

HYDRALUX



reddot award 2015
winner lighting design



DESIGN
AWARD
2015



German
Design Award
NOMINEE 2015

Small, field cuttable and perfect for coves,
contours and architectural details.



HYDRALUX
Infinite design freedom

HYDRALUX

A flexible & powerful LED light line –
field cuttable from the reel



HYDRALUX offers users a new freedom of design: depending on the step measurement (62.5 mm / 2.45" or 125 mm / 4.91") this flexible and light intensive LED line can be shortened on site to the desired length and then simply be installed by bonding or with clips.

The elegant and flexible linear luminaire with a reflective, white background profile offers up 555 lm/ft and is IP67. It is water and UV protected and two HYDRALUX can be joined without light gap.

The sophisticated concept and the small cross-section of 12.5 x 3.5 mm (W x H) / 0.49" x 0.13" (W x H) allows it to be utilized in almost any condition or location, such as in coves, contours and architectural details.



Judgment of the prestigious Red Dot jury

„The linear LED luminaire HYDRALUX offers a high practical value. It creates a distinctive ambience whilst capturing the zeitgeist with their style.“



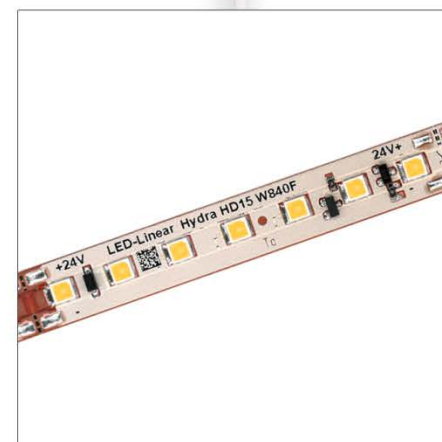
HYDRALUX

Benefits at a glance



From the roll

HYDRALUX is delivered on a roll in the length of 4 to 7.5 meters (13 to 24.5 feet).



Convincing efficiency

24V, high efficiency and high power LED tapes of the latest generation. From 644 lm/m (196 lm/ft) up to 1,821 lm/m (555 lm/ft). Consistent color through selected LED Binning (One Bin Only). High color rendering index of CRI >85 or CRI >90.

One Bin Only

Simple electrical connection

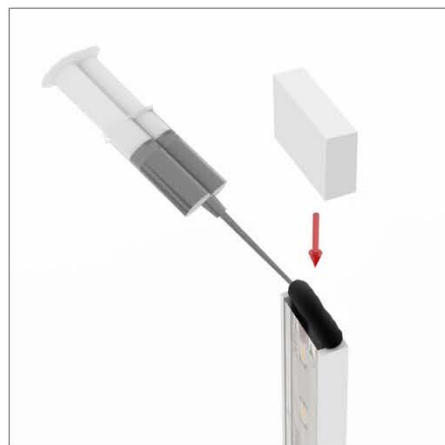
Insert the tape into the lower part of the two-part connector, then put on the upper part with the piercing contacts and push the two parts together.



Field cuttable

Unroll the tape and cut it at the desired length in the middle between the steps.





Perfect finish

With the polyurethane end cap you can protect the end of HYDRALUX against external influences.



Quick installation

The attachment of HYDRALUX can be done with the VarioClips or a double sided 3M adhesive tape. (Available as accessories)



Ready for use everywhere

Equip your luminaire for outdoor use. Secure total IP67 protection through the encapsulation of the connector in the shortest time.



Time-saving

By applying the connector on one side and attaching the end cap on the other side, the product is ready for connection.

