IBV HUNGÁRIA
Lighting and Plastic Processing

ELMAT
elektromaterijal
Šavnička 11, 11030 Beograd 8

DUST- AND WATERPROOF
INDUSTRIAL LUMINAIRES

2016

www.ibv.hu

CONTENTS

LEGEND

Symbols concerning the application:

Luminaires with this symbol are double isolated (Protection class II)

Luminaires with this mark are suitable for direct installing on normal flammable building materials, according to DIN 4102 or similar materials, which have an ignition temperature of at least 200°

Luminaires bearing this symbol have limited surface temperature and are suitable for use in premises which are susceptible to dust and fibres.

Glow wire test 850°C

Protection level against external impact

Symbols concerning the built-in components:

Equipped with LED

T8 fluorescent tube ø 26mm with G13 lampholder

T5 fluorescent tube ø 16mm with G5 lampholder

Luminaires equipped with magnetic control gear

Luminaires equipped with high frequency control gear

Luminaires equipped with high frequency, dimmable control gear

1 phase through wiring

3 phase through wiring

Luminaires with emergency module

Symbols concerning IP protection:

- protected against splashing water
- protected against jet water
- protected against immersion (1m)

IP66 Protected against powerful water jets (heavy seas)

- dustproof
- dust-tight

INTRODUCTION

IBV Hungária Lighting and Plastic Processing Kft. – member of IBV Holding in Germany – was founded in 1991 in Hungary, Kiskunfélegyháza, a town with significant industrial heritage. Thanks to its dynamic development, today our company **is one of the leading producers of dust- and waterproof luminaires in Europe**.

One of our main activities is the production of IBV-developed **industrial luminaries with higher IP-rate for fluorescent tubes or equipped with LED**, in addition to manufacturing GRP-based (**glass fibre reinforced polyester**) products (kitchen sinks, electric cabinets and telecommunication equipment) designed in cooperation with our partners.

We have leading position on the international market of dust- and waterproof luminaries. Our company has been recognized on the market as an **expert** in the field of plastic processing **producing excellent quality products** thanks to the vast experience acquired over 25 years. **More than 90% of our production volume is sold on international markets in more than 40 countries** of 5 continents.

Feedback from our partners on countless occasions confirms the **outstanding price/performance ratio** of our products we are able to offer thanks to two major factors: **German technology used in combination with professional know-how of Hungarian experts**.

The quality level of our products meets the requirements of **European standards (ENEC)** and the highest expectations of our customers. Our SAP integrated company management system gives framework to our activities, thus ensuring that we keep providing our customers with high-quality products. Our company's quality- and environment management systems are certified and meet the requirements of the **ISO 9001** quality management system as well as the **ISO 14001** environment management system.

Briefly in figures:

Experience in lighting:	25 years
Product portfolio:	650 product variation
Luminaires sold:	2.2 million pieces/year
GRP processing:	5500 ton/year
Number of employees:	~500
Built-up area:	65,000 m²

OUR COMPETENCIES

■ IBV Hungária Kft's quality management system guarantees that we deliver high-quality products with reliable operation. **Our products meet the European standards as well as the highest expectations of our customers**.

Since 2003 our manufacturing and supporting activities are regulated by the **ISO 9001 Quality Management System**.

The aim of the **ISO 14001 Environmental Management System** certification – introduced in 2013 – is to preserve our natural resources, decrease contamination and emission of harmful substances through our environmentally conscious management system and by meeting the requirements of our regulations, thus ensuring that the health of our employees and those living in the neighbourhood is protected.

We can undertake a comprehensive quality inspection of our products during the sampling process as well as during production. **EMC** (electromagnetic compatibility), **IP** (ingress protection) and other product-specific tests are frequently run in our laboratory. Besides the basic dimensional measuring and impact resistance measuring we can inspect other product features through tests such as glow-wire, scratch resistance and components' water absorption.

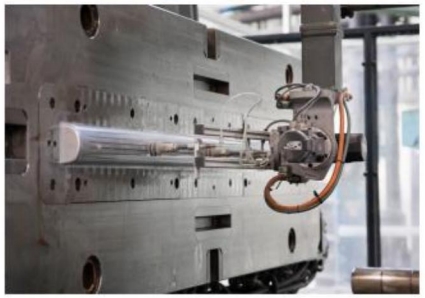
Our products comply with the requirements set forth by the relevant European standards and therefore bear the **CE sign**. Furthermore, they are also certified by independent, accredited institutes and as such they also have the **ENEC11** sign.

On today's market of luminaires a producer's success is determined by the quality of its products and whether they work safely and reliably. In the light of this, our production is driven by the principle of manufacturing good quality products, which is ensured by careful scrutiny and continuous improvement of our processes from purchasing of components to delivering our products. Our luminaires are equipped exclusively with good quality components and each single piece is tested using a 100% electricity test. Continuous improvement of our laboratory enables us to run tests on our luminaires, ensuring that we are able to meet the requirements of relevant standards as well as the expectations of our customers. We are keen on gaining more experience through special tests which we may further utilize in our new product-development projects.

■ As one of Europe's largest **GRP (glass fibre reinforced polyester)** consumers, our company processes more than 5.000 tons of raw material annually. This makes us – after the automobile industry – the continent's largest consumer of GRP.

Thanks to our plant giving place to more than **40 pressing machines** (with a pressing force from 150t to 2000t), we are able to manufacture products of the size of a match-box to that of the size of a cabinet.

The GRP (called also SMC) is processed in high temperature and under great pressing force in the tool where it (after about 1.5-2 minutes) cures. As a result we get a product with perfect features.

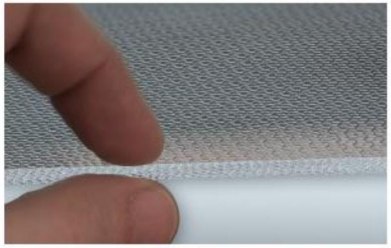


Polyester belonging to the group of thermosetting plastics has great mechanical characteristics and its stability of size and shape at changing temperatures is excellent, far better than in case of other plastics (e.g. polycarbonate); additionally, it is also a good electrical insulator.

It is most widely used where there is a need for a component that is light yet and resistant such as in the automobile industry, aviation and ship industry and in the production of luminaires.

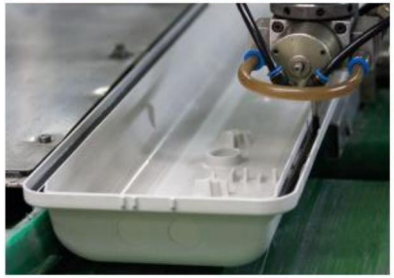
Before pressing a special paint is applied on the surface of the mould – with PIMC technology – so we can manufacture wear- and chemical-resistant coloured-surface products that can even resist adverse weather conditions.

■ With our three **injection moulding** machines (with a pressing force of 1.000 ton) we process several hundred tons of thermoplastics annually, such as **PC** (polycarbonate), **PMMA** (Polymethylmethacrylate), **SAN** (styrene acrylonitrile) and **PP** (polypropylene). With these machines we produce UV-resistant diffusers designed with respect to their optical characteristics. Our offer includes diffusers prepared with longitudinal prisms or made with photo-etching technology.



