

FORCE

Advanced Technology
—SOLUTIONS—

LED Division

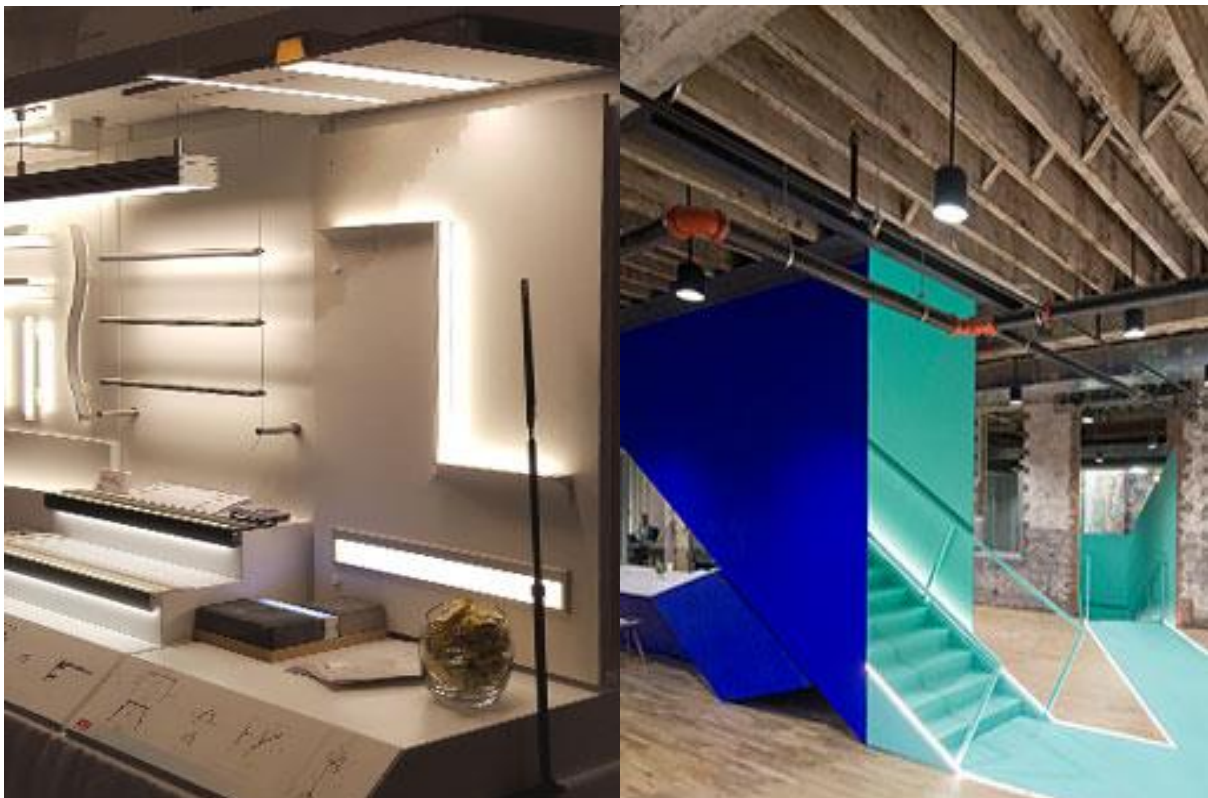
Where light meets Technology

Welcome to Force Advanced Technology Solutions. We manufacture high quality, modular component systems to integrate flexible LED lighting circuits into everyday living space in order to meet the high expectations and needs of our customers.

We offer residential and commercial LED lighting solutions that include a wide range of LED extrusions, covers, end caps, fasteners and other LED lighting accessories that enable our customers to customize and adjust to their individual needs.

Our LED Extrusions combined with the wide range of accessories used for mounting, sealing, conducting electricity and a wide range of high quality LED strips – provide an endless number of LED lighting solutions - **the only limit is your imagination.**

We aim to become a leader in the extrusion technology. The world has embraced this form of LED lighting integration and has caused an increase in demand for different designs. We are forever developing new designs and evolving our component system based on our market research and feedback from customers.



Our design minded staff are always available to help you to understand and integrate our system into your everyday life. With varying backgrounds in technical and mechanical services and the willingness to help you create whatever your imagination can come up with while using our system, we know that Force LED Division is your best choice for LED lighting integration.

Our Company's extended partnership distribution network offers our products in many countries around the world: USA, Russia, Australia, Canada, and the majority of countries throughout Europe.





Fixtures are high quality, high CRI, and UL Listed. Each fixture offers high light efficiency and effectiveness, consistent colour tone, ideal CRI index, and low power consumption.