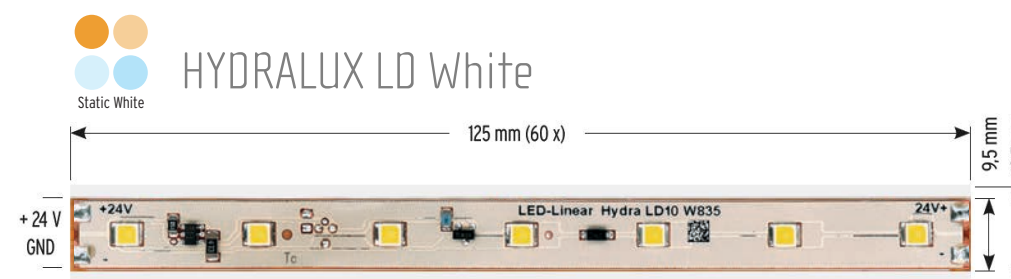
HYDRALUX

From 196 lm/ft up to 555 lm/ft

HYDRALUX is as diverse as your applications. Choose between different lumen packages, wattages, color temperatures, overall lengths or step measurements. The LD versions (125 mm / 4.91") and HD versions (62.5 mm / 2.45") differ in the steps measurements and in the LED pitch, the distance between two LEDs. Application recommendations are offered throughout.



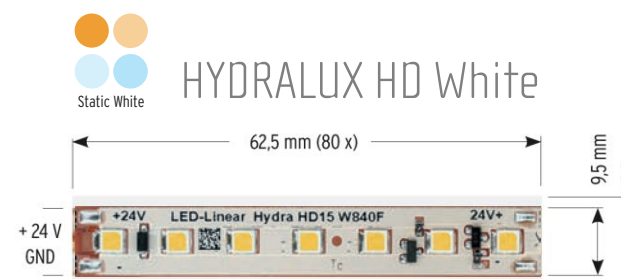
Available in the color temperatures: W820 (2,200 K), W824 (3,100 K), W827 (3,500 K), W830 (4,000 K), W835 (4,600 K), W840 (6,300 K)



	Watt/ft	Lumen/ft	Min. length (mm/in)	Max. length (m/ft)
HYDRALUX LD5 IP67	1.5	196	125 / 4.9"	7.5 / 24.6'
HYDRALUX LD10 IP67	2.9	343	125 / 4.9"	5 / 16.4'
HYDRALUX LD15 IP67	4.6	521	125 / 4.9"	4 / 13.1'



The first choice for indirect cove lighting and other applications without direct view contour lighting and accent lighting.



	Watt/ft	Lumen/ft	Min. length (mm/in)	Max. length (m/ft)
HYDRALUX HD6 IP67	1.8	262	62.5 / 2.5"	5 / 16.4'
HYDRALUX HD10 IP67	2.9	388	62.5 / 2.5"	5 / 16.4'
HYDRALUX HD15 IP67	4.7	555	62.5 / 2.5"	4 / 13.1'



The first choice for applications with direct view or low construction heights - with a homogenous light.



	Watt/ft	Lumen/ft	Min. length (mm/in)	Max. length (m/ft)
HYDRALUX RGB LD15 IP67	4.4	154	125 / 4.9"	4 / 13.1'



Atmospheric illumination and color accents for every application. Color (λd): Red (R) = 622nm; Green (G) = 532nm; Blue (B) = 466nm

T5 High Efficiency (T5 HE)
Power: Ø 7.6 W/ft
Lumen power: Ø 684 lm/ft
Efficiency: Ø 90 lm/W
Lifetime: Ø 20,000 h

Luminaire length = 1.80' / 2.78' / 3.77' / 4.75'



Generic LED-Strip IP67
Power: 5.85 W/ft
Lumen power: 304 lm/ft
Efficiency: 52 lm/W
Lifetime: 35,000 h

Luminaire length = 2,500 mm / 5,000 mm
8.2' / 16.4'



HYDRALUX HD15
Power: 4.7 W/ft
Lumen power: 555 lm/ft
Efficiency: ~ 118 lm/W*
Lifetime: 60,000 h

24%
more
efficient than
T5 HE

300%
longer
lifetime
than
T5 HE

HYDRALUX LD10
Power: 2.92 W/ft
Lumen power: 343 lm/ft
Efficiency: ~ 117 lm/W*
Lifetime: 60,000 h

125%
more efficient
than generic
LED-Strip

71%
longer
lifetime than
generic
LED-Strip

Luminaire length =
2.46'' - 24'



