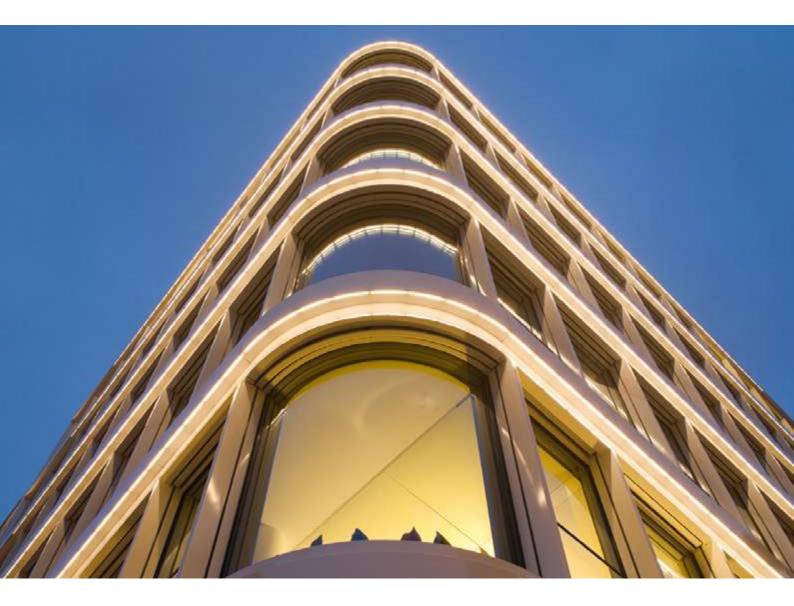


FAÇADE LIGHTING APPLICATION NOTE



Direct view and indirect view

FAÇADE LIGHTING

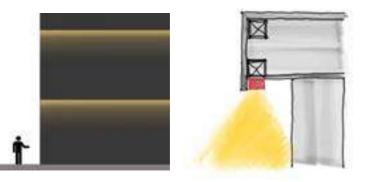
What is façade lighting and why do we need it?

Façade lighting of our buildings is essential in creating aesthetically pleasing urban environments. Buildings nowadays need to be iconic landmarks and distinct in the way they present themselves both in day and night. Carefully designed night lighting on the façades that respects the building's architecture, context while controlling light trespass are quite important in making an image that is enjoyed by all.

Façade lighting can come in two types -1. Direct lighting 2. Indirect lighting

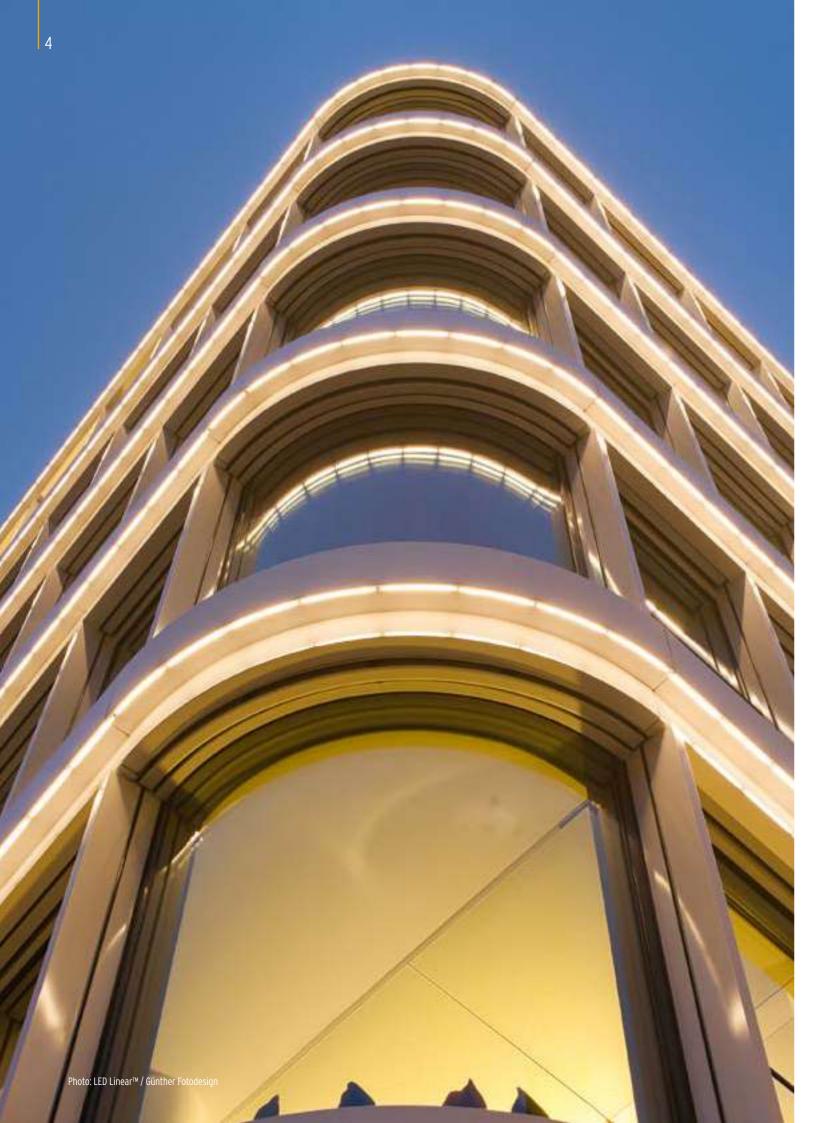
Which parameters have to be carefully evaluated?

