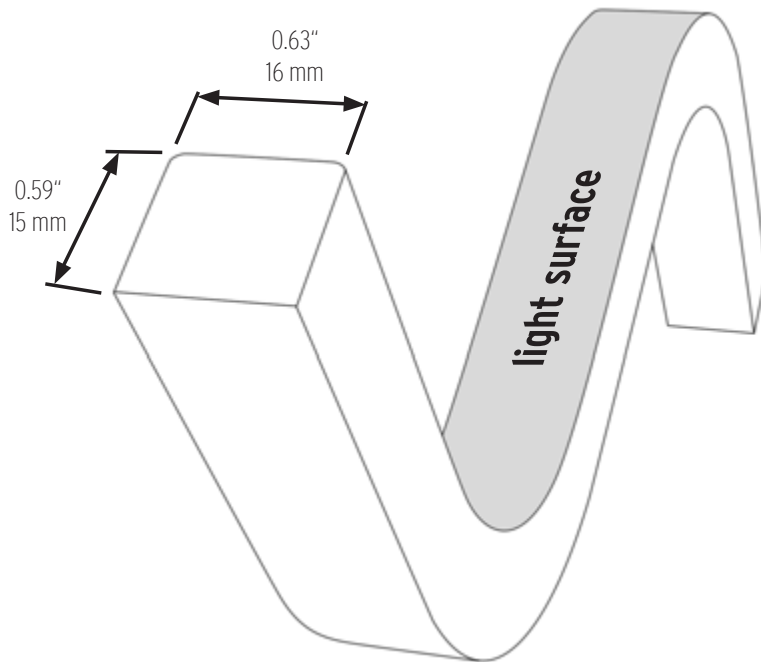
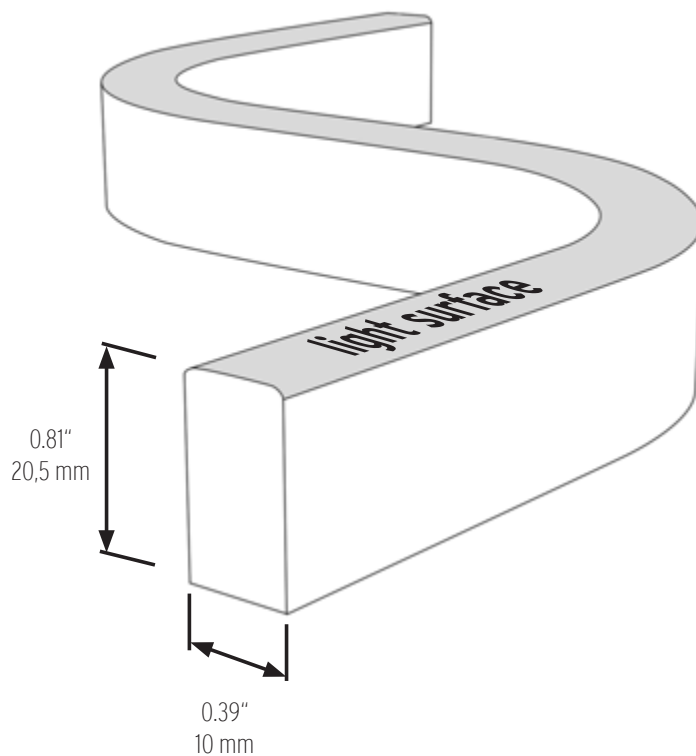


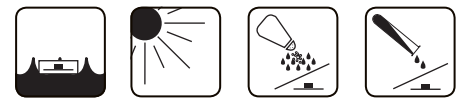
Top View (TV)



Side View (SV)



LED LINEAR™
lighting solutions



Installation instructions

VarioLED™ Flex
VENUS
PHOBOS
SKYLLA
NIKE
IP67/68

Warning: The safety of the luminaire is only ensured if the following instructions are followed properly. Keep these instructions for future maintenance work. www.led-linear.com

- It is absolutely necessary to isolate the mains supply before beginning any installation, inspection, maintenance or cleaning.
 - Installation and maintenance must be carried out only by trained specialist personnel with appropriate professional qualifications in accordance with the latest electrical installation and safety regulations.
 - Installation and operating of this luminaire are subject to international safety regulations. The manufacturer is not liable for damage caused by improper use or installation.
 - If any luminaire is subsequently modified, certificates can become invalid. The person responsible for the modification shall be considered as manufacturer.
 - If malfunctions occur, please directly contact LED Linear GmbH.
 - The maximum admissible ambient temperature of the luminaire may not be exceeded. Surpassing that temperature reduces the service life and, in extreme cases, poses risk of early failure.
 - To protect the sensitive surfaces from dirt and fingerprints it is recommended to wear protective gloves during the assembly.
 - The transport and storage of the luminaire must be in the original packaging.
 - Technical amendments and graphical presentation are subject to change.
-

• It is up to the consumer to ensure that an adequate intake of loads is guaranteed. Power supply units used for operation should ensure the following basic protection and safety features:

- Short-Circuit Protection
 - Overload Protection
 - Overheat Protection
 - SELV equivalent (Safety Extra Low Voltage)
 - Class 2
 - The electrical feed-in is always conducted between a female plug of type VarioCon Female and the fixture-integrated connector.
 - Best temperature for assembly is between 64 °F to 95 °F (+18 °C and +35 °C)
 - The installation surface must be dry and clean.
 - Surface must be free of dust, grease, oil or separating agents.
 - Lightly adhering coatings must be removed. For cleaning use clean cloth and material-compliant detergents like Isopropanol
 - Pressure to adhere should be between 65-97 N / in² (10 - 15 N/cm²).
 - Quick fixation is done by the adhesive on the rear side of the Top View versions. However, the mounting with clamps (VarioClip or VarioContour) is to be preferred in any case.
 - For Side View versions there are 3 options of fixation. Separate reel(s) of adhesive tape will be optionally delivered with the VENUS or PHOBOS product and have to be applied by the customer.
 - The 3M self-adhesive tape on rear side of the VENUS fixture is not suitable for free-floating overhead installations. For additional fixing please use VENUS Mounting Profile or VENUS Mounting clips.
 - As a permanent fixation method our aluminum-clamp VarioClip Venus is recommended. Aluminum-clamp VarioClip is also available as a profile of 2 m lengths. IP68 products will be delivered without adhesive. Adequate installation is up to the installer.
 - Due to production, tolerances in linear expansion of up to 0.2" (5 mm) have to be expected. In width by up to +/- 0,04" (1 mm).
 - Please ensure that VarioLED™ Flex VENUS is not installed over the joint of 2 profiles to avoid shearing effect which could cause a damage to the FLEX PCB board inside the fixture.
 - While installing the luminaire it must be taken care that after assembling mechanical stress is avoided onto the surface (e.g. mounting into a ground groove).
- Please notice also safety and assembly information for VarioLED™ Flex, see LED Linear system Catalog Page 418 ff.

The luminaire can be operated stand alone or in a chain configuration up to a maximal length and operating power of:

Maximum lengths and connector capacity

Produkt Product	Protection Class	Voltage [V]	max. current [A]	max. electrical power [W]	max. system length
VENUS TV	III (external PSU)	24 V	1,20 A	28,8 W	5,0 m
VENUS SV			2,56 A	61,4 W	4,0 m
VENUS IQ WHITE TV			2,16 A	51,8 W	5,0 m
VENUS IQ WHITE SV					5,0 m
VENUS RGB TA			2,40 A	57,6 W	7,5 m
VENUS RGB SV					7,5 m
VENUS COLOR R,Y TV			1,60 A	38,4 W	5,0 m
VENUS COLOR R,Y SV					
VENUS COLOR B,G TV			2,00 A	48,0 W	5,0 m
VENUS COLOR B,G SV					
PHOBOS TV			2,56 A	61,4 W	4,0 m
PHOBOS SV					
SKYLLA TV			1,60 A	38,4 W	5,0 m
SKYLLA SV					
NIKE HD8 TV			1,00 A	24,0 W	5,0 m
NIKE LD4 SV					

For cleaning use clean, moist cloth and material-compliant detergents like Isopropanol.

Cleaning of the Luminaire

Dimension in inch (W/H/L): 0,63" / 0,59" / 3,8" - 296,3" | 16mm / 15mm / 96,5mm - 7526 mm (depending on version)
 Protection class: III
 IP-Protection: IP67 / IP68 (depending on version)
 Permitted ambient temperature: -13°F to +113°F (-25°C bis +45°C)
 Color rendering index: RA >85
 Lifetime: L80 / 30.000 - L80 / 53.000 (depending on version)
 Operating voltage: 24V

Technical data

Tools required for the installation of luminaire:

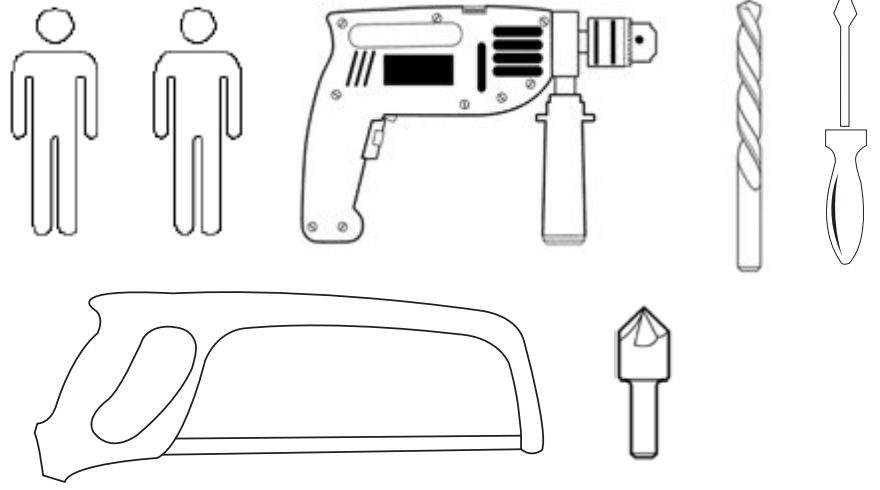
Two people

Power drill and drill attachment

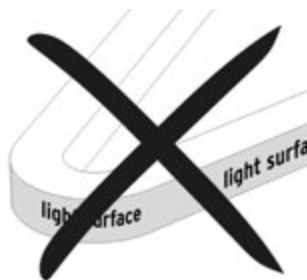
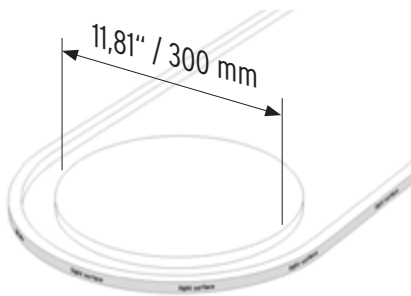
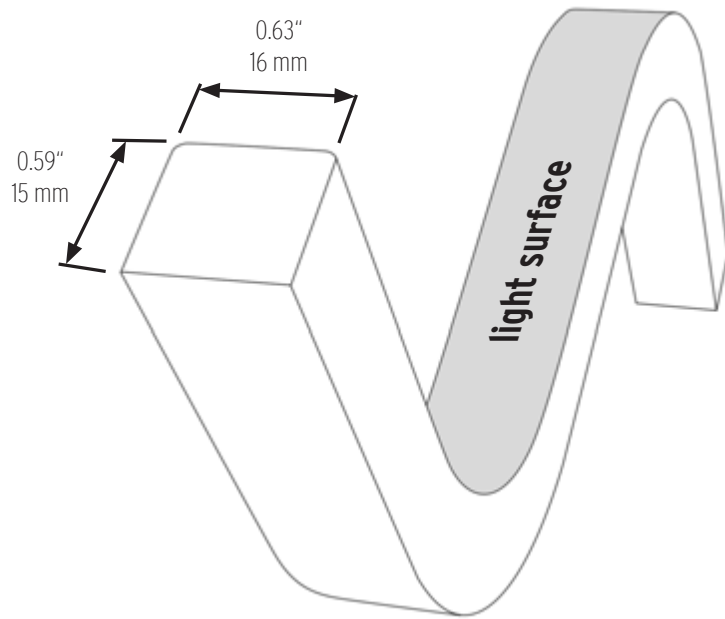
Sinker

Screwdriver / electric screwdriver

Hacksaw / miter saw



Top View (TV)



Bend direction TV

Please make sure that even during installation the predetermined bending direction is NEVER changed. The product may also not be twisted.

VarioLED™ Flex VENUS, PHOBOS, SKYLLA and NIKE shall not be bent sharply. PC core and encapsulation can not prevent any damage.

The minimal bending radius for all Top View (TV) products of 5.9" (15 cm) should not be exceeded.

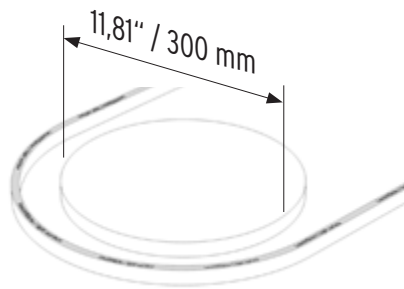
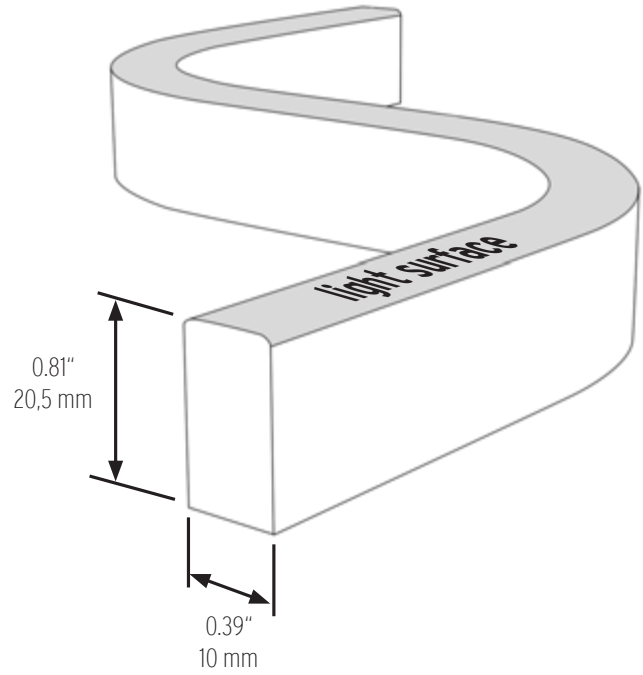
VarioLED™ Flex VENUS, PHOBOS, SKYLLA and NIKE may not be:

- Twisted
- Dropped
- Bent at a 90° angle or bent at all
- Sagging / hanging down

Bend direction SV

- Please make sure that even during installation the predetermined bending direction is NEVER changed. The product may also not be twisted.
- VarioLED™ Flex VENUS, PHOBOS, SKYLLA and NIKE shall not be bent sharply. PC core and encapsulation can not prevent any damage.
- The minimal bending radius for all Side View (SV) versions of 5.9" should not be exceeded.
- VarioLED™ Flex VENUS, PHOBOS, SKYLLA and NIKE may not be:
 - Twisted
 - Dropped
 - Bent at a 90° angle or bent at all
 - Sagging / hanging down