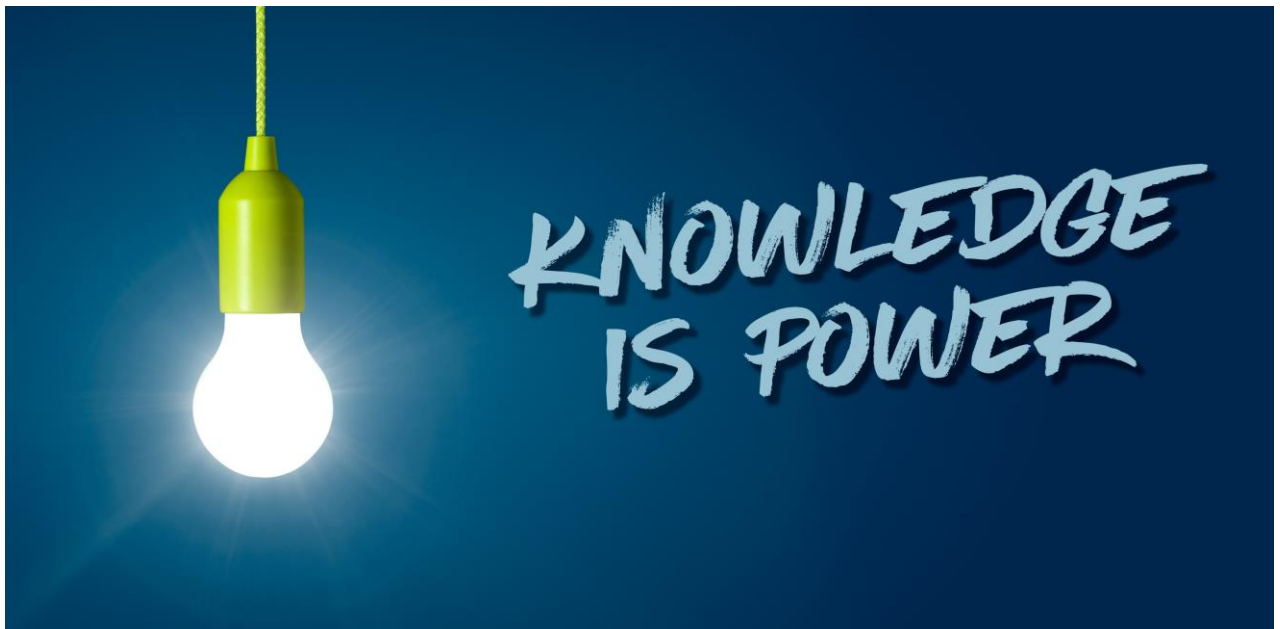
Lighting fixtures are available in four different styles: suspended, surface mounted, recessed, and stand-alone lamps

Our LED fixtures facilitate and popularize several applications that require compact lighting solutions, and are designed to be mounted indoors and outdoors.

Indoor applications: interior design, architecture, furniture, scenography advertisement, industrial design, exhibits (shop displays, exhibits) etc.

Outdoor applications: different types of pavements, sidewalk surfaces, communication routes, bike lanes, driveways, parking lots, construction, landscape architecture (gardens, road line marking, swimming pools, building facades) etc.





How LEDs are Different

LED lighting is very different from other lighting sources such as incandescent bulbs and CFLs. Key differences include the following:

Light Source: LEDs are the size of the tip of a pen, and a mix of red, green, and blue LEDs is typically used to make white light.

Direction: LEDs emit light in a specific direction, reducing the need for reflectors and diffusers that can trap light. This feature makes LEDs more efficient for many uses such as recessed downlights and task lighting. With other types of lighting, the light must be reflected to the desired direction and more than half of the light may never leave the fixture.

Heat: LEDs emit very little heat. In comparison, incandescent bulbs release 90% of their energy as heat and CFLs release approx. 80% of their energy as heat.

A [light-emitting diode](#), or LED, is a type of solid-state lighting that uses a semiconductor to convert electricity into light. Today's LED bulbs can be eight times more energy efficient than conventional incandescent lights and cut energy use by more than 80 percent.

Good-quality LED bulbs can have a useful life of 50,000 hours or more -- meaning they can last more than 25 times longer than traditional light bulbs. That is a life of more than four years if run 24 hours a day, seven days a week.

From traffic lights and vehicle brake lights to TVs and display cases, LEDs are used in a wide range of applications because of their unique characteristics, which include compact size, ease of maintenance, resistance to breakage, and the ability to focus the light in a single direction instead of having it go every which way.

By 2030, it is estimated that LEDs will account for 75 percent of all lighting sales.

LEDs contain no mercury, and a recent [Energy Department study](#) determined that LEDs have a much smaller environmental impact than incandescent bulbs. They also have an edge over compact fluorescent lights (CFLs) that's expected to grow over the next number of years as LED technology continues its steady improvement.



No UV Emissions: LEDs produce no UV radiation and very little heat LED illumination generates small amount of infrared light as well as close to 0% UV emissions. Due to this, LED lighting is very suitable not only for materials and goods that are sensitive to heat because of some radiated heat emission, but also for UV sensitive illumination such as in art galleries or museums.

LED is also free of any toxic chemicals. The majority of conventional fluorescent light bulbs contain some materials like mercury, which can be hazardous for the environment. LED lights do not have toxic materials and are a hundred percent recyclable. This can help you reduce your carbon footprint, which can be a huge factor to have a greener environment. Over the course of its lifespan, one LED will prevent approximately a half ton of greenhouse gas emissions from entering the atmosphere



LEDs have taken over the market of lighting technology by storm. But, this is for good reasons. It is because LEDs are much more energy efficient, cost-saving, and environmentally-friendly compared to other traditional lighting technology. Energy saving: On average lighting accounts for 25% of electricity use in the average property/establishment. LEDs can decrease that amount to 5%, which can result in huge savings for your energy bill. Today, LED is considered as the most energy efficient option when it comes to lighting and illumination. Instant On: LEDs reach their full brightness immediately unlike fluorescent and CFL products.

Intelligent Lighting Solutions for Commercial Buildings

The main reason why you should choose LED light is that it is energy efficient. With the increasing costs of today's electricity, this is becoming more relevant. For instance, up to 40% of a city's electricity costs are spent on street lighting only.

Durable Quality: LEDs are very durable and are only built with robust components, which are extremely rugged and may withstand even the toughest conditions. Also, since LED are resistant to vibrations, shock or external impacts, they can be a great lighting system especially if you need lighting that can withstand the harshest of weather conditions. That is the reason why so many people are converting to using LED lighting.

Design Flexibility: LEDs are made in various shapes to provide efficient illumination. Some LED's can also be dimmed to have a dynamic control on the color, distribution, and strength of light. LED's that are well designed can achieve great lighting effects, not only for one's eyes, but also for the mind and mood required.