- Direct light or indirect light
- Weather resistance • Light distribution
- Integration into façade
- detail & maintenance



LINEAR MODULAR INFINITE (∞)

Direct view VENUS True Color Top View shining down



Direct view PRODUCT OVERVIEW

VarioLED™ Flex VENUS True Color TV/ 3D IP67

VENUS True Color comes in two versions - Top View (TV) and 3D. Two way bending from top to bottom in a radius of 150 mm is possible with VENUS True Color TV. Bending in all directions and even twist it by 180°/m is possible with the 3D version. Both versions offer an opal encapsulation and totally dot free protected flexible LED design light lines with a small cross section of 18 mm x 17 mm and max. length of 3,970 mm.

IP67 rated. Comes with IP67 connectors as standard.

Suitable applications: Slim lines of light directly fixed onto façade, silhouetting façade profiles, signage

ADONIS IP67

Ideally used as a surface mounted rigid luminaire for outdoor applications. The ADONIS is a versatile luminaire that can also be used indoor for specific applications. Its main advantage is its small form factor (only 20.5 mm x 25.5 mm) with a very high lumen output of up to 2,620 lm/m. ADONIS is characterized by its formal elegance and absolutely dot free, homogeneous light emission surface. Delivered with translucent end caps for a perfect fixture to fixture light overlap. It is available in five standard lengths and is supplied ready to plug in with IP67 mini connectors.

IP67, IK10 rated. Comes with IP67 connectors as standard.

Suitable applications: Surface mounted directly onto façade elements such as walls.