Side View (SV)



IP67

- (A) TV -> adhesive tape attached to the luminaire



- (B) SV -> Separate adhesive tape for custom fitting



IP68

- (C) TV -> adhesive tape attached to the luminaire



- (D) SV -> Separate adhesive tape for custom fitting



- (F) Only for luminaire with maximum length of 78.74" (2m)



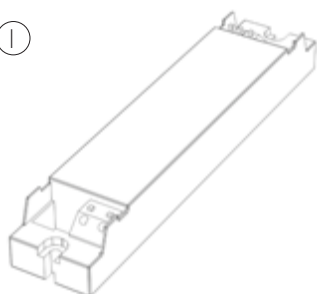
- (G)



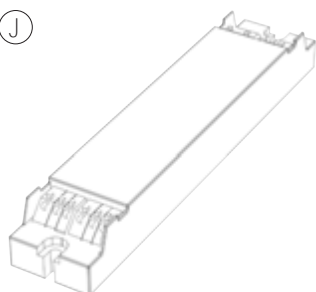
- (H)



- (I)



- (J)



Your lighting package contains

- (A) VarioLED™ Flex
VENUS / PHOBOS / SKYLLA / NIKE
TV
IP67
(Picture: VarioLED™ Flex VENUS TV)
- (B) VarioLED™ Flex
VENUS / PHOBOS / SKYLLA / NIKE
SV
IP67
(Picture: VarioLED™ Flex VENUS TV)
- (C) VarioLED™ Flex
VENUS / PHOBOS / SKYLLA / NIKE
TV
IP68
(Picture: VarioLED™ Flex VENUS TV)
- (D) VarioLED™ Flex
VENUS / PHOBOS / SKYLLA / NIKE
SV
IP68
(Picture: VarioLED™ Flex VENUS SV)

Optional accessories

- (F) VarioContour VENUS TV/SV
78.74" (2m)
- (G) VarioClip VENUS TV/SV
- (H) VarioCon IP67
- (I) VarioPSU
- (J) VarioControl

Step by step instructions

Open the package carefully.

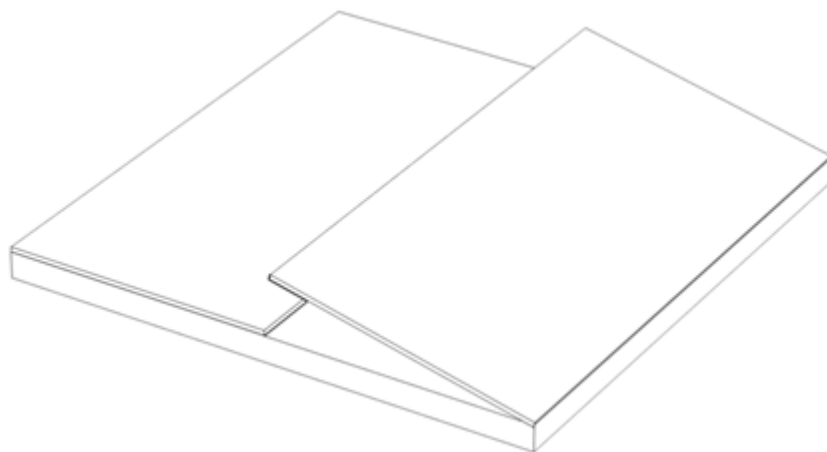
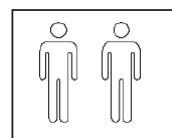
Make sure not to damage the encapsulation of the product when opening the package with a sharp object (Cutter Knife / Scissors), otherwise, no adequate protection of the LED strip is guaranteed. After receiving the package, please check the integrity and completeness of product.

The luminaire's modules and the adhesive tape are made of different materials, such as Polycarbonate (PC). To ensure proper installation, they must be brought to room temperature before installation. Depending on the storage location, the flexibility of the luminaire can be significantly reduced when temperatures are too low. Warming up to room temperature makes the luminaire flexible for proper assembly.