* Based on W835; CRI >85

HYDRALUX

Small, freely configurable and ready for use everywhere





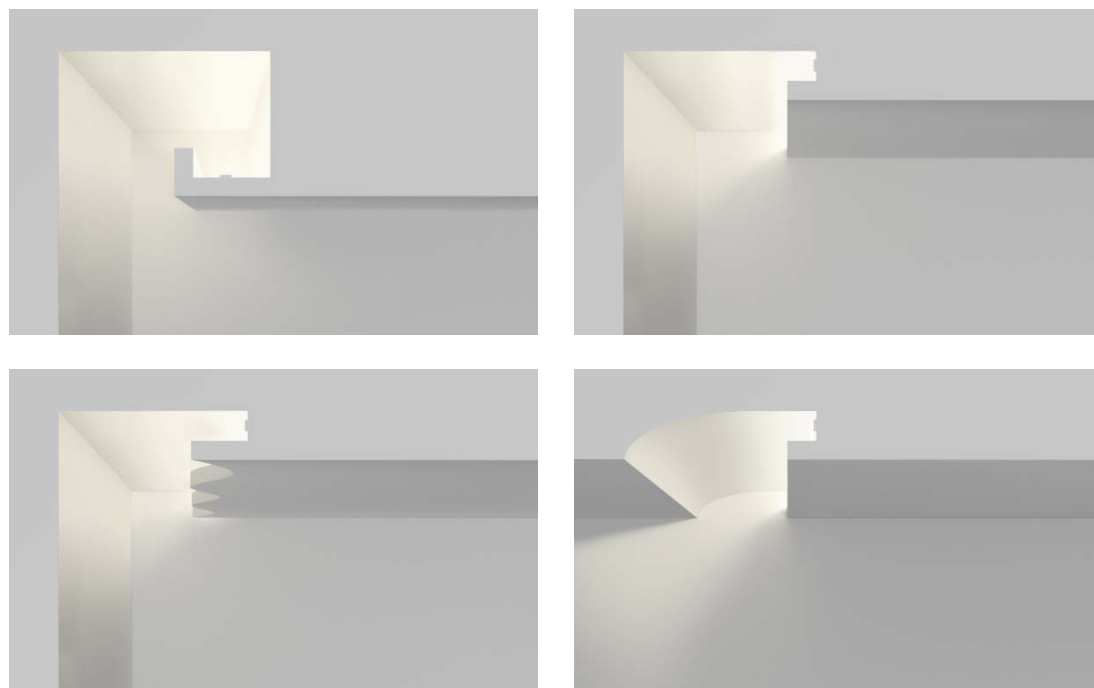
HYDRALUX

... perfect for professional cove lighting

Indirect lighting is increasingly being used in many types of applications. Professionally designed cove lighting illuminates rooms with atmospheric, diffuse light and a pleasant effect.

With HYDRALUX we go one step further and also offer the opportunity to use the cove as an instrument of general lighting for your premises. Our lighting solution is a symbiosis of homogeneous light and great color consistency (One Bin Only) inside your desired color temperature (2,000 K to 5,000 K) at levels of luminance 196 lm/ft 555 lm/ft.

The technical design of the luminaire has been evolved to be field cuttable at the construction site and in this case to ensure easy installation. The narrow dimensions 0.49" x 0.13" (W x H) allow the installation of the luminaire even in the smallest space. HYDRALUX is cuttable every 62.6 mm / 2.45" (HD) or every 125 mm / 4.91" (LD) and can be electrically connected via the connector application. This enables to adapt the luminaire length to your wishes and to optimally utilize the available space.



HYDRALUX = IP67

A solution for indoor and outdoor use

A specially developed polyurethane encapsulation protects the HYDRALUX against a wide variety of environmental influences and makes it to an absolute all-rounder in the outdoor and indoor use. Wherever protection is essential, this lighting solution shows its advantages. Through the encapsulated surface, the luminaire is, for example, easy to clean, as is necessary in refrigerated counters. Thus it meets the advanced hygiene requirements in these areas. For further fields of application, please refer to the next page.

HYDRALUX has a very high resistance in harsh climatic conditions and is resistant to salt water, chlorine, solvents and UV radiation. With encapsulated connector the whole system has IP67, without encapsulated connector it has a protection of IP40.