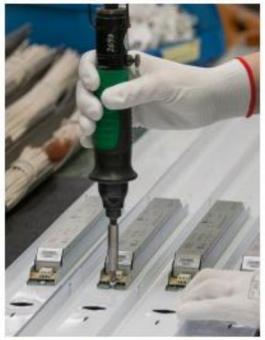
The production is scheduled according to Kanban principles.

We have vast experience in the production and handling of **transparent** as well as **opalized** thermoplastic polymers.



■ A smaller part of the diffusers is manufactured with **blow moulding** technology. First an **extruded** plate is made from the plastic granules. This is then cut into an appropriate size and used to produce diffusers with blow moulding. Besides the extruder we also have two blow moulding press machines. Apart from diffusers we can also extrude plain sheets as well as industrial curtains.

■ The **sealing** of our products is done through the use of a two-component **polyurethane foam** that is applied with the help of automatized production line. This allows us to manufacture products with an IP rate of 54, 65, 66 or 67, according to the needs of our customers. Benefits of this technology include swift production and reliable quality. In addition to our three foaming machines, a fourth one has been recently installed where we use a **silicone-based sealing** material. **EPDM** (rubber) gasket is also available on request.



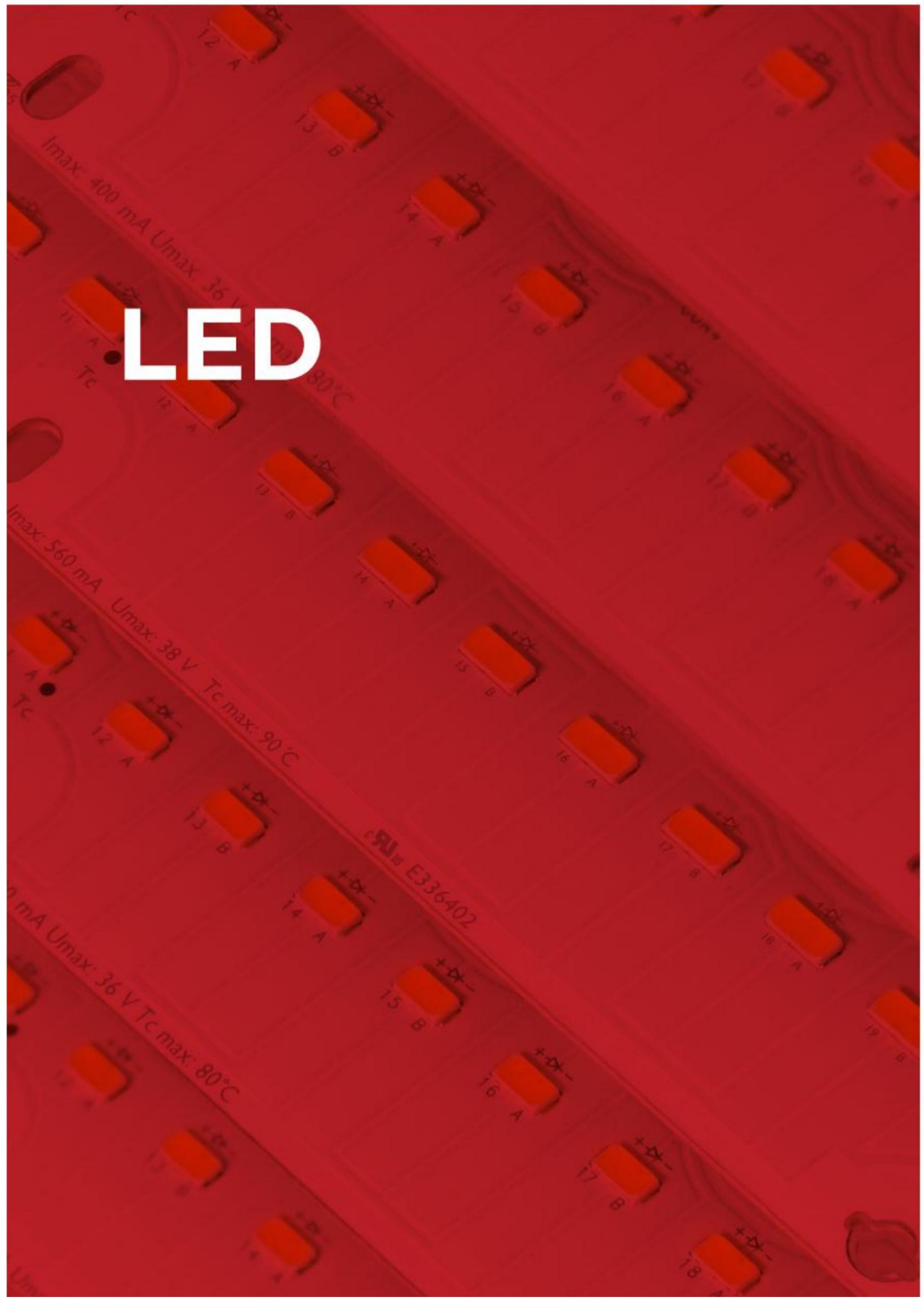
■ The assembly of our luminaires takes place in our **assembly workshop** on highest level. The Kanban system ensures that all the necessary components are at disposal according to needs, thus contributing to an efficient assembly process. All of our assembled luminaires are **100% quality and functionality checked**.

■ We also carry out the repair and painting of our products in our painting workshops. This is where the components most exposed to strain get a lacquer coat to enhance their aesthetic value as well as their ability to resist weather conditions.

■ Numerous European companies have transferred the production of their plastic products to us. We have assumed our partners´ production successfully whether it be GRP or thermoplastics processing. Nothing expresses the trust of our partners placed in us better than the fact that such projects resulting from production transfers accounts for 30% of our revenue.

We have gained great **experience in the maintenance and repair of moulds** producing plastic components, thanks to the fact that we look after our own as well as our partners' moulds. Our mould shop has all the facilities necessary for maintaining and repairing the moulds, which helps us to provide ongoing maintenance work of several hundred moulds.

It is our extensive know-how, experience and expert knowledge acquired over the years that help us orchestrate a complex transfer of production very often requiring significant technological development – from design through sampling process to the successful realization of the project – in a professional manner ensuring our partner that the production is in safe and competent hands.



771-FAVOURITE LED

Industrial dust- and waterproof luminaires with LED-modules

Now with a new, opalized diffuser with unique light transmissivity!
Specially developed for LED applications

FIELD OF APPLICATION:

Thanks to the construction principles of gasket, closing system and diffuser our LED fixtures ensure a high grade of protection (IP 65, IP 66 or IP 67) against dust, contamination and water permeation. In accordance with their IP grade they can be widely used to illuminate spaces with dusty, humid environment.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Diffuser:** Our LED-luminaires with **opal** diffuser offer you:
  - **extremely high light efficiency** through high **light permeability, unique on the market,** (up to 93% light transmissivity)
  - an **excellent light uniformity** through **well-balanced light dispersing** (no shadows)
  - **elimination of the dazzling effect** (no glaring)
  - **aesthetical appearance (no dots** of the single LEDs)
  - **keeping the usual, well known features of the diffuser** such as chemical and heat resistance, mechanical features, **UV-stabilization** etc.