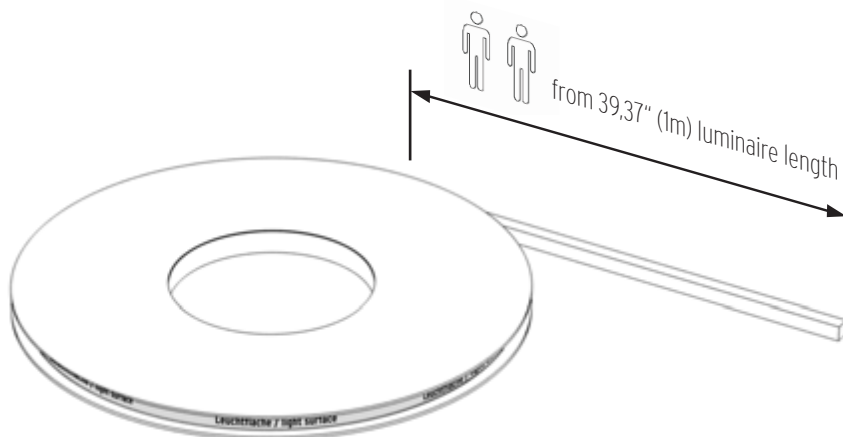
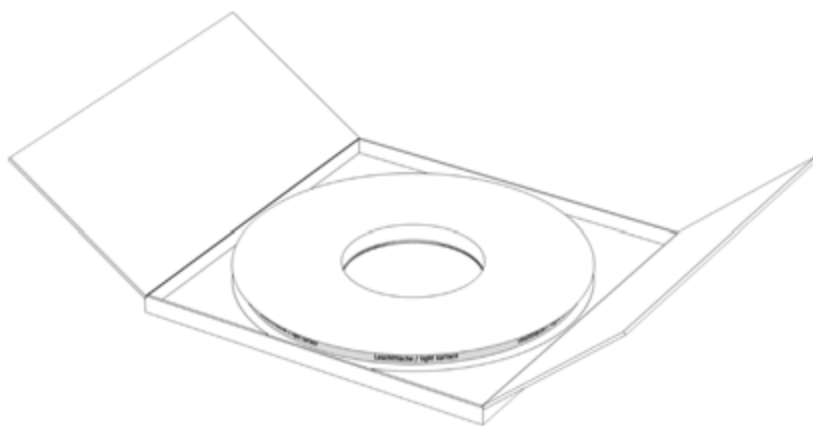
The best temperature for assembly is between 64,4°F to 95 °F (+18°C to +35°C).

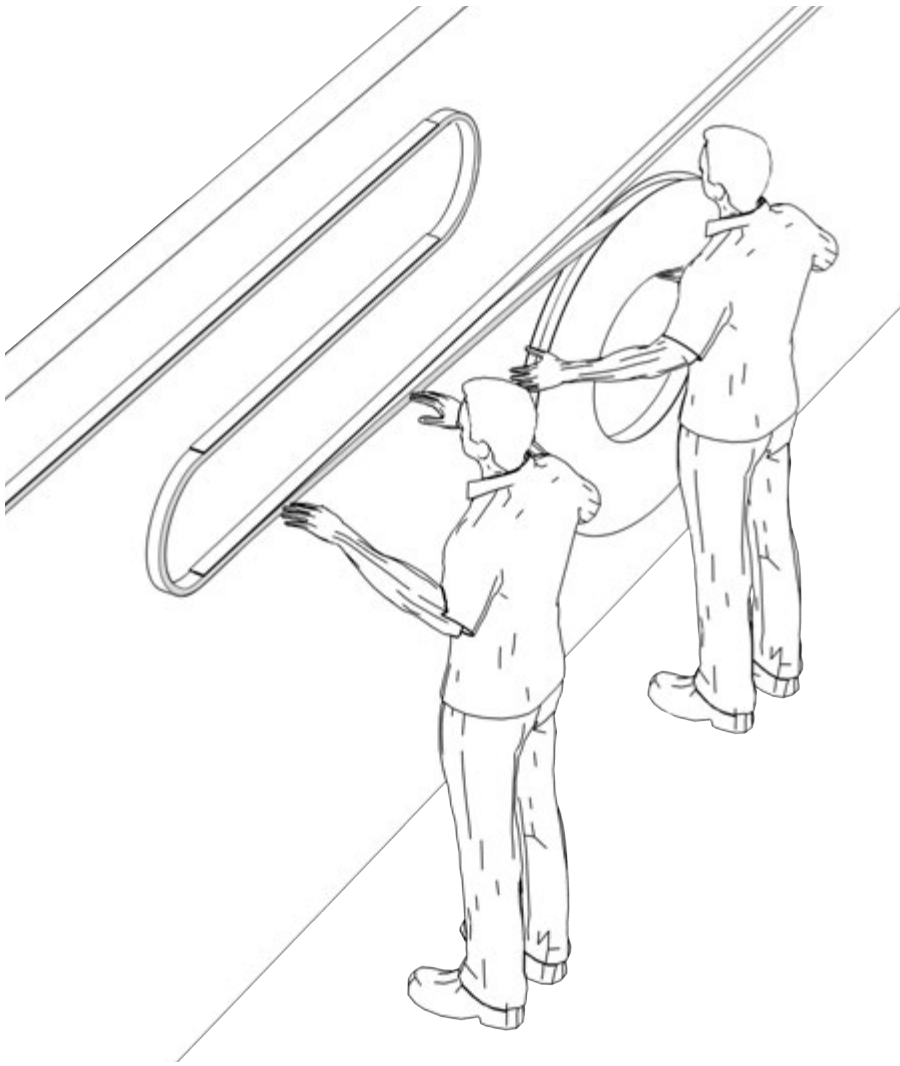
Unroll the product gradually and carefully from the packing roll.

Attention: If the luminaire is longer than 39,37" (1m), the installation should be done by two people.