XOOLUM™ IP67

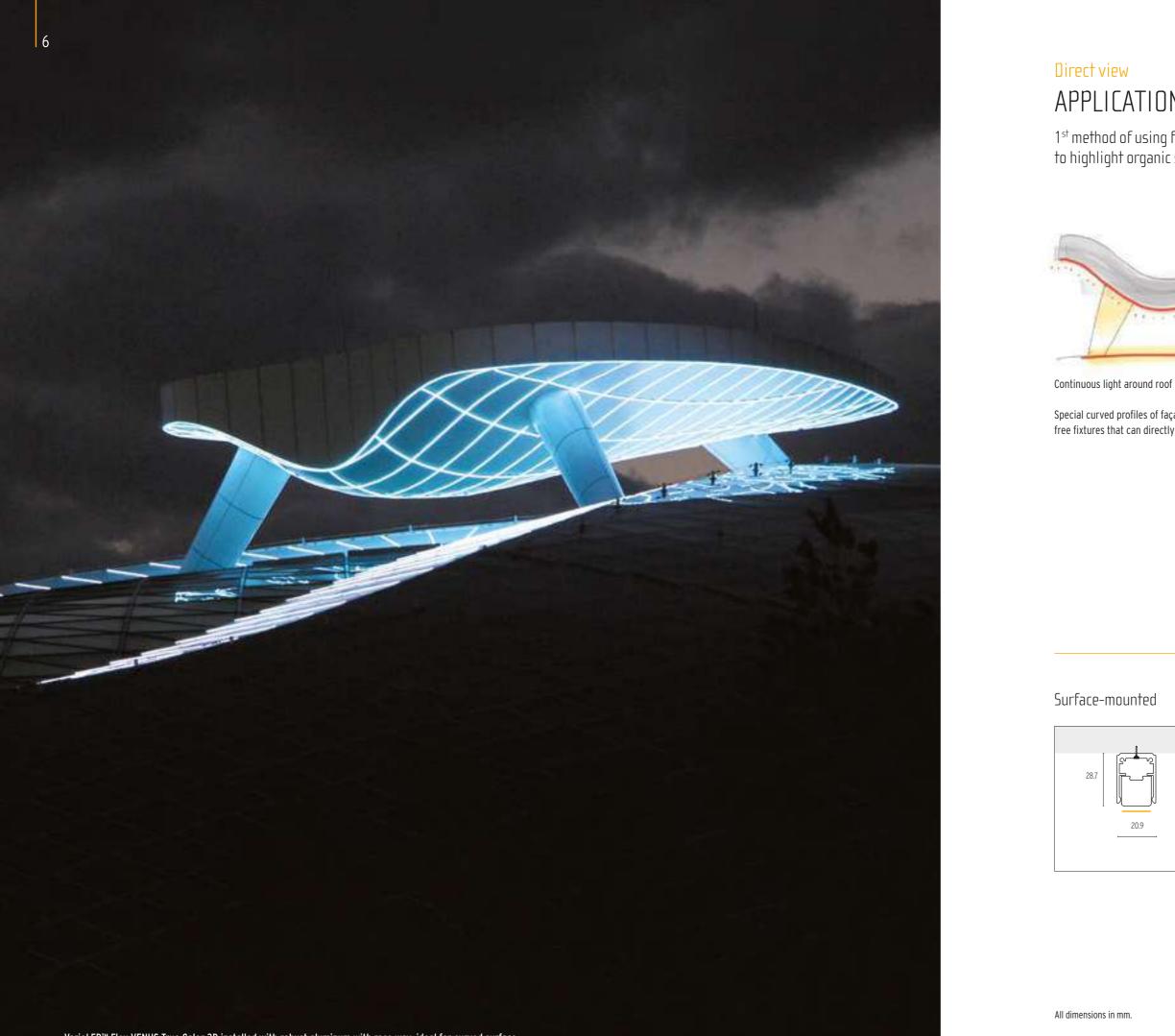
XOOLUMTM is offering an enormous modularity and user-friendliness combined with a lumen output of up to 1.920 lm/m. This fixture is created from natural anodized aluminum, with absolutely homogeneous light over its entire surface with an opal encapsulation. The luminaire can be easily cleaned as it is surface washable, and highly resistant to harsh climatic conditions. It is innovative with an adjustable luminaire head (45°) that can be tilted to where light is desired.

IP67 rated.

Suitable applications: Straight runs of high brightness direct view light, on façades, building edges, canopies.

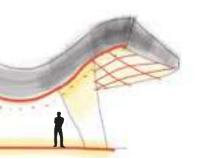


Façade lighting | LED Linear™ GmbH



APPLICATION IDEA

1st method of using façade lighting — to highlight organic shapes of external elements



Special curved profiles of façade elements are illuminated with dot free fixtures that can directly be mounted onto the architectural surface.



Mounting accessories



VTC Surface Mounting Clip High Art.-#: 13000278

Description

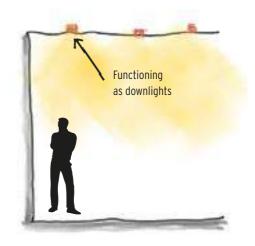
Robust aluminum extrusion painted clips with cable race in white for surface mount.