Operational in Very Hot or Cold Temperatures

LEDs are perfect for operation under extreme low and cold outdoor temperature settings. With fluorescent lamps, having a low temperature can cause failure of its operation. LEDs can operate no matter where you are or what season of the year is. Another good thing about LED's is that they don't consume high amount of power. Thus, they are not just long lasting, but also can allow you to save money from paying your monthly electricity bill. You have to take note the lifespan of your lighting technology can also make a difference. Therefore, if you don't want to suffer from paying a huge amount of money from using typical lighting technology, then it is time for you to change your option.



SURFACE MOUNT EXTRUSIONS



F7696



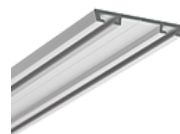
F4023



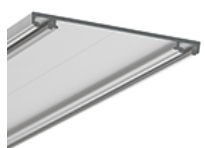
F1888



F6367



F6639



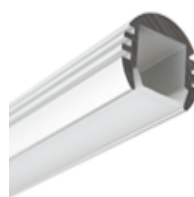
F4508



F4370



F7696



F3777



F5390



F5391



F18015



F4507



F4508



F468+48



F4507



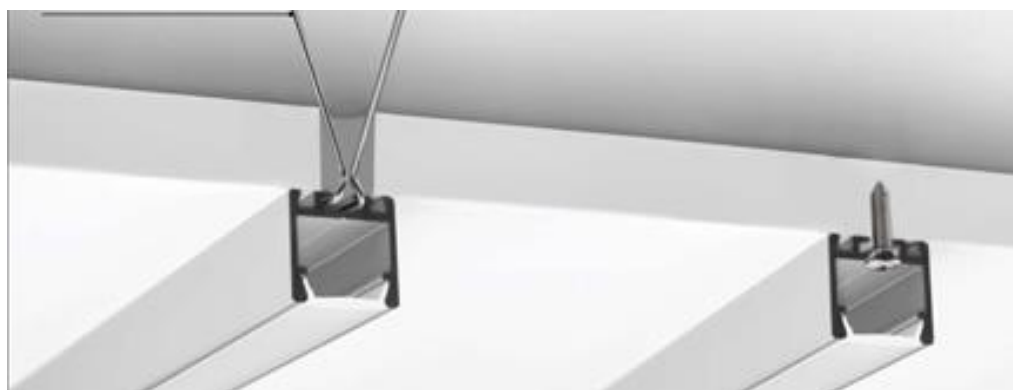
F4369



F4476



F4370



EXTRUSION WITH SPACE TO CONCEAL POWER SUPPLIES



F18013



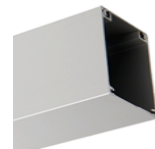
F18012



F18032



F18011



F00640



F18031



F18030



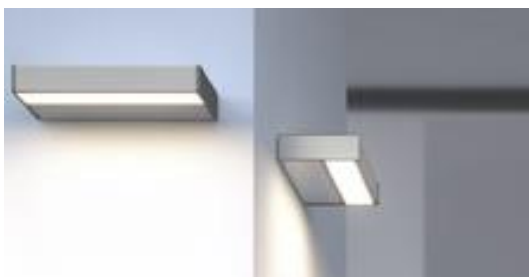
F18014



F00641



F7545



This Profiles are ideal for wall and ceiling mounting while allowing you to hide away electronic equipment and to achieve many design applications.

ARCHITECTURAL EXTRUSION, LINE OF LIGHT



F18019



F6638



F4574



F5551



F6454



F4574



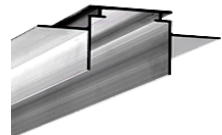
F6164



F5552



F5553



F5555A&B

APPLICATIONS



NOTE! The mounting track fitted in a wall, ceiling, etc. must maintain a straight line. Excessive bending of the mounting track to the curvature of the surface in which it is fitted will prevent the mounting of the fixture.

HIGH OUTPUT ARCHITECTURAL EXTRUSION, LINE OF LIGHT



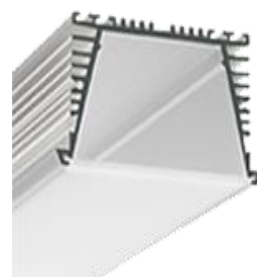
F18029



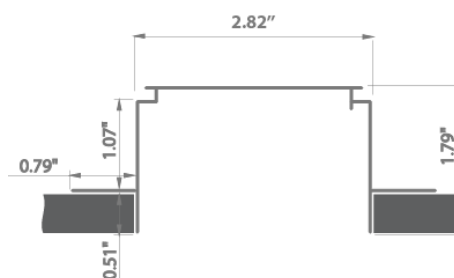
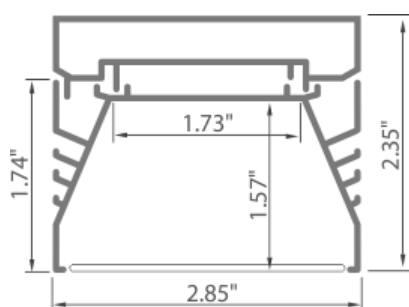
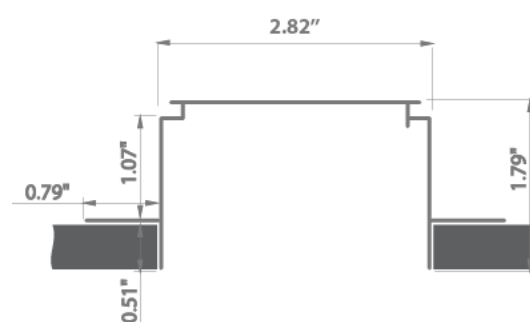
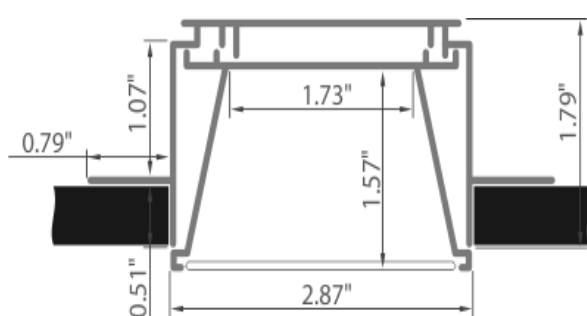
F6593