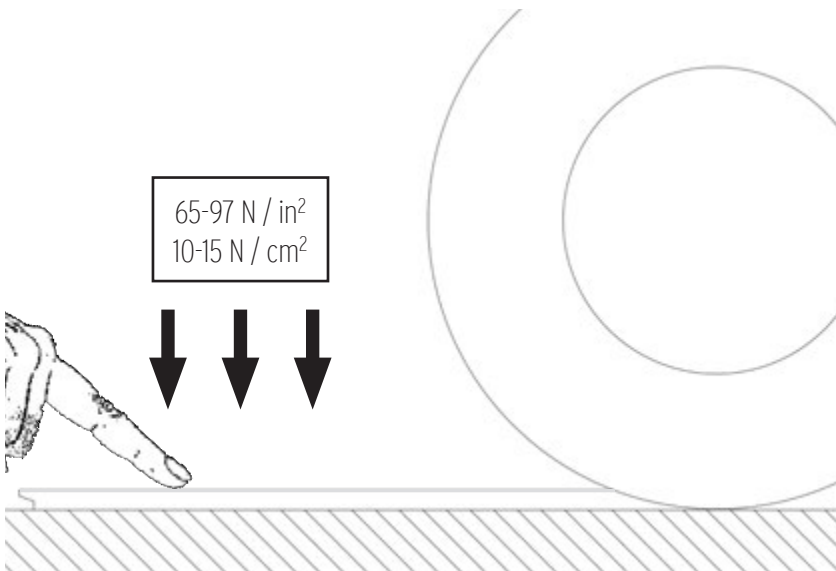
☰ +95°F (+35°C)
to
☰ +64,4°F (+18°C)





The installation of the product should always be carried out by two people. (one person for pressing the product onto the surface, one person to hold up the package with the rest of the luminaire) During the installation of the product, especially when the product is longer than 78,74" (2 m), it is important to handle it very careful. Otherwise the conductor tracks in the product can easily be damaged through improper bending.

It is important to make sure that no part of the product is hanging down. Thereby, the bending radius can be undershot and the product can take extensive damage.



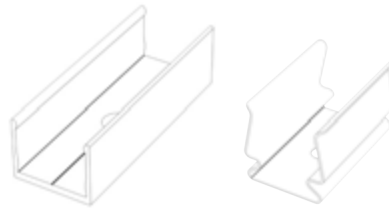
The attached adhesive tape at the back of the top view version ensures a fast and flexible mounting of the IP67products. The proof should be carried out with about $65-97 \text{ N/inch}^2$ ($10-15 \text{ N/cm}^2$). For the side view products, there are three different possibilities for applying the adhesive tape (not suitable for freefloating overhead installations). Therefore, the tape is optionally added in the product delivery. The NIKE and the IP68 products are delivered without tape. Here it is the processors task to care for a proper installation.

As a further fixation method we recommend our aluminum VarioClips:

- VarioClip VENUS TV 50 mm
Art.-Nr.: 13000010-01
14,5 mm x 18,5 mm x 50mm (HxBxL)
Aluminum
- VarioClip TV 30 mm 301
Art.-Nr.: 13000033-01
19 mm x 19,5 mm x 30mm (HxBxL)
stainless steel
- VarioClip TV 30 mm 316L
Art.-Nr.: 13000050-01
19 mm x 21,5 mm X 30mm (HxBxL)
stainless steel
- VarioClip VENUS SV 50 mm
Art.-Nr.: 13000011-01
20 mm x 12,5 mm x 50mm (HxBxL)
Aluminum
- VarioClip SV 30 mm 301
Art.-Nr.: 13000038
24 mm x 15 mm x 30mm (HxBxL)
stainless steel
- VarioClip SV 30 mm 316L
Art.-Nr.: 13000051-01
26 mm x 16,5 mm x 30mm (HxBxL)
stainless steel

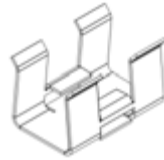
The holding clips are also available as a profile of 78.74" (2m).

Top View

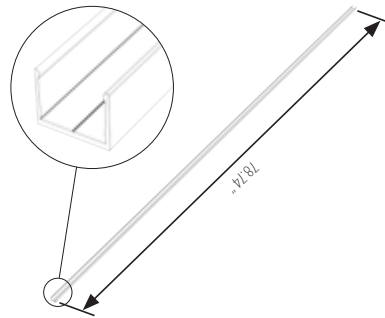


Clip 50 mm

Clip 30 mm (301)

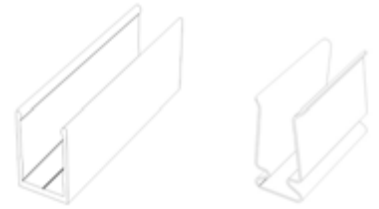


Clip 30 mm (316L)



Profile mounting 78.74" (2m)

Side View

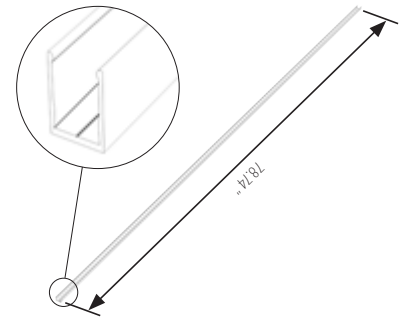


Clip 50 mm

Clip 30 mm (301)



Clip 30 mm (316L)