  Available in PC - injection moulded **Polycarbonate** (high mechanical strength and high heat and shock resistance) **or in Acrylic** - injection moulded **PMMA** (unique non-aging properties, high chemical resistance).
- **Housing:** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. Glass-fibre reinforced polyester has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- The **gasket** between the diffuser and housing is made of non-aging **PU (polyurethane)** foam. In order to ensure **maximum** chemical and weather **resistance** even under tough conditions, **silicon-based gasket** with enhanced resistance is optionally available.
- **Fixing the diffuser to the body:** with highly resistant polyamide clips or with stainless steel clips. Anti-vandal stainless steel clips available on request.
- **Gear tray** (reflector): White powder coated steel sheet according to **Zhaga** standards or customized.
- **Electrical components:** The adequate power supply is ensured through electronic driver, that is built into the luminaire.

IBV HUNGÁRIA
Lighting and Plastic Processing

Technical options

Our new opal diffuser has an **outstanding light transmissivity** up to **93%**. With this great light permeability, it is an **excellent choice for luminaires equipped with LED-modules**.

The opal diffusers are made of UV-stabilized **opalized** material, specially developed for LED applications. This ensures among others a well-balanced light distribution and the **elimination of glaring**.

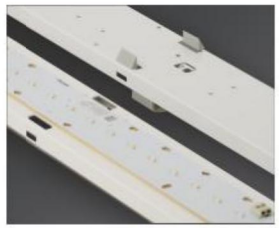
Usual stainless steel clips for **SELV** (Safety Extra Low Voltage) solutions.

The special "antivandal" stainless steel clips for **non-SELV (HV)** solutions can be released with an additional tool only.

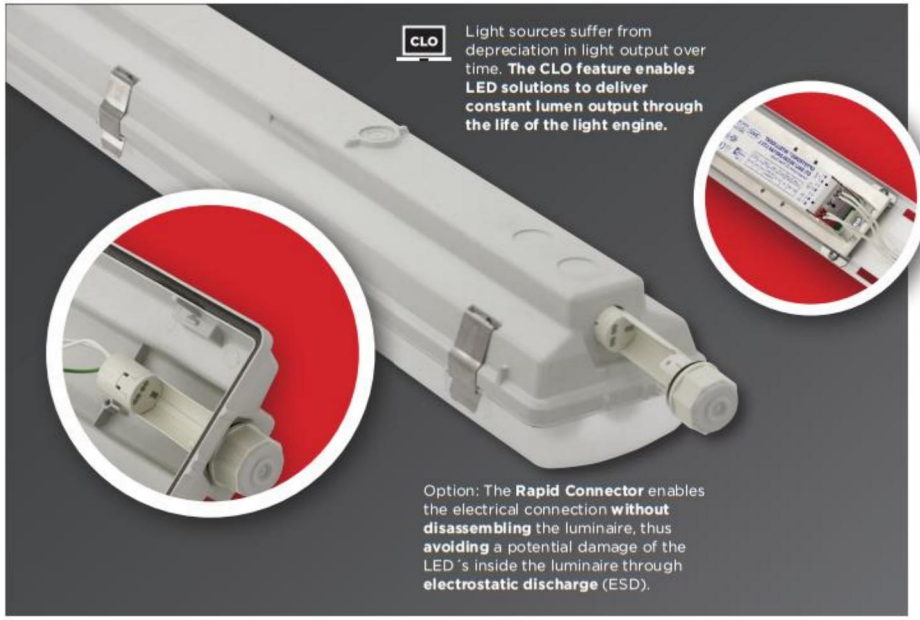
With 771-Favourite LED - depending on customer requirements - we can reach different levels of luminous flux (lumen) as well as luminous efficacy (lm/Watt). Details see attached overview.

In order to optimize the thermal management of the luminaire we avoid the direct contact of the gear tray and driver, thus increasing the lifetime of the modules and driver.

LED-Version with motion sensor

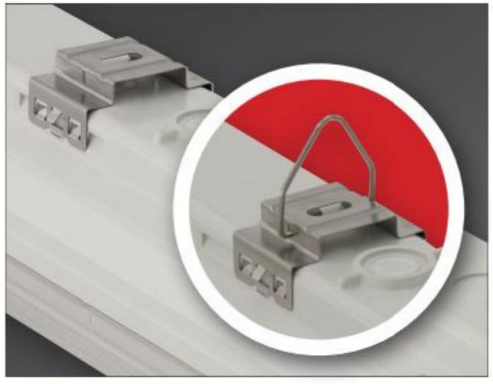


The gear tray is made of white powder coated steel sheet according to **Zhaga** standards. On request customisation possible.

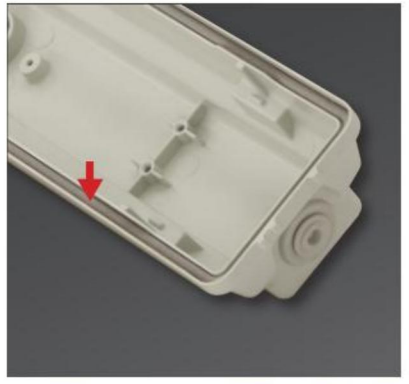


Light sources suffer from depreciation in light output over time. **The CLO feature enables LED solutions to deliver constant lumen output through the life of the light engine.**

Option: The **Rapid Connector** enables the electrical connection **without disassembling** the luminaire, thus **avoiding** a potential damage of the LED´s inside the luminaire through **electrostatic discharge** (ESD).



Ways of installing:
1. With stainless steel suspension brackets (easy-to-install) onto the ceiling.
2. Suspension on chains with stainless steel suspension brackets mounted with hooks.



In order to ensure maximum chemical and weather resistance, silicon-based gasket with enhanced resistance is optionally available.

LED
771 - FAVOURITE LED

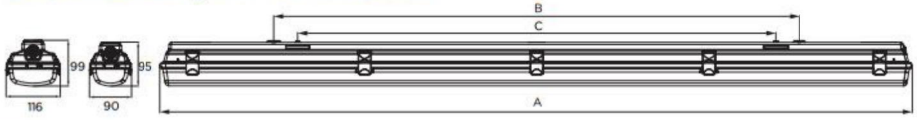
3F

Technical Data

Type	Power (W)	LED luminous flux (lm)	luminaire total luminous flux (lm)	luminous efficacy (lm/w)	Correlated colour temp (K)	CRI	lifetime L70B50 (Ta=35°C)
Philips Fortimo LED Strip LV3							
771 1x600 mm	16	2200	1930	118	4000	>80	>50.000 h
771 1x1200mm	32	4400	4050	128	4000	>80	>50.000 h
771 1x1500mm	38	5550	5000	130	4000	>80	>50.000 h
771 2x1500mm*	53	7250	6600	125	4000	>80	>40.000 h
Philips Fortimo LED Line HV2							
771 2x1200mm*	54	8150	7400	137	4000	>80	>50.000 h
771 2x1500mm*	66,5	10200	9180	138	4000	>80	>50.000 h
Osram PrevaLED Slim 3							
771 1x600 mm	15,5	2150	1970	127	4000	>80	>50.000 h
771 1x1200mm	30	4250	3850	127	4000	>80	>50.000 h
771 1x1500mm	40	5700	5125	128	4000	>80	>50.000 h
771 1x1500mm	46	6400	5775	125	4000	>80	>50.000 h
Osram PrevaLED Value 2							
771 1x600 mm	22	2600	2400	108	4000	>80	50.000 h
771 1x1200mm	39	4800	4500	115	4000	>80	50.000 h
771 1x1500mm	45	5700	5250	116	4000	>80	50.000 h
771 2x1500mm*	52	6700	6200	120	4000	>80	50.000 h
Philips Certaflux HV2							
771 1x600mm	16	1650	1500	94	4000	>80	>30.000 h
771 1x1200mm	28	3400	2880	104	4000	>80	>30.000 h
771 1x1500mm	37	4130	3800	104	4000	>80	>30.000 h