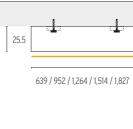
www.led-linear.com/venustc



Direct view APPLICATION IDEA



Surface-mounted, fixed



All dimensions in mm.

2nd method of using façade lighting — as an external downlight

Opal dot free linear profiles arranged in a decorative pattern following façade elements can provide functionality of downlights.



Mounting accessories



Sliding block C010 Set, incl. Screw Art.-#: 13000287



VarioClip 010 Set Art.-#: 13000202

Description

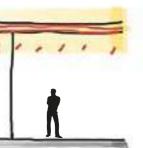
Metal mounting block with sets screw for down lighting applications. Install inside the fixture profile to stop the fixture from sliding. Recommended to use one mounting lock per fixture and clips every 60 cm.



www.led-linear.com/adonis



Profile light line



The outer profile of the façade is easily picked up with a continuous direct view linear light. End to end connections appear as seamless on the façade.



Mounting accessories



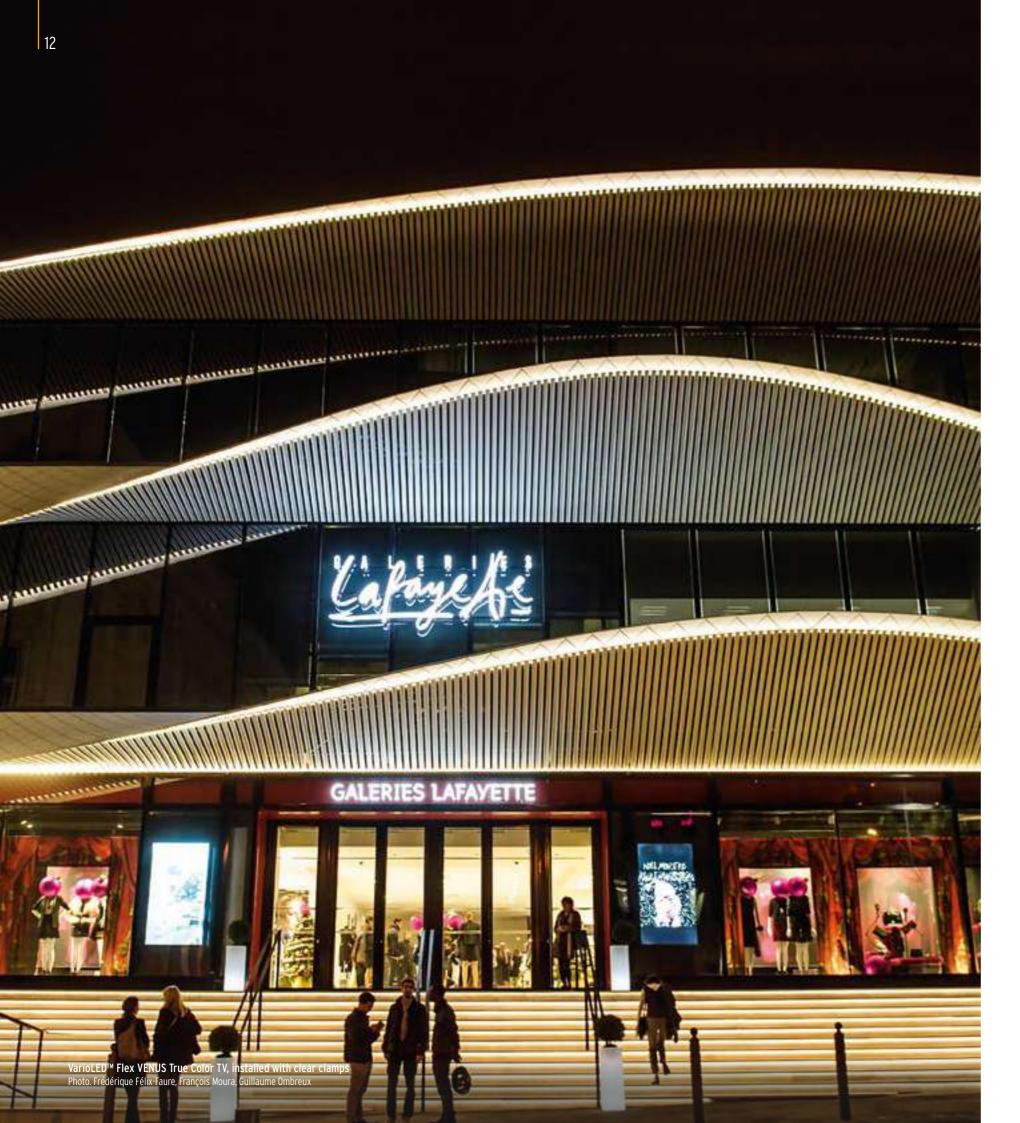
Plastic Mounting Bracket Digits in order code: PCL