In the following we want to give you detailed information on general protection classes for technical luminaires.

Protection classes for technical luminaires

Solid object protection according to the first code number

- IPOX** = Unprotected against solid objects
- IP1X** = Protection against large solid objects > 50 mm (1.96")
- IP2X** = Protection against mid-sized solid objects > 12 mm (0.47")
- IP3X** = Protection against small solid objects > 2.5 mm (0.098")
- IP4X** = Protection against granular objects > 1 mm (0.039")
- IP5X** = Dust protection (ingress of dust not impossible)
- IP6X** = Dust tight (no ingress of dust)

Moisture protection according to the second code number

- IPX0** = Unprotected from moisture
- IPX1** = Protection against vertically falling drops of water
- IPX2** = Protection against diagonally falling drops of water (up to 15°)
- IPX3** = Protection against spray water
- IPX4** = Protection against water splashing from all directions
- IPX5** = Protection against water jets
- IPX6** = Protection against flooding
- IPX7** = Protection during temporary immersion
- IPX8** = Protection against submersion

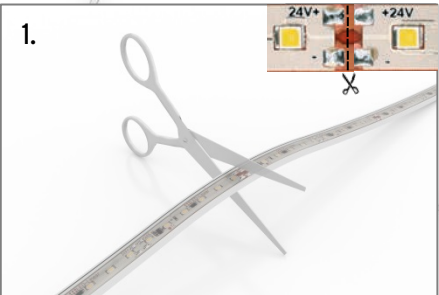


	HYDRALUX IP40 (without encapsulated connector)	HYDRALUX IP67 (with encapsulated connector)
Moist areas		
Bakeries	0	+
Damp basements	-	+
Refrigerated counters	0	+
Wet areas		
Bath / shower rooms	-	+
Swimming pools	-	0
Thermal or saline baths	-	-
Dusty areas		
Carpentry / Joinery	+	+
Paper processing	+	+
Storage for hay, straw, animal feed	+	+
Indoor applications		
Shelf lighting	+	+
Cove lighting	+	+
Museum lighting	+	+
Contour lighting	+	+
Furniture installation	+	+
Organic forms	+	+
Hotels	+	+
Restaurants	+	+
Outdoor applications		
Façade lighting	-	+
Cove lighting	-	+
Contour lighting	-	+
Organic forms	-	+

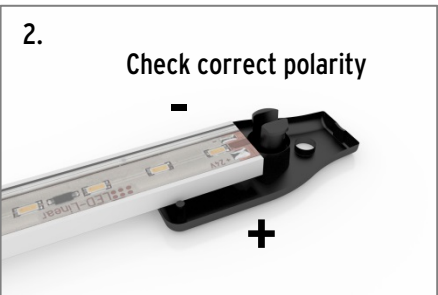
+ suitable
o limited suitable (in IP67)
- unsuitable

	Polyurethane	Connector	Clips
Acetone	-	-	+
Benzene	-	-	+
Fats			
Mineral	+	-	+
Vegetal	+	-	+
Animal	+	-	-
Silicone oil	0	-	+
Chloroform	-	-	+
Diesel fuel	+	-	-
Ethanol			
< 30%	0	+	+
> 30%	-	+	+
Ethyl acetate	-	-	+
Glycerol	+	-	+
Heating oil	0	-	+
Isopropanol	-	-	+
Caustic potash 30%	+	-	-
Cresol	-	-	+
Methanol	-	-	+
Regular gasoline	-	-	+
HCl (hydrochloric acid)			
< 20%	+	-	-
> 20%	+	-	-
Sulfuric acid			
< 50%	+	-	-
< 70%	0	-	-
> 70%	-	-	-
> 98%	-	-	-
Premium gasoline	-	-	+
Toluene	-	-	+
Trichloroethane	-	-	+
Xylene	-	-	+

+ resistant
o limited resistant
- not resistant



1. Unroll the tape and cut it at the desired length in the middle between the steps. Make sure that a minimum bending radius of 3 cm (1.18") is observed.



2. Check correct polarity. Insert the tape into the lower part of the two-part connector. The correct polarity must be strictly observed.