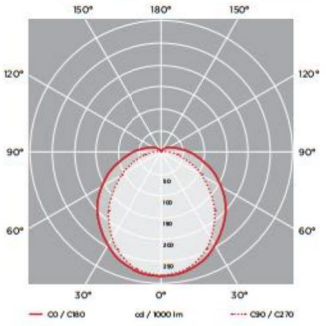
* The LED strips are placed in one line in a twin (wider) housing.

Schematic drawing with main dimensions

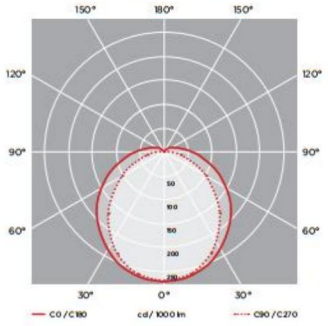


Photometric curves:

771-Favourite LED 39 W (Prevaled)



771-Favourite LED 32 W (Fortimo)



Further options:
- emergency kit
- through wiring
- dimmable driver
- IP 66
- protection class II
- halogen-free wiring
- motion sensor
- CLO

IBV HUNGÁRIA Lighting and Plastic Processing

771-ORIENT LED

Industrial dust- and waterproof luminaires with LED-modules

771 Orient LED is available in the following sizes: 1x1200 mm (1x36W), 1x1500 mm (1x58W)

YOUR MAIN BENEFITS:

A professional luminaire for wide usage, that fulfills the strongest quality requirements.
Especially for applications, where **high heat resistance (up to Ta +50 °C)** is required. Available in IP 65

FIELD OF APPLICATION:

Due to the construction principles of gasket, closing system and diffuser our fixtures ensure a high grade of protection (IP 65) against dust, contamination and water permeation. In accordance with their IP grade they can be used widely to illuminate spaces with dusty, humid environment. Thanks to its **enhanced heat resistance**, 771-Orient LED is especially suitable for applications, where **error-free functioning at higher ambient temperature** is desired.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing:** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- The **diffuser** is available in injection moulded **opal polycarbonate (PC)** with extremely high light permeability and well-balanced light dispersing. Main advantages: High mechanical strength and high heat and shock resistance and excellent transparency.

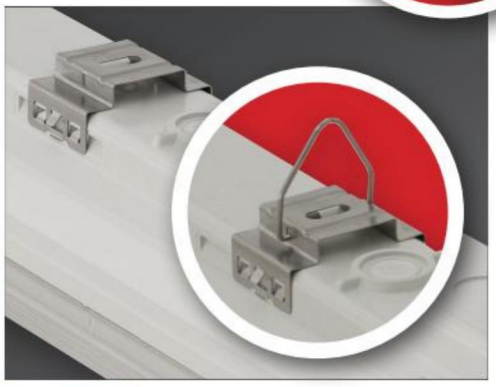
  The diffusers are designed with respect to their optical characteristics and are **UV resistant**.
- In order to ensure maximum heat, chemical and weather resistance even under tough conditions, the gasket between the diffuser and housing is made of silicon-based foam with enhanced resistance. Non-aging PU (polyurethane) foam is optionally available.
- **Fixing the diffuser to the body:** with highly resistant stainless steel clips
- **Gear tray** (reflector): White powder coated steel sheet according to Zhaga standards or customised.
- **Electrical components:** in accordance with the requested specification suitable for LED-technology, details see under technical data.

Technical options

Our new opal diffuser has an **outstanding light transmissivity of more than 90%**. With this great light permeability, it is an **excellent choice for luminaires equipped with LED-modules**.

The opal diffusers are made of UV-stabilized **opalized** material, specially developed for LED applications. This ensures among others a well-balanced light distribution and the **elimination of glaring**.
Moreover the diffuser made of injection moulded polycarbonate (PC) excels at highest **impact resistance of IK 10.**

Fixing of the diffuser to the body: With highly resistant stainless steel clips. Optionally "anti-vandal" clips available on request.



Ways of installing:
1. With stainless steel suspension brackets (easy-to-install) onto the ceiling.
2. Suspension on chains with stainless steel suspension brackets mounted with hooks.

Depending on customer requirements we can reach different levels of luminous flux (lumen) and high luminous efficacy (lm/Watt) of our LED-luminaires. Details see attached overview.

The gear tray is made of white powder coated steel sheet according to **Zhaga** standards. On request customisation possible.

Option: The **Rapid Connector** enables the electrical connection **without disassembling** the luminaire, thus **avoiding** a potential damage of the LED´s inside the luminaire through **electrostatic discharge** (ESD).

In order to optimize the thermal management of the luminaire at high ambient temperatures, the driver is fixated to the bottom of the body with a **heat sink** plate. Thus heat sensitive LED components function properly up to Ta +50°C.

In order to ensure **maximum heat**, chemical and weather **resistance** even under tough conditions, the **gasket** between the diffuser and housing is made of **silicon-based** foam with enhanced resistance.

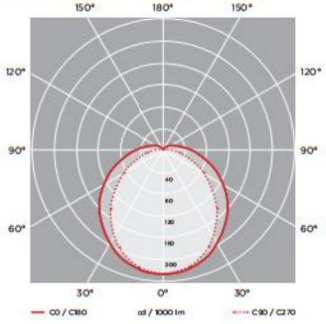
Technical Data

Type	Power (W)	LED luminous flux (lm)	luminaire total luminous flux (lm)	luminous efficacy (lm/W)	colour temp (Kelvin)	CRI	lifetime L80B10 (Ta=50°C)
Philips Fortimo LED Strip LV3							
Orient LED 1x1200mm	23	3400	3100	134	4000	>80	>50.000 h
Orient LED 1x1200mm	25	3700	3400	136	4000	>80	>50.000 h
Orient LED 1x1500mm	29	4200	3800	131	4000	>80	>50.000 h
Orient LED 1x1500mm	31	4500	4100	132	4000	>80	>40.000 h

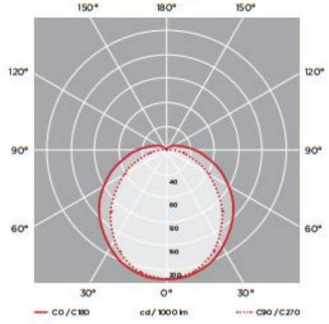
Schematic drawing with main dimensions

Photometric curves:

771-Orient LED 25 W (Fortimo)



771-Orient LED 31 W (Fortimo)



Further options:
- protection class II
- halogen-free wiring

IBV HUNGÁRIA Lighting and Plastic Processing

771-VENTILA LED

Industrial dust- and waterproof luminaires with LED-modules

771-Ventila LED is available in the following sizes: 1x600 mm (1x18W) 1x1200 mm (1x36W), 1x1500 mm (1x58W), 2x600 mm (2x18W) 2x1200 mm (2x36W), 2x1500 mm (2x58W)

YOUR MAIN BENEFITS:

A professional solution especially **for outdoor applications**. 771-Ventila LED withstands the impact of adverse weather conditions (sunlight, rain, wind etc.). Ta = -20...+35°C
Full range available in IP65 or IP66.