Description

White plastic surface mounting clip. Recommended to use every 50 cm. Cannot be used together with the aluminum mounting profile.



www.led-linear.com/xoolum

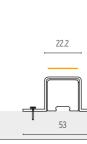


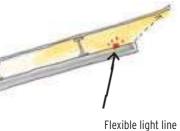
Direct view APPLICATION IDEA

4th method of using façade lighting — to follow special arches and non-standard profiles of façade elements



Surface-mounted





Special shaped profiles of façade elements are illuminated with dot free fixtures that can directly be mounted onto the architectural surface.



Mounting accessories



VTC Surface Holding Clamp Clear Art.-#: 13000279

Description PVC casting clamp for surface mount.



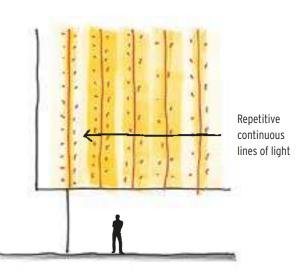
www.led-linear.com/venustc

Façade lighting | LED Linear™ GmbH

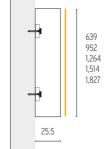


Direct view APPLICATION IDEA

5th method of using façade lighting — as a repetitive façade lighting element



Surface-mounted, fixed



Several repetitive lines of light create a strong façade lighting impression.



Mounting accessories



Sliding block C010 Set, incl. Screw Art.-#: 13000287



VarioClip 010 Set Art.-#: 13000202

Description

Metal mounting block with set screw for vertical applications. Install inside the fixture profile to stop the fixture from sliding. Recommended to use one mounting lock per fixture and clips every 60 cm.



www.led-linear.com/adonis

Direct view TECHNICAL DATA

General data

	VarioLED™ Flex VENUS TC IP67	ADONIS IP67	XOOLUM™ IP67
Ingress protection	IP67	IP67	IP67
CRI	up to 95	up to 96	up to 96
Efficiency	up to 68 lm/W	up to 73 lm/W	up to 77 Im/W
Cross section	18 mm x 17 mm	20.5 mm x 25.5 mm	25.4 mm x 31 mm

Color temperature (Kelvin)

VarioLED™ Flex VENUS TC IP67		2,100	Kelvin	4,200						
ADONIS IP67		1,900	Kelvin	4,500						
XOOLUM™ IP67		2	400		Kelvin					
	ŧ	l I	l l	l. I		l.	l I	I.		Í
	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000 K

Luminous flux (Lumens per meter)

VarioLED™ Flex VENUS TC IP67		270 - 1,010 lm/m											
ADONIS IP67		240		lm/m		2,620							
XOOLUM™ IP67		250	Im/m	1,870			1			I			
	0	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000 In		

Length (mm)

VarioLED™ Flex VENUS TC TV IP67	354	in 70 mm ind	crements	3,924			
VarioLED™ Flex VENUS TC 3D IP67	494	mm 1,964	in 70 mm increment	S			
ADONIS IP67		mm Star	ndard lengths: 639, 9	952, 1,264, 1,514, 1,8	327		
XOOLUM™ IP67	198	in 62,5 mm inc	rements	4,010			
	I I 0 500 1,0	l l 000 2,000) 3,000	ا 4,000	ا 5,000	7 ,500	10,000 m



Photo: Lane Barder

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Indirect view PRODUCT OVERVIEW

XOOLINE™ IP67

XOOLINE[™] IP67 offers a tremendous modularity and ease of installation. Extruded and anodized aluminum housing profile in standard or custom length with IP67 connectors on the side in combination with 8 types of optics allows a variety of façade and external applications.