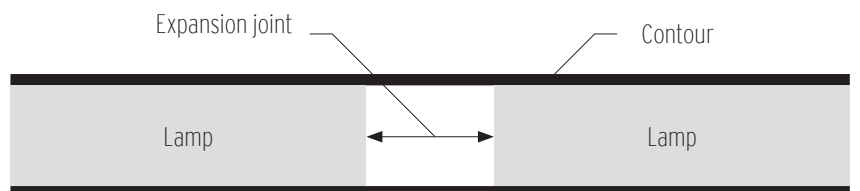
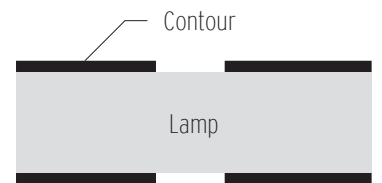
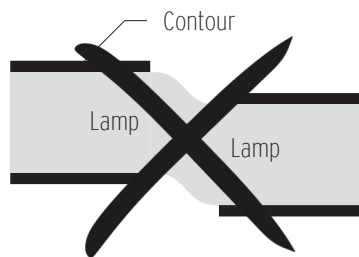
Profile mounting 78.74" (2m)

Mounting profiles must be installed in alignment and secured against misalignment so that no shearing forces can damage the product.

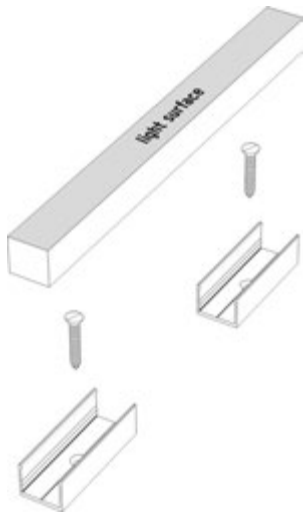
Observe thermal expansion!

During installation ensure that there are sufficient expansion joints between the luminaires.

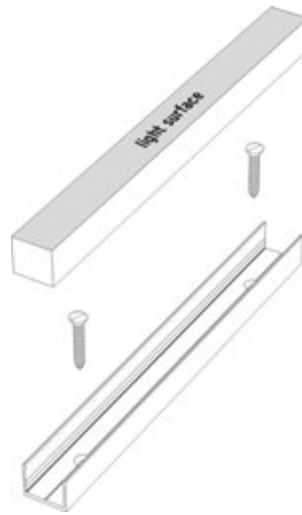
The thermal expansion of the luminaire is about 1 mm per meter at a temperature difference of 10°.