FIELD OF APPLICATION:

Due to the construction principles of gasket, closing system and diffuser our fixtures ensure a high grade of protection (IP 65, IP 66) against dust, contamination and water permeation. In accordance with their IP grade they can be used widely to illuminate areas with dusty, humid environment.

Thanks to its **enhanced weather resistance**, 771-Ventila LED is especially suitable for applications, where **error-free functioning in outdoor conditions** is desired.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- The **diffuser** is available in injection moulded **opal acrylic** (PMMA) with extremely high light permeability and well-balanced light dispersing.
  Main advantages: **weather resistance** and extremely high light efficiency.
- The diffusers are designed with respect to their optical characteristics and are **UV resistant**.
- In order to ensure **maximum heat**, chemical and weather **resistance** even under tough conditions, the **gasket** between the diffuser and housing is made of **silicon-based foam** with enhanced durability.
- **Fixing of the diffuser to the body:** with highly resistant stainless steel clips (standard or anti-vandal version).
- **Gear tray** (reflector): White powder coated steel sheet according to **Zhaga** standards or customised.
- **Electrical components:** in accordance with the requested specification suitable for LED-technology, details see under technical data.

IBV HUNGÁRIA Lighting and Plastic Processing

Technical options

Our new opal diffuser has an **outstanding light transmissivity of more than 93%**. With this great light permeability, it is an **excellent choice for luminaires equipped with LED-modules**.

The gear tray is made of white powder coated steel sheet according to **Zhaga** standards.
On request customisation possible.

Depending on customer requirements we can reach different levels of luminous flux (lumen) and high luminous efficacy (lm/Watt) of our LED-luminaires. Details see attached overview.

Ways of installing:

1. In order to withstand the outdoor weather conditions (wind, storm), we recommend to use **strengthened** stainless steel suspension brackets. They are easy to install onto the **wall and ceiling**.
2. **Usual** suspension brackets, suitable for installation onto the **ceiling**, are available on request.

LED
771-VENTILA LED

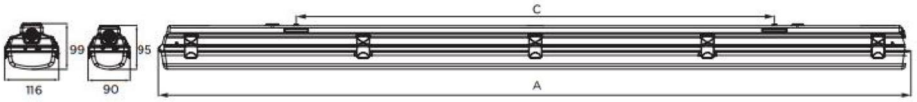
LED
3F

Technical Data

Type	Power (W)	LED luminous flux (lm)	luminaire total luminous flux (lm)	luminous efficacy (lm/w)	colour temp (Kelvin)	CRI	lifetime L70B50 (Ta=35°C)
Philips Fortimo LED Strip LV3							
771 Vent 1x600 mm	16	2200	1930	118	4000	>80	>50.000 h
771 Vent 1x1200mm	30	4400	4050	128	4000	>80	>50.000 h
771 Vent 1x1500mm	38	5550	5000	130	4000	>80	>50.000 h
771 Vent 2x1500mm*	53	7250	6600	125	4000	>80	>40.000 h
Philips Fortimo LED Line HV2							
771 Vent 2x1200mm*	54	8000	7400	137	4000	>80	>50.000 h
771 Vent 2x1500mm*	66,5	10000	9180	138	4000	>80	>50.000 h
Osram PrevaLED Slim 3							
771 Vent 1x600 mm	17,5	2150	1970	127	4000	>80	>50.000 h
771 Vent 1x1200mm	36	4250	3850	127	4000	>80	>50.000 h
771 Vent 1x1500mm	40	5700	5125	128	4000	>80	>50.000 h
771 Vent 1x1500mm	46	6400	5775	125	4000	>80	>50.000 h
Osram PrevaLED Value 2							
771 Vent 1x600 mm	22	2600	2400	108	4000	>80	50.000 h
771 Vent 1x1200mm	39	4800	4500	115	4000	>80	50.000 h
771 Vent 1x1500mm	45	5700	5250	116	4000	>80	50.000 h
771 Vent 2x1500mm*	52	6700	6200	120	4000	>80	50.000 h
Philips Certaflux HV2							
771 Vent 1x600mm	16	1650	1500	94	4000	>80	>30.000 h
771 Vent 1x1200mm	28	3400	2880	104	4000	>80	>30.000 h
771 Vent 1x1500mm	37	4130	3800	104	4000	>80	>30.000 h

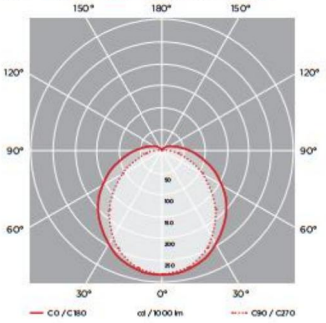
* The LED strips are placed in one line in a twin (wider) housing.

Schematic drawing with main dimensions

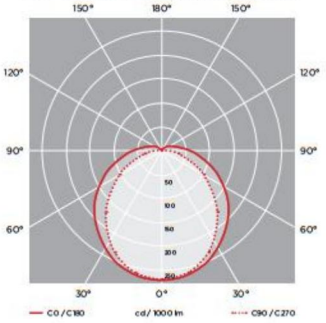


Photometric curves:

771-Ventila LED 39 W (Prevaled)



771-Ventila LED 32 W (Fortimo)



Further options:
- protection class II
- halogen-free wiring
- motion detector
- trough wiring
- Dali/CLO

IBV HUNGÁRIA Lighting and Plastic Processing

746-CLEVER LED

Industrial dust- and waterproof luminaires with LED-modules

Now with a new, opalized diffuser with unique light transmissivity!
Specially developed for LED applications

FIELD OF APPLICATION:

Thanks to the construction principles of gasket, closing system and diffuser our LED fixtures ensure a high grade of protection (IP 65 or IP 66) against dust, contamination and water permeation. In accordance with their IP grade they can be widely used to illuminate spaces with dusty, humid environment.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Diffuser:** Our LED-luminaires with **opal** diffuser offer you:
  - **extremely high light efficiency** through high **light permeability, unique on the market,** (up to 93% light transmissivity)
  - an **excellent light uniformity** through **well-balanced light dispersing** (no shadows)
  - **elimination of the dazzling effect** (no glaring)
  - **aesthetical appearance (no dots** of the single LEDs)
  - **keeping the usual, well known features of the diffuser** such as chemical and heat resistance, mechanical features, **UV-stabilization** etc.