F18022



F5595



RECESSED EXTRUSION



F18019



F6144



F3776



F4477



F7696



F4369



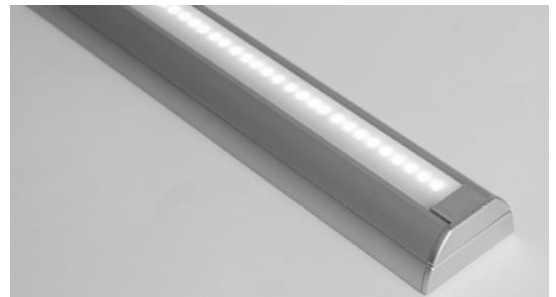
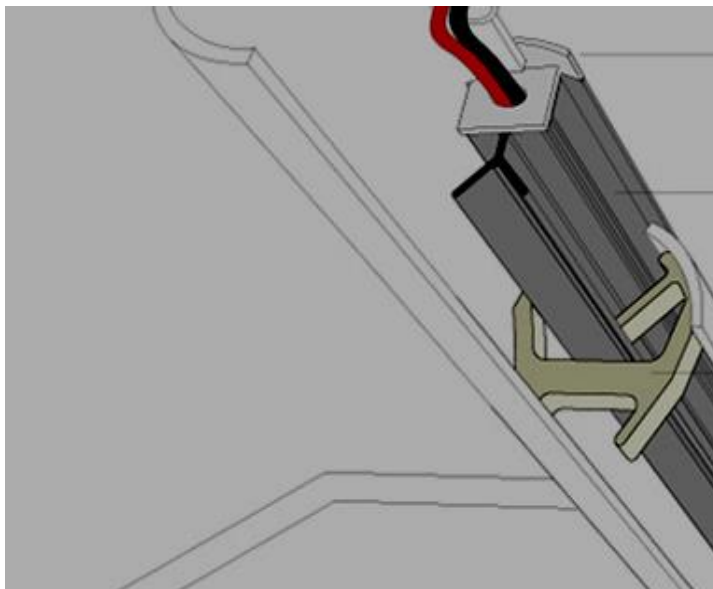
F3775



F5392



F4370



*Housing for flexible or hard LED strips that are 8-12.8mm wide (0.50")

*Extrusion acts as the connector between the light source and the application area and provides a Stylish and finished look

*Used as interior lighting, corner mount extrusion: store window exhibits, 90 degree corners (walls, furniture)

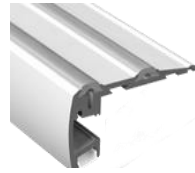
EXTRUSION FOR STAIRS & FLOOR APPLICATIONS



F18018



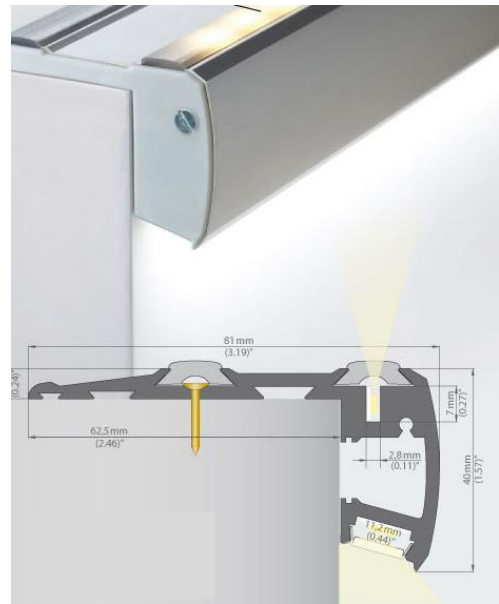
F3579



F4845



F1889



- Stair housing for flexible or hard LED strips: accommodates LEDs with the beam of light directed to the side, so called "side view" of the tape width up to 7 mm (0.28") and standard LED tape or strips that are 8 - 10 mm (0.39")
- Stair illumination and in particular as a discreet lighting in cinemas, shops, nightclubs and restaurants
- Eliminates obstacles related to multiple LED light strips mounting
- Maximizes the applications and uses available for LED light strips

EXTRUSION FOR ASSEMBLING HIGH LIGHT OUTPUT LED FIXTURES



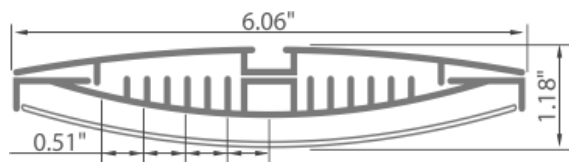
F45769



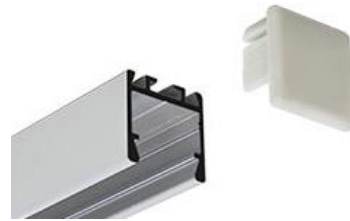
F4570

The extrusion with LED light source, is mostly used to create light illuminations inside rooms. With the possibility of installing a few strips inside the extrusion it can be used as a primary energy-efficient light source.

Due to its structure, and when assembled with other components, it is the basis for the design of various types of light fixtures. The extrusion is available in a version dedicated for direct wall - ceiling mounting and as an element enabling the assembly of a hanging fixture.