3. Place the upper part of the connector on the lower part of the connector.



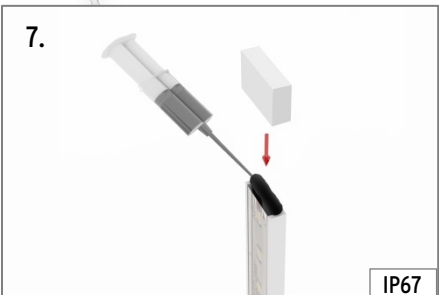
4. Now click together the upper and the lower part of the connector. Make sure that no gaps occur at the sides. The product is now ready to be connected in indoor areas.



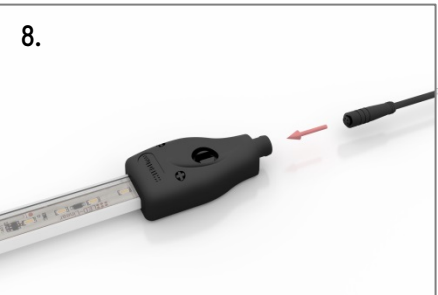
5. To achieve IP67 protection, the connector needs to be filled with a sealant, which can be filled in with a syringe through a filling hole on the underside of the connector. (Accessory Art. # 18200065)



6. The filling must be done carefully and slowly. When filling material comes out of the small hole, the connector is fully filled with sealant. The sealant has dried after 2 hours and is completely hardened after 8 hours.



7. To ensure an IP67 protection at the other end of the product, the end cap must also be sealed.



8. By applying the connector on one side and attaching the end cap on the other side, the product is ready for connection.



9. The attachment of HYDRALUX can be done with the VarioClips (Art. # 13000115). Alternatively, an double-sided adhesive tape (Art. # 18200035) can be used for attachment.

For further information, please check the "HYDRALUX assembly, accessory and safety information" which is available for download in the HYDRALUX product section on our website.

HYDRALUX - Accessories

Innovative and easy, for indoor and outdoor use

Required accessories

These accessories are generally required to connect the HYDRALUX luminaire to the power supply.

The HYDRACON Mono or RGB Male Kit allows the easy connection of a HYDRALUX luminaire with a 24V power supply. The required VarioCon Female connectors can be found on the internet under "VarioConnect" in our product section.

← Or →

The HYDRACON Mono or RGB Male Kit with VarioCon Female 0,115 m allows the easy connection of a HYDRALUX luminaire with a 24V power supply.

← or →

Two-piece, two-pole (mono) or four-pole (RGB) IP40 / IP67 connector for freely configurable HYDRALUX Flex tapes; with 2 m (6.56') long 2x0,34 mm2 IP67 feed-in cable.



- HYDRACON Mono Male Kit Art. # 15000221
- HYDRACON RGB Kit Art. # 15000222



- HYDRACON Mono Male Connect 0,115 Kit Art. # 15000192
- HYDRACON RGB Male Connect 0,115 Kit Art. # 15000194



- HYDRACON Mono 2 x 0,34 mm Kit Art. # 15000193
- HYDRACON RGB 4 x 0,25 mm Kit Art. # 15000195

Optional accessories

These accessories can be chosen freely and are used for the encapsulation of the connector and the installation of the luminaire.

Professional IP67 syringe set. Is used to fill the connector very comfortable with a two-component sealant. Please follow the installation instructions.

Hand pistol for easy handling of the HYDRACON Encapsulation Kit Pro.

HYDRALUX end cap made of polyurethane. In order to achieve an IP67 protection the end cap can filled with the sealant of the HYDRACON Encapsulation Kit Pro before the installation on the luminaire.

Mounting clip made of transparent plastic for flexible encapsulated LED strips with a width of 12.5 mm (4,92") and a maximum height of 4 mm (0.16").