  Available in PC - injection moulded **Polycarbonate** (high mechanical strength and high heat and shock resistance) **or in Acrylic** - injection moulded **PMMA** (unique non-aging properties, high chemical resistance).
- **Housing:** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. Glass-fibre reinforced polyester has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- The **gasket** between the diffuser and housing is made of non-aging **PU (polyurethane)** foam. In order to ensure **maximum** chemical and weather **resistance** even under tough conditions, **silicon-based gasket** with enhanced resistance is optionally available.
- **Fixing the diffuser to the body:** with highly resistant polyamide clips or with stainless steel clips. Anti-vandal stainless steel clips available on request.
- **Gear tray** (reflector): White powder coated steel sheet according to **Zhaga** standards or customized.
- **Electrical components:** The adequate power supply is ensured through electronic driver, that is built into the luminaire.

IBV HUNGÁRIA Lighting and Plastic Processing

Technical options

Our new opal diffuser has an **outstanding light transmissivity** of up to **93%**. With this great light permeability, it is an **excellent choice for luminaires equipped with LED-modules**.

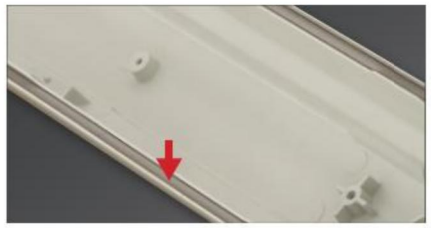
The opal diffusers are made of UV-stabilized **opalized** material, specially developed for LED applications. This ensures among others a well-balanced light distribution and the **elimination of glaring**.

Usual stainless steel clips for **SELV** (Safety Extra Low Voltage) solutions.

The special "antivandal" stainless steel clips for **non-SELV (HV)** solutions can be released with an additional tool only.

With 746-Clever LED - depending on customer requirements - we can reach different levels of luminous flux (lumen) as well as luminous efficacy (lm/Watt). Details see attached overview.

In order to optimize the thermal management of the luminaire we avoid the direct contact of the gear tray and driver, thus increasing the lifetime of the modules and driver.



In order to ensure **maximum** chemical and weather **resistance** even under tough conditions, **silicon-based gasket** with enhanced resistance is optionally available.

Further accessories:
cabel gland, different connectors enabling the electrical connection **without disassembling** the luminaire, thus **avoiding** a potential damage of the LED´s inside the luminaire through **electrostatic discharge** (ESD).

The gear tray is made of white powder coated steel sheet according to **Zhaga** standards.
On request customisation possible.

LED-Version with motion sensor

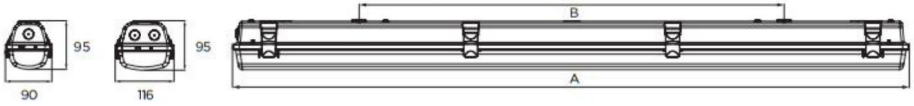
IBV HUNGÁRIA Lighting and Plastic Processing

Technical Data

Type	Power (W)	LED luminous flux (lm)	luminaire total luminous flux (lm)	luminous efficacy (lm/w)	colour temp (Kelvin)	CRI	lifetime L70B50 (Ta=35°C)
Philips Fortimo LED Strip LV3							
746 1x600 mm	16	2200	1930	118	4000	>80	>50.000 h
746 1x1200mm	32	4500	4050	128	4000	>80	>50.000 h
746 1x1500mm	38	5500	5000	130	4000	>80	>50.000 h
746 2x1500mm*	53	7250	6600	125	4000	>80	>40.000 h
Philips Fortimo LED Line HV2							
746 2x1200mm*	54	8150	7400	137	4000	>80	>50.000 h
746 2x1500mm*	66,5	10200	9180	138	4000	>80	>50.000 h
Osram PrevaLED Slim 3							
746 1x600 mm	15,5	2150	1970	127	4000	>80	>50.000 h
746 1x1200mm	30	4250	3850	127	4000	>80	>50.000 h
746 1x1500mm	40	5700	5125	128	4000	>80	>50.000 h
746 1x1500mm	46	6400	5775	125	4000	>80	>50.000 h
Osram PrevaLED Value 2							
746 1x600 mm	22	2600	2400	108	4000	>80	50.000 h
746 1x1200mm	39	4800	4500	115	4000	>80	50.000 h
746 1x1500mm	45	5700	5250	116	4000	>80	50.000 h
746 2x1500mm*	52	6700	6200	120	4000	>80	50.000 h
Philips Certaflux HV2							
746 1x600mm	16	1650	1500	94	4000	>80	>30.000 h
746 1x1200mm	28	3400	2880	104	4000	>80	>30.000 h
746 1x1500mm	37	4130	3800	104	4000	>80	>30.000 h

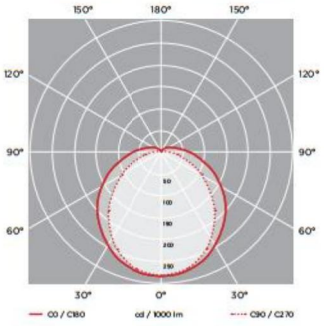
* The LED strips are placed in one line in a twin (wider) housing.

Schematic drawing with main dimensions

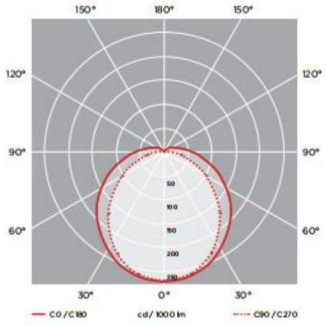


Photometric curves:

746-Clever LED 39 W (Prevaled)



746-Clever LED 32 W (Fortimo)



Further options:
- emergency kit
- through wiring
- dimmable driver
- IP 66
- protection class II
- halogen-free wiring
- motion sensor
- CLO

775-PC LED

Industrial dust- and waterproof luminaires

Equipped with **LED modules**. 775-PC LED is available in the following sizes: 1x1200 mm (1x36W), 1x1500 mm (1x58W), 2x1200 mm (2x36W), 2x1500 mm (2x58W)

YOUR MAIN BENEFITS:
A professional luminaire for wide usage, that fulfills the strongest quality requirements.
Especially for applications, where **high impact resistance (IK-rate)** is required.
Available in IP 65 or IP66

FIELD OF APPLICATION:

Due to the construction principles of gasket, closing system and diffuser our fixtures ensure a high grade of protection (IP 65 or IP66) against dust, contamination and water permeation. In accordance with their IP-grade they can be used widely to illuminate spaces with dusty, humid environment. Thanks to its **enhanced impact resistance**, 775-PC LED is especially suitable for applications, where **high IK-rate** is required.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

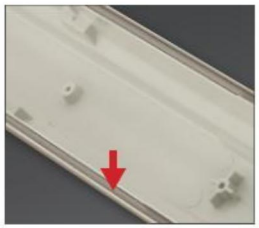
- **Housing** It is made of flame retardant **injection moulded polycarbonate (PC)** (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very high mechanical strength and allows us to reach an excellent shock resistance of IK 10.
- The **diffuser** s available in the following versions:
  Injection moulded polycarbonate **(PC), opal**, with extremely high light permeability and well-balanced light dispersing.
  As option injection moulded acrylic (PMMA) diffuser in opal version is available.