SURFACE MOUNT EXTRUSIONS APPLICATIONS



Housing for flexible or hard LED strips that are 24mm wide (0.94")

Eliminates obstacles related to LED light strip mounting

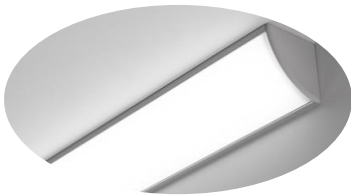
Extrusion acts as the connector between the light source and the application area and provides a stylish and finished look

Maximizes the applications and uses available for LED light strips

Lighting or illumination of certain areas (stream of light may vary depending on the power of applied LEDs)

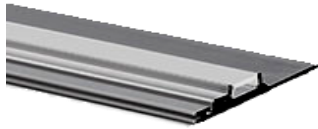
Extrusion can be used as a primary energy-efficient light source (due to the possibility of installing two strips inside)

Indoor and outdoor applications





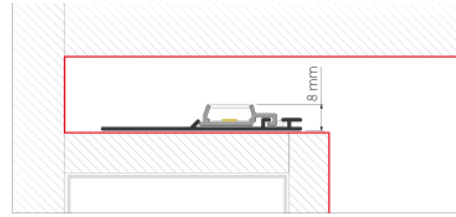
EXTRUSIONS FOR LIGHTING OF NICHE



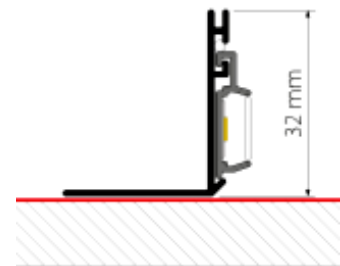
F18028



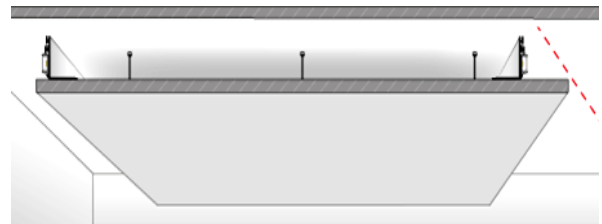
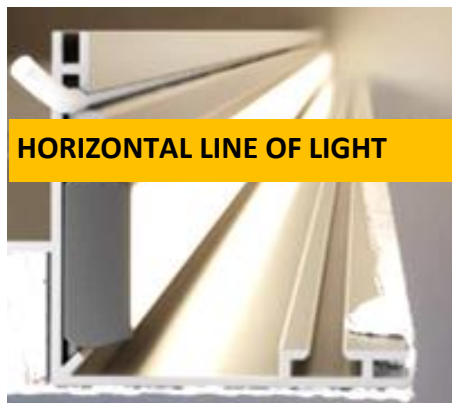
F18027



F18027 is a set of two extrusions designed for recess illumination purposes. The complete set enables the perpendicular direction of light to the wall. The strip is angle-bracket-shaped. The horizontal edge is for mounting and the vertical edge serves as a fixing element for extrusion directing its light perpendicularly to the wall.



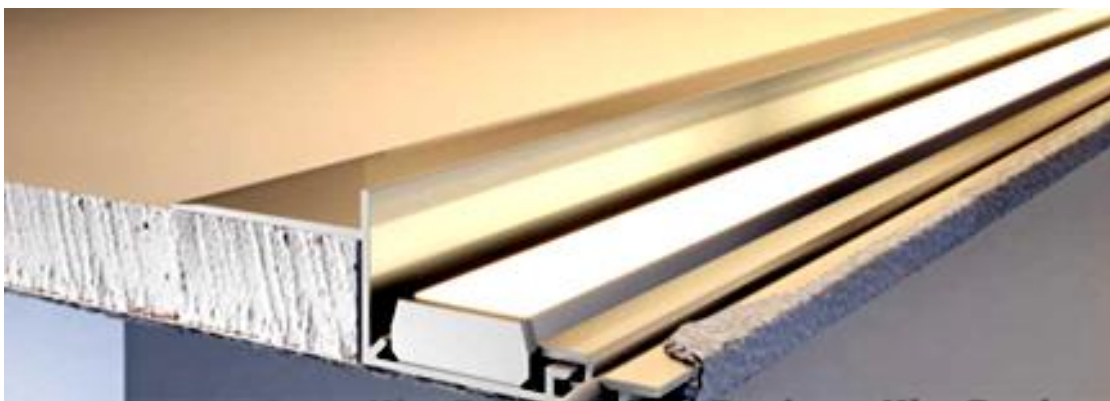
F18028 is a set of two profiles designed for recessed illumination purposes. The complete set enables the parallel direction of light to the wall. The strip is flat and drywall mounted whose light faces up.



F18029

F18029 is a cove lighting system. This extrusion enables the parallel or perpendicular direction of light to the wall. The extrusion can be fixed in the mounting base in either a parallel or perpendicular fashion.

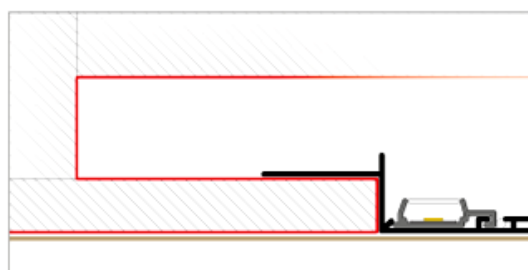




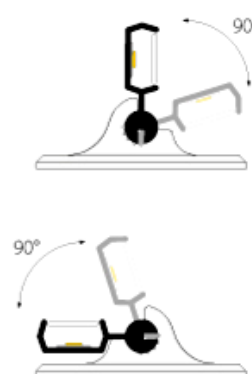
F18026 extrusion is designed for recess illumination purposes. This extrusion enables the parallel direction of light to the ceiling facing up. The lower edge is an extension of the recess and forms a thin aesthetic edge.