Translucent screwed end caps for a perfect fixture to fixture light overlap. Thanks to its smart order code no extra mounting accessories are needed since it is already included.

Replacement product: ADONIS IP67

IP67 rated. Comes with IP67 connectors as standard.

Suitable applications: Projected indirect light onto façade elements.

HYDRALUX™ White IP67

HYDRALUX[™] offers the best in class flexible lengths in outdoor lighting and will be delivered as a whole reel. Based on incremental step measurement (62.5 mm or 125 mm) this flexible and light intensive LED line can be shortened on site to the desired length and then simply be installed by using the IP67 rated connectors.

Even with an optimized field cuttable technology, HYDRALUXTM can offer very high lumen outputs - up to 1,650 lm/m. It is water and UV protected. The small cross section of 12.5 mm x 3.5 mm (W x H) allows it to be utilized in almost any condition.

IP67 rated.

Suitable applications: Façade coves and groove lines, canopies.

VarioLED™ Flex HYDRA White IP67

VarioLED[™] Flex HYDRA is the smallest solution with pre soldered male and female IP67 connectors. It comes with a maximum product length of 7,500 mm and with a maximal run length of 10,000 mm.

It is water and UV protected. The small cross section of 12.5 mm x 3.8 mm (W x H) allows it to be utilized in almost any condition.

IP67 rated. Comes with IP67 connectors as standard.

Suitable applications: Façade coves and groove lines, canopies.

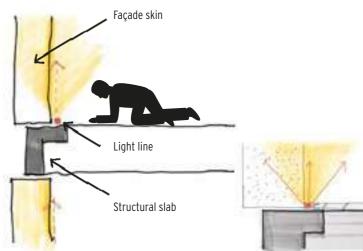




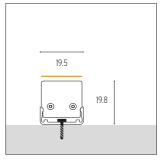




Indirect view APPLICATION IDEA



Surface-mounted



All dimensions in mm.

1st method of using façade lighting as a highlighter for shapes and materials

Even if exposed to weather elements, luminaires such as the XOOLINE™, can provide a soft light distribution to illuminate the wall materials and provide a consistent glow of the façade.