  The diffusers are designed with respect to their optical characteristics and are **UV resistant**.
- **The gasket** between the diffuser and housing is made of non-aging **PU (polyurethane)** foam.
  In order to ensure maximum chemical and weather resistance, **silicon-based** gasket with enhanced resistance is optionally available.
- **Fixing of the diffuser to the body:** with highly resistant clips made of polyamide or with stainless steel clips. Anti-vandal stainless steel clips available on request.
- **Gear tray** (reflector): White powder coated steel sheet according to **Zhaga** standards or customised.
- **Electrical components:** in accordance with the requested specification suitable for LED-technology, details see under technical data.

Main technical options

Our new opal diffuser has an **outstanding light transmissivity of more than 90%**. With this great light permeability, it is an **excellent choice for luminaires equipped with LED-modules**.

In order to ensure **maximum** chemical and weather **resistance, silicon-based gasket** with enhanced resistance is optionally available.



775-PC LED
with motion sensor

CLO

Light sources suffer from depreciation in light output over time. **The CLO feature enables LED solutions to deliver constant lumen output through the life of the light engine.**

Further options and accessories:
cabel gland, different connectors enabling the electrical connection without disassembling the luminaire, thus avoiding a potential damage of the LED´s inside the luminaire through electrostatic discharge (ESD).

Depending on customer requirements we can reach different levels of luminous flux (lumen) as well as luminous efficacy (lm/Watt) of our LED-luminaires.
Details see attached overview.

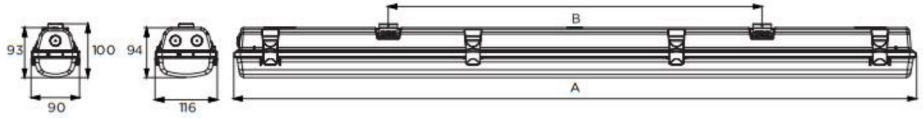
In order to optimize the thermal management of the luminaire we avoid the direct contact of the gear tray and driver, thus increasing the lifetime of the modules and driver.

Technical Data

Type	Power (W)	LED luminous flux (lm)	luminaire total luminous flux (lm)	luminous efficacy (lm/w)	Correlated colour temp (K)	CRI	lifetime L70B50 (Ta=35°C)
Philips Fortimo LED Strip LV3							
775 1x600 mm	16	2200	1930	118	4000	>80	>50.000 h
775 1x1200mm	31	4500	4050	128	4000	>80	>50.000 h
775 1x1500mm	38	5550	5000	130	4000	>80	>50.000 h
775 2x1500mm*	53	7250	6600	125	4000	>80	>40.000 h
Philips Fortimo LED Line HV2							
775 2x1200mm*	54	8150	7400	137	4000	>80	>50.000 h
775 2x1500mm*	66,5	10200	9180	138	4000	>80	>50.000 h
Osram PrevaLED Slim 3							
775 1x600 mm	15,5	2150	1970	127	4000	>80	>50.000 h
775 1x1200mm	30	4250	3850	127	4000	>80	>50.000 h
775 1x1500mm	40	5700	5125	128	4000	>80	>50.000 h
775 1x1500mm	46	6400	5775	125	4000	>80	>50.000 h
Osram PrevaLED Value 2							
775 1x600 mm	22	2600	2400	108	4000	>80	50.000 h
775 1x1200mm	39	4800	4500	115	4000	>80	50.000 h
775 1x1500mm	45	5700	5250	116	4000	>80	50.000 h
775 2x1500mm*	52	6700	6200	120	4000	>80	50.000 h
Philips Certaflux HV2							
775 1x600mm	16	1650	1500	94	4000	>80	>30.000 h
775 1x1200mm	28	3400	2880	104	4000	>80	>30.000 h
775 1x1500mm	37	4130	3800	104	4000	>80	>30.000 h

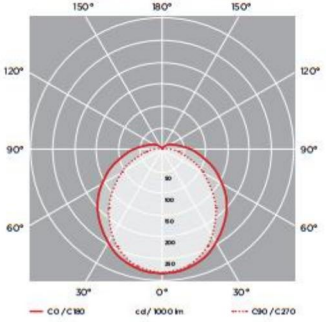
* The LED strips are placed in one line in a twin (wider) housing.

Schematic drawing with main dimensions

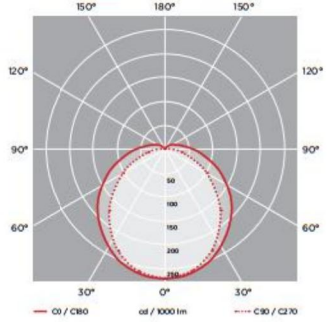


Photometric curves:

775-PC LED 39 W (Prevaled)



775-PC LED 32 W (Fortimo)



Further options:
- emergency kit
- through wiring
- dimmable driver
- protection class II
- IP 66
- halogen-free wiring
- CLO

770-FARMER LED

Industrial dust- and waterproof luminaires for chemically agressive environment

With 1 LED-tube

IP65

YOUR MAIN BENEFITS:

The shape of 770-Classic adapted **for applications in chemically agressive environment**.

FIELD OF APPLICATION:

Thanks to their special construction our diffuser covered fittings ensure a high grade of protection (IP 65) against dust, contamination and water permeation. In accordance with their IP grade, they can be widely used to illuminate spaces with dusty, humid and **chemically aggressive** environment in the **most economical and energy efficient** way.

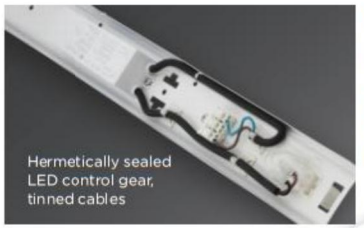
When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

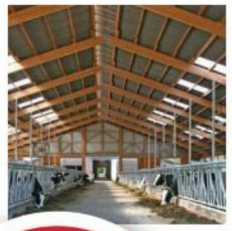
TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing:** It is made of flame retardant glass-fiber reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- **Diffuser:** For a long-term fight against chemicals we equipped the 770–Farmer LED with an injection moulded **SAN diffuser** (styrene acrylonitrile). Main advantages: strong, resistant, deformable in very slight degree only, transparent, **UV-resistant**.
- The silicon **gasket** between the diffuser and the housing is ensured by a special sealing with enhanced resistance.
- **Fixing the diffuser to the body:** with highly resistant stainless steel or plastic clips.
- **Gear tray** (reflector): White powder coated steel sheet.
- **Way of installing:** direct onto the wall or ceiling resp. suspended.
- **Electrical components:** in accordance with chemically resistant LED control gear and energy efficient, chemically protected LED-tube