F18026

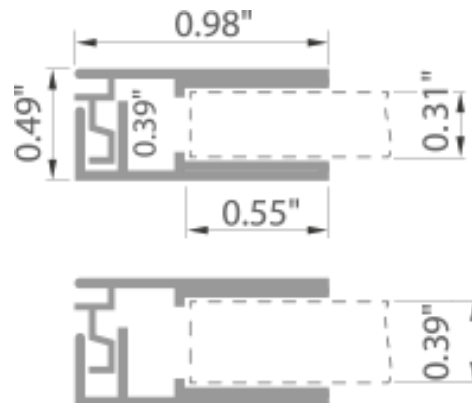
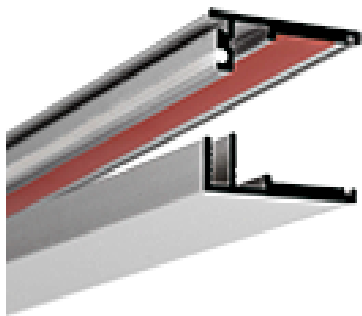


F7176



F7176 is designed to illuminate niches and slots in suspended ceilings and walls, offering an option of smooth control of lighting beam direction. A major advantage of this system is the installation in locations that are hard to access.

EXTRUSION FOR EDGE LIGHTING GLASS, ACRYLIC



F18016 extrusions are not construction extrusions!

They are designated exclusively to illuminate glass or acrylic. Therefore, assembly, suspension, or other technical activities related to the panels should be performed using standard elements.

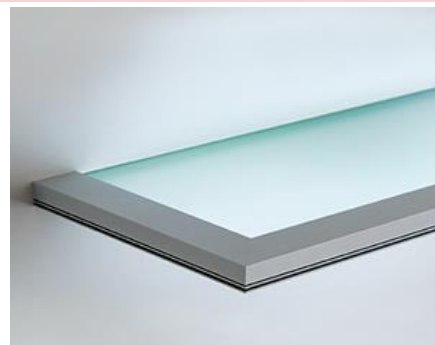
F18016 extrusion is dedicated to illuminate the edge of glass or acrylic, thickness of 8mm to 10mm. The advantages of the extrusion are:

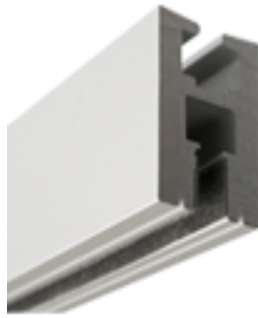
Ability to adjust to the thickness of glass/acrylic

Easy mounting of LED Tape and a solid, strong grip of the edge of glass/acrylic.

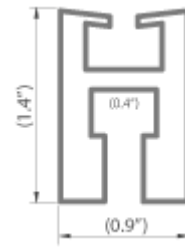
Complete F18016 extrusion consists of 2 extrusions: F18016 (1) dedicated for mounting LED tape up to 10mm wide and F18016 (2) extrusion – the closing extrusion.

Additionally the extrusions are equipped with mounting adhesive tape and a silicone strip that assures a solid connection of the two extrusions. F18016 end caps consist of two overlapping parts that are assembled individually. This type of end cap construction enables to hide the gap that is created when thicker glass is assembled into the extrusion. End caps can be mounted before or after the glass is inserted into the extrusion. This activity needs to be performed with care to avoid damaging the delicate grips of the end caps. F18016 (1) needs to be inserted into F18016 (2) starting from one of the ends (not putting them in parallel and inserting the whole length).





F1890



END CAP

Applications:

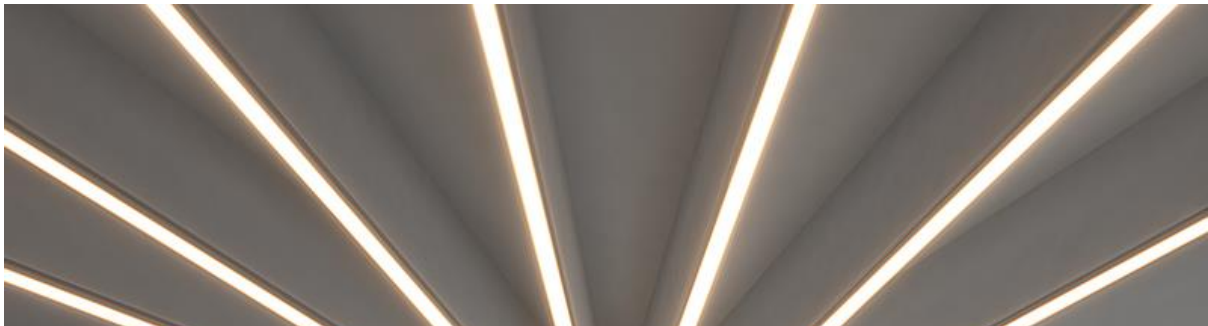
For flexible or hard LED strips

To illuminate the edge of glass or other material, 6mm thick

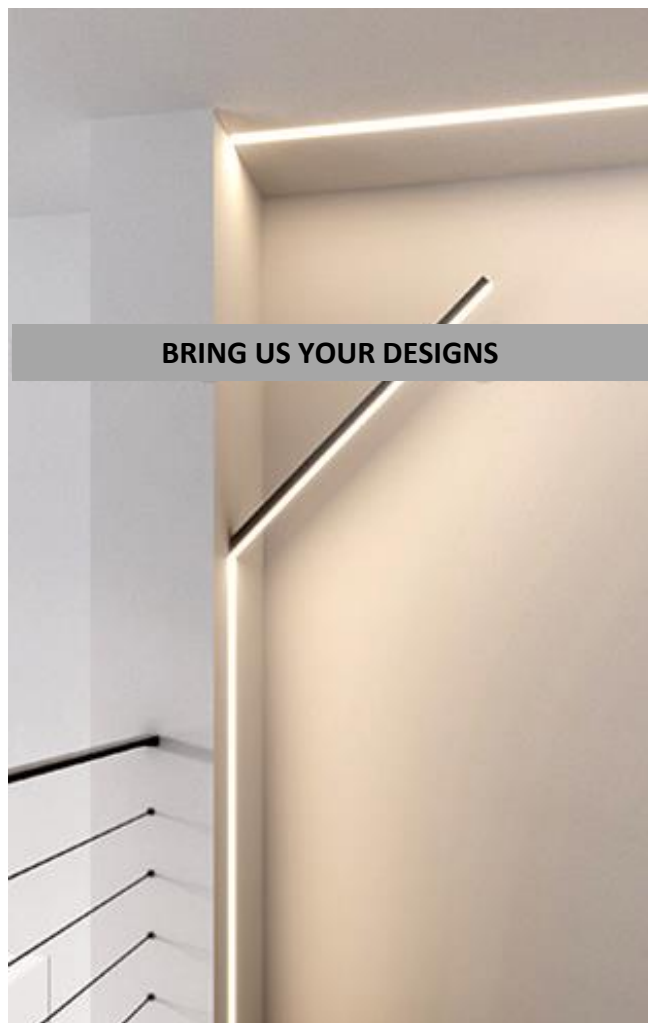
To be mounted to walls, ceilings etc.

Illuminating: signboards, information signs, exhibitions stands





BRING US YOUR IMAGINATION



BRING US YOUR DESIGNS

FASTENER SETS



Mounting Set used for mounting extrusions.
It also serves to carry current of 12V and 24V.
Length of the steel rod: 500mm (19.7")
Use on: wood panels, MDF, sheet metal, glass



WIRE FASTENERS

LIGHT FIXTURE SUSPENSION ELEMENT (steel rod) CONDUCTIVE



DP FASTENERS



FASTENERS



Fasteners are mounted directly to the profile with a countersunk screw.
Internal electricity conductive fasteners are used for the transfer of power voltage of 12V and 24 V. One electricity pole is powered by one fastener.
In this case, electricity of one pole flows along the arm.
The cable connecting the pole of the LED strip with the arm is out-of-sight.

MOUNTING SPRINGS



F42731



F00800



F00638



F00841



MOUNTING BRACKETS



APPLICATIONS

- to mount profiles to desired surfaces
- to connect profiles into one integrated fixture that creates straight line



APPLICATIONS

- to mount profiles to desired views
- to insert profiles into handrails

EXTRUSION COVERS FROSTED



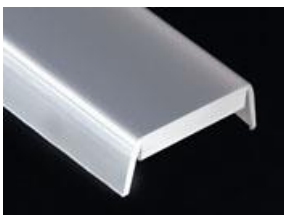
Light transmission: 70% APPROX

It has very good light dispersion.



You can attain a line of light without visible dots

Cover can withstand high temperatures 120C/ 248F



Material: CERTIFIED POLYCARBONATE



DOUBLE-SIDED UV PROTECTION (VERY GOOD RESISTANCE TO WEATHERING)

VERY GOOD MECHANICAL RESISTANCE.

10-YEAR WARRANTY ON THE OPTICAL PROPERTIES

10-YEAR WARRANTY ON MECHANICAL PROPERTIES

GOOD CLASS OF REFRACTORY – RESISTANCE

EXTRUSION COVERS CLEAR



It has a very high light transmission rate.



It is ideally suited to build LED luminaries which are exposed to vibrations.



Material: CERTIFIED POLYCARBONATE



**DOUBLE-SIDED UV PROTECTION (VERY GOOD RESISTANCE TO WEATHERING)
VERY GOOD MECHANICAL RESISTANCE.
10-YEAR WARRANTY ON THE OPTICAL PROPERTIES
10-YEAR WARRANTY ON MECHANICAL PROPERTIES
GOOD CLASS OF REFRACTORY – RESISTANCE**

EXTRUSION END CAPS

End caps provided in pairs and /or left &right hand sets

Material : Plastic. Some end caps are available in metallic.



LED STRIPS 12 V



**Side Emitting IP65 UL
Listed Flexible LED
Strip 4.8Watt/1m**

Power Consumption :	4.8 Watt/Mtr
LED Quantity :	60 LEDs/ Mtr
DC Power :	12 volt
Lumen Output :	320lm/ Mtr
Colour Temp :	3000 Kelvin
CRI :	90+
Beam Angle :	130*



**IP65 UL Listed Flexible LED
Strip 4.8Watt/1m**

Power Consumption :	4.8 Watt/Mtr
LED Quantity :	60 LEDs/ Mtr
DC Power :	12 volt
Lumen Output :	340lm/360lm/390lm/420lm
Colour Temp :	2700/3000/3500/4000 Kelvin
CRI :	90+
Beam Angle :	140*



**IP65 UL Listed Flexible LED
Strip 9.6Watt/1m
GEL Coated**

Power Consumption :	9.6 Watt/Mtr
LED Quantity :	120 LEDs/ Mtr
DC Power :	12 volt
Lumen Output :	720lm/850lm/910lm/960lm
Colour Temp :	2700/3000/3500/4000 Kelvin
CRI :	90+
Beam Angle :	140*



IP65 UL Listed Flexible LED
Strip 9.6Watt/1m

Power Consumption :	9.6 Watt/Mtr
LED Quantity :	120 LEDs/ Mtr
DC Power :	12 volt
Lumen Output :	720lm/850lm/910lm/960lm
Colour Temp :	2700/3000/3500/4000 Kelvin
CRI :	90+
Beam Angle :	140*



IP65 UL Listed Flexible LED
Strip 14.4Watt/1m

Power Consumption :	14.4 Watt/Mtr
LED Quantity :	120 LEDs/ Mtr
DC Power :	12 volt
Lumen Output :	1200lm/1200lm/1320lm/1440lm
Colour Temp :	2700/3000/3500/4000 Kelvin
CRI :	90+
Beam Angle :	140*