- For IP67 protection: HYDRACON Encapsulation Kit Pro Art. # 18200065



- For IP67 protection: HYDRACON Encapsulation Pistol Art. # 13100004



- HYDRACON End Cap Art. # 11000116



- Mounting: VarioClip Flex 12,5 mm Clear (set of 50) Art. # 13000115
- 3M adhesive tape (10 m), (32.8') Art. # 18200035

Safety information

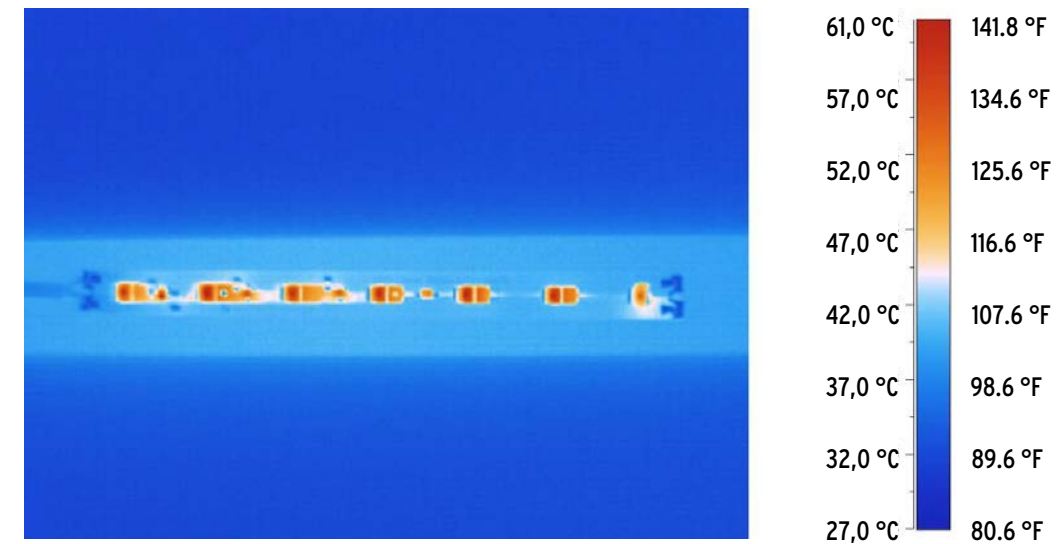
The luminaires of the brand LED Linear, are luminaires of protection class II or protection class III. This means that the protection is not based solely on basic insulation, but additional or reinforced insulation is provided or no protective conductor connection is available.

Please remember that it is absolutely necessary to break the mains voltage before beginning any installation, inspection, maintenance or cleaning of the luminaire. Installation and maintenance of the lamp shall only be carried out by trained personnel with adequate professional qualifications in accordance with the latest electrical installation and safety regulations. For the installation and operation of this luminaire, national safety regulations must be considered. The manufacturer accepts no liability for any damage caused by improper use or installation. If modifications are made to the luminaire, the person responsible for the modification, shall be considered as manufacturer. In case of malfunctions or failure of the luminaire, please contact LED Linear GmbH.

Thermal management and lifetime

The biggest enemy of an LED in the planned operation are high temperatures. These have a strong effect on the lumen output, the color consistency, the lifetime and the efficiency of the LED module. The goal of thermal management is to deliver the generated heat as quickly as possible to the environment.

Realizing this, we developed the established TJ-Away (thermal junction away) printed circuit board technology, which removes the evolving heat optimally. In the construction of HYDRALUX special attention was paid to the thermal optimization of the luminaire in order to be able to use even our most powerful LEDs. The resulting heat is emitted by TJ-away to the anodized aluminum profile, however, removed from the profile itself to the environment. As a result, overheating of the LEDs is eliminated and the optimal operation of the luminaire is guaranteed.



The specified luminous flux of the LEDs drops at a temperature change of 100 °C (212 °F) to less than one half. The cooler an LED is operated, the more efficiently it operates. Be assured that the specified LED Linear lumen currents of the individual products are measured exclusively in a thermally stable state.

The life of our HYDRALUX is 60,000 hours @ L80 B10. This means that after an operating time of 60,000 hours 80% of the original lumen stream are still available. LED semiconductor chips are subject to natural degradation, which will be described here with the index L80 and B10.



- Field cuttable from the roll
- Up to 149 lm/W lamp efficiency
- Designed for the smallest spaces
- Visually appealing
- For use in indoor and outdoor areas in coves, contours and architectural details



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