Mounting accessories



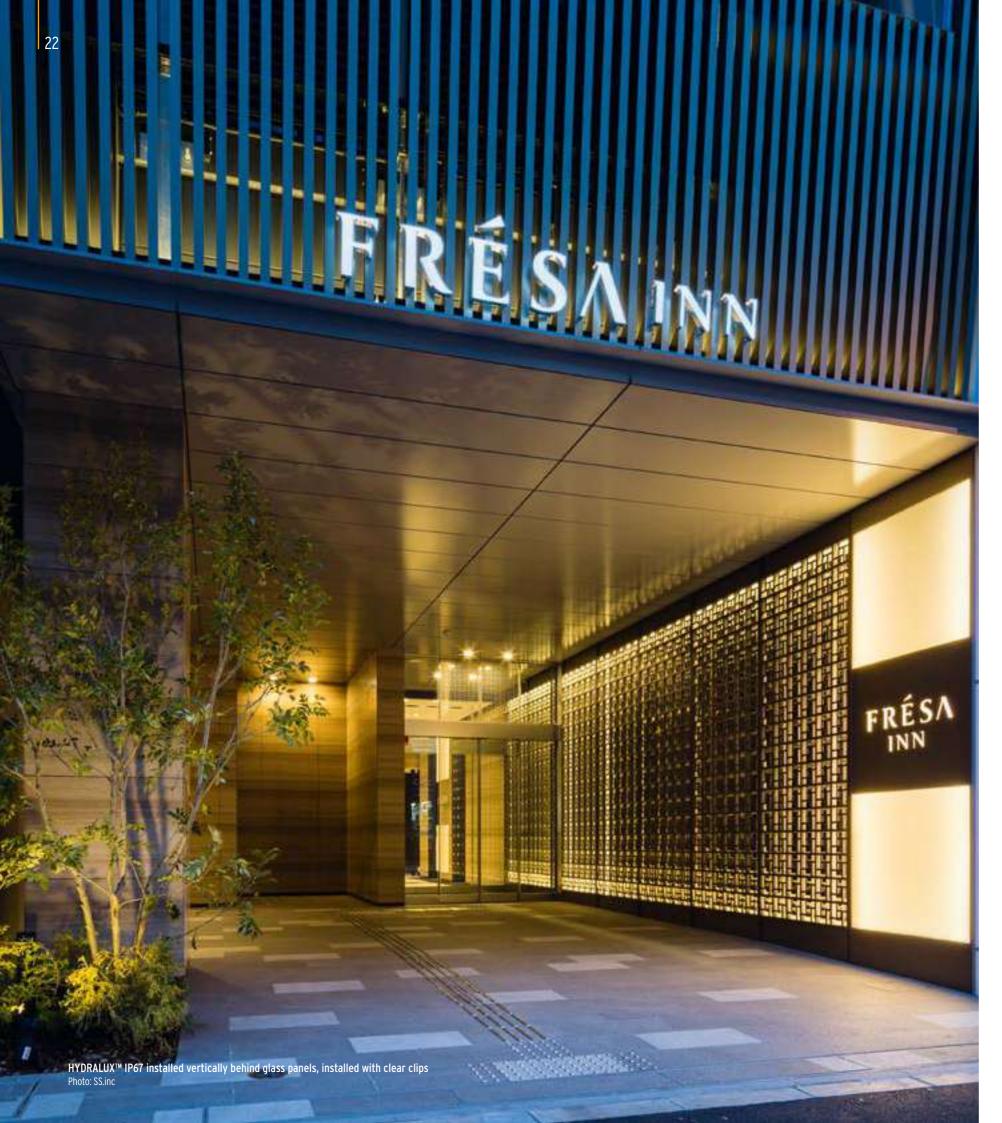
0° aluminum mounting clip in 90 mm length Digits in order code: CLO

Description

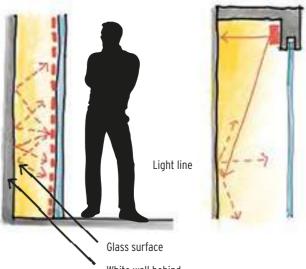
Aluminum surface mounting bracket, recommended to use every 50 cm. Available in four different angles.



www.led-linear.com/xooline

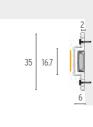


Indirect view APPLICATION IDEA



The light source must be placed behind the architectural material such as glass and illuminate the rear surface so that only the effect of indirect light is visible.

Surface-mounted, Clips



All dimensions in mm.

2nd method of using façade lighting — Iinear wash light to enhance architectural surface

White wall behind



Mounting accessories



VarioClip Flex 12.7 mm Clear (Set of 50) Art.-#: 13000115

Description

Clear plastic mounting clips. Use to mount the product on hard surfaces. Sold as set of 50 pieces.



www.led-linear.com/hydralux



VarioClip Flex 12.7 mm Clear (Set of 50) Art.-#: 13000115

Clear plastic mounting clips. Use to mount the product on hard surfaces.



www.led-linear.com/varioledflex

Indirect view TECHNICAL DATA

General data

	XOOLINE™ IP67	HYDRALUX™ IP67	VarioLED™ Flex HYDRA IP67
Ingress protection	IP67	IP67	IP67
CRI	up to 96	up to 96	up to 96
Efficiency	up to 107 lm/W	up to 110 lm/W	up to 109 lm/W
Cross section	19.5 mm x 21.9 mm	12.5 mm x 3.5 mm	12.5 mm x 3.8 mm

Color temperature (Kelvin)

