cm (heavily planted)	50cm (mixed reef) / 60cm (soft coral / LPS) / 50cm (moderately planted) / 60cm (lightly planted)	35cm (mixed reef) / 45-60cm (soft coral / LPS) / 60cm (fish only) / 35cm (moderately planted) / 45-60cm (lightly planted)

Deeper penetration when mulitple units are used.
Advanced aquariums or SPS dominant tanks may require special recommendation, please contact our customer service if needed.
Corals need to be acclimated to new lights. Always start from low intensity and increase gradually.