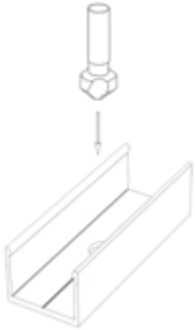
Clip mounting



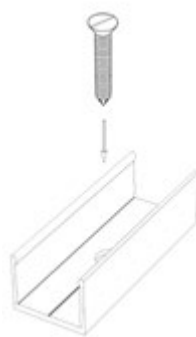
Profile mounting



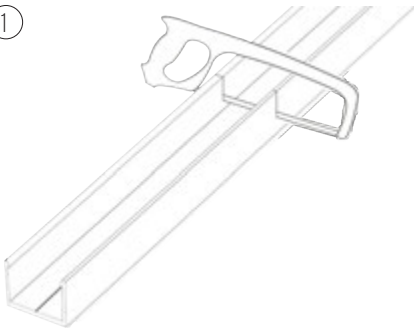
①



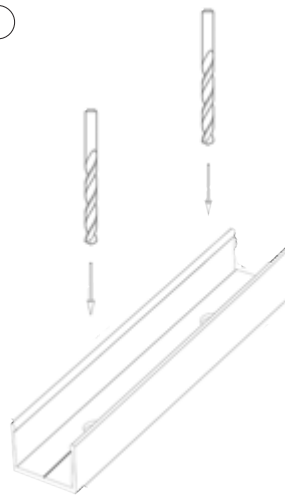
②



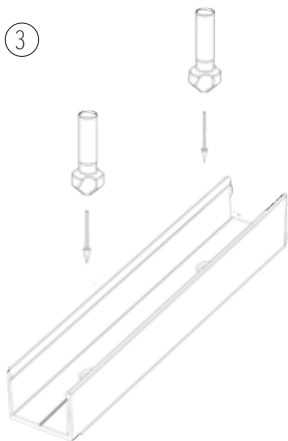
①



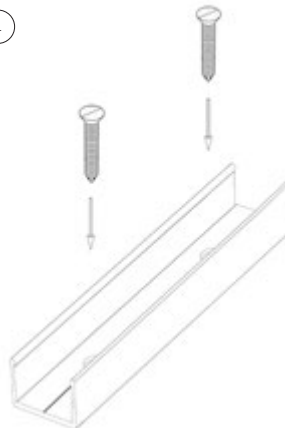
②



③



④



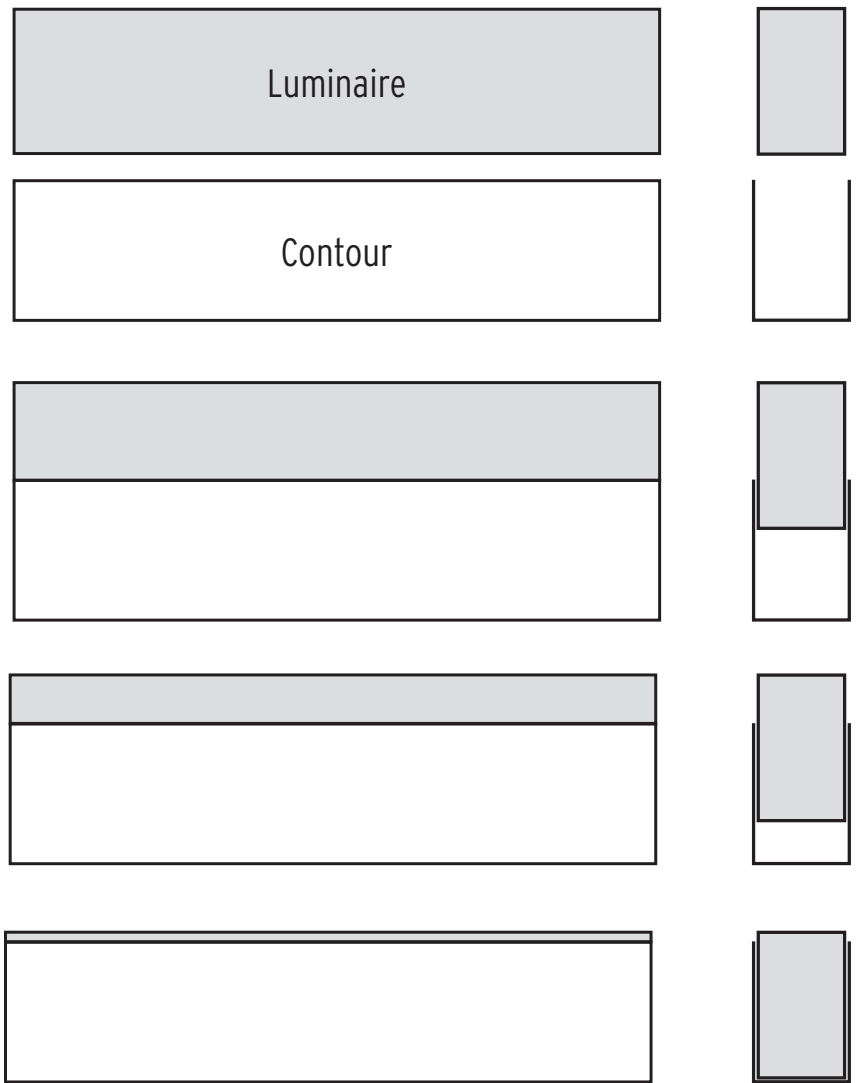
mounting type: Clips + profile

- The mounting clips „Clip 30mm (301)“ and „Clip 30mm (316L)“ are not designed for an assembly with countersunk screws. This can damage mounting clips.
- It is recommended to assemble the mounting clips „Clip 50mm“ with countersunk screws. For this purpose the predrilled hole has to be lowered before.

- Lower the hole of the clip „clip 50mm“ to record a countersunk screw.
- Attach the clip with a suitable countersunk screw to the surface (depending on the surface it must be prepared for receiving the screw).

- Cut the mounting profile to the desired length with a hacksaw.
With a metal drill, pre-drill adequate holes for mounting the profile.
- Lower the pre-drilled holes with a sinker for receiving a countersunk screw.
- Attach the profile with a suitable countersunk screw to the surface (depending on the surface it must be prepared for receiving the screw).

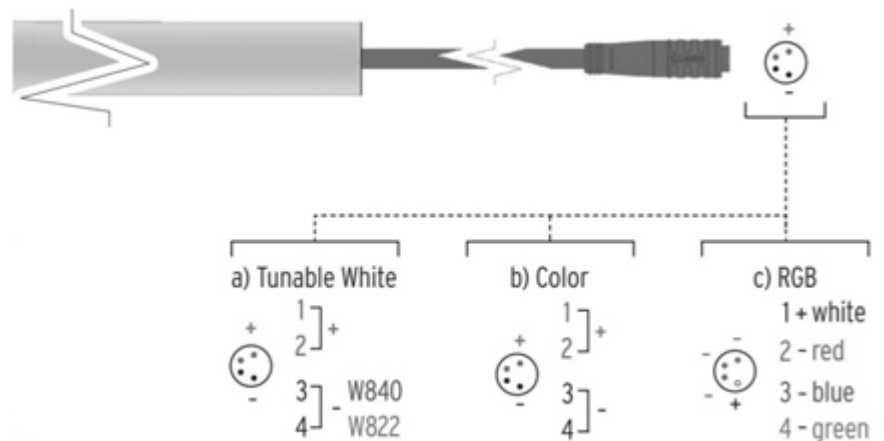
When using the mounting profile, the luminaire must be gradually pressed into the profile. The drawing shows the various steps.



Wiring

Please note that miswiring the unit can cause permanent damage. Make sure that the connection is secured using the wiring diagram.

WHITE 24V DC:	
+	WHITE
-	GREY
RGB 24V DC:	
+	WHITE
-	RED
-	GREEN
-	BLUE
IQ WHITE 24V DC:	
+	WHITE
+	RED
-	GREEN W822/W825
-	BLUE W840



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