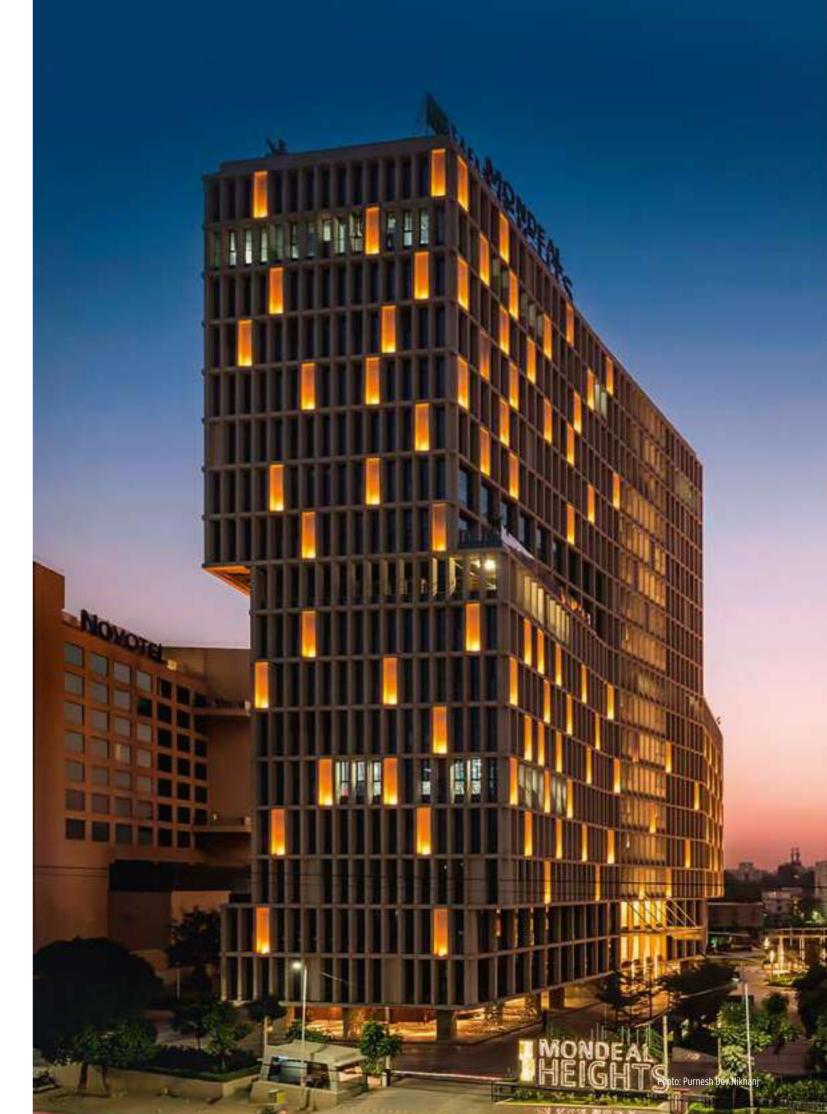
XOOLINE™ IP67			2,500			Kelvin			9,600	
HYDRALUX™ IP67			2,500			Kelvin			9,600	
VarioLED™ Flex HYDRA IP67			2,500			Kelvin			9,600	
	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000 K

Luminous flux (Lumens per meter)

XOOLINE™ IP67		290		Im/m		2,620					
HYDRALUX™ IP67		300	lm/m	1,650							
VarioLED™ Flex HYDRA IP67		300	lm/m	1,630			·				
	0	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	ا 5,000 lm,

Length (mm)

XOOLINE™		140	mm	2,005 i	n 62,5 mm	increments					
HYDRALUX™ IP67		144	in 62.5	mm/ 125 mm	ı / 250 mm	increments	depending on t	the light source	7,500		
VarioLED™ Flex HYDRA IP67		82	in 62.5	mm/ 125 mm	ı / 250 mm	increments	depending on	the light source	7,500		
	0	500	 1,000	2,000)	,000	ا 4,000	ا 5,000	7,5	l 500	i 10,000 m



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