RGB LED STRIPS 12 V



RGB Flexible LED Strip
14.4Watt/1m
IP 20

Power Consumption :	14.4 Watt/Mtr
LED Quantity :	60 LEDs/ Mtr
DC Power :	12 volt
Lumen Output :	RED 40lm/GREEN 173lm/BLUE 30lm RGB 243lm
Beam Angle :	100*

IP65 UL LISTED WATERPROOF LED STRIPS 24V



IP65 UL Listed Flexible LED
Strip 4.8 Watt/1m

Power Consumption	:	4.8 Watt/Mtr
LED Quantity	:	60 LEDs/ Mtr
DC Power	:	24 volt
Lumen Output	:	300lm/320lm/345lm/370lm
Colour Temp	:	2700/3000/3500/4000 Kelvin
CRI	:	90+
Beam Angle	:	140*



IP65 UL Listed Flexible LED
Strip 9.6 Watt/1m

Power Consumption	:	9.6 Watt/Mtr
LED Quantity	:	120 LEDs/ Mtr
DC Power	:	24 volt
Lumen Output	:	910lm
Colour Temp	:	3500 Kelvin
CRI	:	90+
Beam Angle	:	140*



IP65 UL Listed Flexible LED
Strip 9.6 Watt/1m

Power Consumption	:	9.6 Watt/Mtr
LED Quantity	:	120 LEDs/ Mtr
DC Power	:	24 volt
Lumen Output	:	720lm/850lm/910lm/960lm
Colour Temp	:	2700/3000/3500/4000 Kelvin
CRI	:	90+
Beam Angle	:	140*

-22F TO 122F
Op Temp

24V DC
4



**IP65 UL Listed Flexible LED
Strip 14.4 Watt/1m**

Power Consumption :	14.4 Watt/Mtr
LED Quantity :	120 LEDs/ Mtr
DC Power :	24 volt
Lumen Output :	1200lm/1200lm/1320lm/1440lm
Colour Temp :	2700/3000/3500/4000 Kelvin
CRI :	90+
Beam Angle :	140*

RGB LED STRIPS 24V



**RGB Flexible LED Strip
14.4Watt/1m
IP 20**

Power Consumption :	14.4 Watt/Mtr
LED Quantity :	60 LEDs/ Mtr
DC Power :	24 volt
Lumen Output :	RED 40lm/GREEN 173lm/BLUE 30lm RGB 243lm
Beam Angle :	100*

HIGH DENSITY IP65 UL LISTED LED STRIPS 24V



**IP65 UL Listed Flexible LED
Strip 18.2 Watt/1m**

Power Consumption :	18.2 Watt/Mtr
LED Quantity :	266 LEDs/ Mtr
DC Power :	24 volt
Lumen Output :	1294lm/1329lm/1400lm/1444lm
Colour Temp :	2700/3000/3500/4000 Kelvin
CRI :	90+
Beam Angle :	120*

LP SERIES LED DRIVERS (NON-DIMMABLE) 12V &24V

LP* series is an AC/DC LED driver featuring the dual modes constant voltage and constant current output. LP* series operates from 90~305 VAC and offers model with different rated voltage ranging between 12v to 54V. Thanks to the high efficiency up-to 90% with the fanless design, the entire series is able to operate from -40°C ~ $+80^{\circ}\text{C}$ case temperature under free air convection. The entire series is rated with IP67 ingress protection level and is suitable work for a variety of applications in dry, damp or wet locations

Manufacturer : Meanwell



Wattage:

18Watt to 150Watt

Features:

- Slim plastic case with IP67 level
- Economical design
- Withstand 300VAC surge input for 5 seconds (LPV/C-20/35/60/100)
- -30°C to $+70^{\circ}\text{C}$ wide operation range
- Suitable for economical LED lighting and moving sign applications
- Typical Lifetime > 50000 hours

PWM DIMMABLE POWER SUPPLIES 12V & 24V

Manufacturer : Meanwell



PWM-Series is a waterproof constant voltage output LED power supply series. Differentiating from general DC output supplies, PWM Series transmits PWM style output, adapting to driving all kinds of LED strips that the colour temperature can be maintained and the brightness homogeneity can be assured. Adopting a universal input range between 90VAC and 305VAC and incorporating the built-in PFC function, this series is also built with a 3 in 1 dimming function (0~10Vdc, PWM signal or resistance) that simplifies the brightness adjustment for system designers so as to achieve light reduction and energy conservation.

Providing a high efficiency of up to 90.5% and a no load consumption below 0.5W, PWM series can satisfy the energy saving demand for the generation LED lighting. The class II design and the double insulation weather resistant cable make it convenient for users to flexibly install on various types of lighting systems. The enclosure design is 94V-0 flame retardant plastic casing. The interior is fully potted with silicone that enhances the heat dissipation and allows PWM series to meet the anti-vibration demand up to 5G. It also conforms to IP67 level, enabling PWM to be used in a highly dusty and highly humid harsh environment. The entire series can operate in temperatures between -40*c to +70*C and comply with the relevant global lighting safety certification.

Max Load/ Watt	40 Watt to 120 Watt
Input Voltage	90 - 305V
Output Voltage	12V
Dimensions L*W*H	1.97 x 2.09 x 1.38 40W & 60W
	6.73 X 2.49 X 1.48 90W
	7.52 X 2.79X 1.48 120W
Weight	17.29 Oz to 34.22 Oz



Force Advanced Technology Solutions Limited

Bay B21 & B22

Smithstown Industrial Estate

Shannon , Co.Clare Ireland.

Sales : 061 366980 sales@forceirl.com www.forceirl.com