Technical options

The maximum of chemical resistance can be achieved by using special components



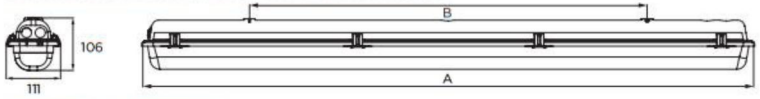


Technical data

With LED Control gear for LED-tubes

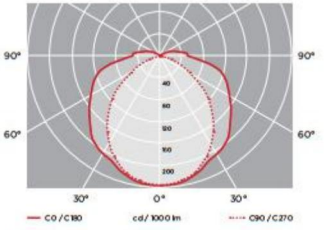
Type	Power (W)	LED luminous flux (lm)	luminaire total luminous flux (lm)	luminous efficacy (lm/w)	colour temp (Kelvin)	CRI	lifetime L80B10 (Ta=35°C)
770-FARMER LED							
770 FLT 1x600 mm	13	1500	1350	104	4000	>80	>50.000 h
770 FLT 1x1200mm	26	3000	2700	104	4000	>80	>50.000 h
770 FLT 1x1500mm	33	3800	3500	106	4000	>80	>50.000 h

Schematic drawing with main dimensions:

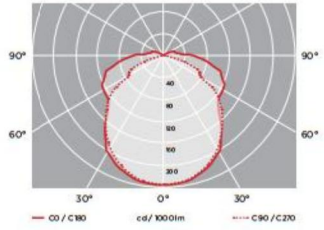


Photometric curves:

770-Farmer LED 1x13 W



770-Farmer LED 1x26 W



SERIES 746 PRO LT

Industrial dust- and waterproof luminaires

With 1 and 2 LED-tubes.

YOUR MAIN BENEFITS:

This product family has been **designed for LED-tubes**. Thanks to its special construction this model offers you an additional price advantage: It can be used without any gear tray.
Full range available in IP 65 and IP 66

FIELD OF APPLICATION:

Thanks to the construction principals of gasket, closing system and diffuser our fixtures ensure a high grade of protection (IP 65, IP 66) against dust, contamination and water permeation. In accordance with their IP grade they can be widely used to illuminate spaces with dusty, humid environment.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing:** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- The **diffuser** is available as follows: injection moulded **acrylic** (PMMA) in two versions:
  1. transparent**,** with longitudinal prisms.
  2. light opalescent, designed with respect to their optical characteristics, made with photo etching.
  Main advantages of PMMA: Very good transparency (better than the transparency of glass), unique non-aging properties, chemical and **UV-resistance.**

  Injection moulded **polycarbonate** (PC). Main advantages: high mechanical strength and high heat and shock resistance and excellent transparency. The PC diffusers are made with optically designed longitudinal, internal prisms and are **UV resistant**.
- **The gasket** between the diffuser and housing is made of non-aging PU (polyurethane) foam. As option gasket with enhanced resistance is available.
- **Fixing the diffuser to the body:** with highly resistant clips made of polyamide or with stainless steel clips
- **Gear tray** (reflector): **No gear tray needed.** The electrical components are mounted directly into the housing. As option white powder coated steel sheet gear tray is available.
- **Way of installing:** direct (with screws) onto the wall or ceiling resp. suspended.
- **Electrical components:** The adequate power supply is ensured through electronic driver, that is built in into the LED-tube.

CE

746 PRO LT

IP65

Option:

IP66

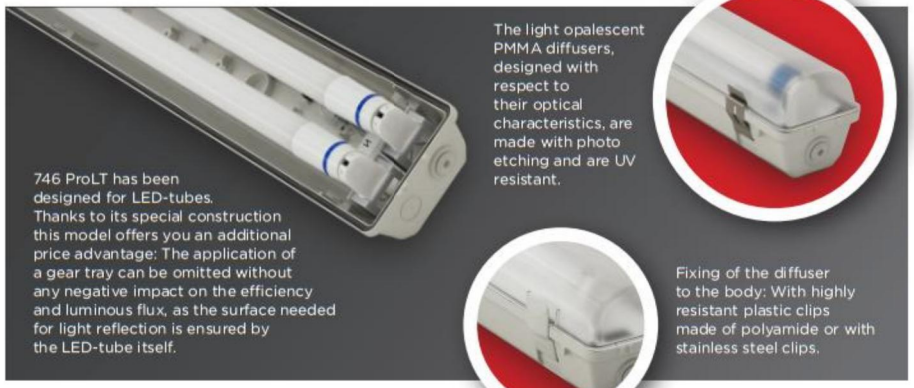
PC 850°C

LED SOLUTIONS

IBV HUNGÁRIA Lighting and Plastic Processing

Main technical options

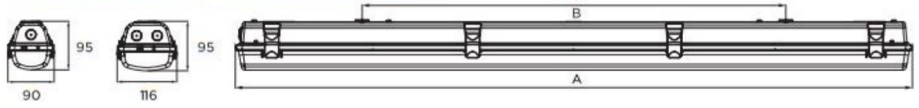
Optimized economical packaging with plastic net. On request traditional carton box or retail-box packaging available.



Technical data (extract):

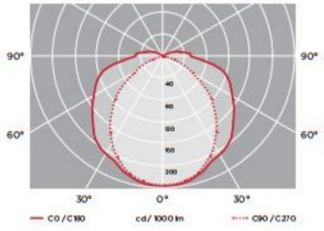
Type	Lampholder	Power (W)	Luminous flux (lm)	Dimensions A (mm)	B (mm)	Weight (kg)
746 Pro LT equipped with Retrofit LED-tube (Philips Master LED)						
746 Pro LT 1x600	T8/G13	1 x 10W	660	699	415	1,19
746 Pro LT 1x1200	T8/G13	1 x 19W	1 320	1 277	800	2,47
746 Pro LT 1x1500	T8/G13	1 x 24W	1 520	1 577	1 100	2,57
746 Pro LT 2x600	T8/G13	2 x 10W	1 320	699	415	2,31
746 Pro LT 2x1200	T8/G13	2 x 19W	2 640	1 277	800	3,35
746 Pro LT 2x1500	T8/G13	2 x 24W	3 040	1 577	1 100	3,37

Schematic drawing with main dimensions:

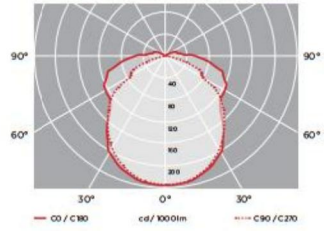


Photometric curves:

746 PRO LT 1x19W (LED tube)



746 PRO LT 2x24W (LED tube)



Further options:
- through wiring
- reflector (gear tray)
- rapid connector
- halogen-free wiring

IBV HUNGÁRIA Lighting and Plastic Processing

LED SOLUTIONS

746 PRO LT

Ø 26 G 13

Ø 16 G 5

3F

RETROFIT LED

Industrial dust- and waterproof luminaires with LED-tubes

With 1 and 2 LED-tubes (Retrofit)
For T8 (G13)

Most of our luminaires can be equipped with extremely energy efficient LED-tubes (so called Retrofit). The LED-tube versions are available at following series: 771-Favourite, 746-Clever, 770-Classic, 770-Extreme -30, 760-Batten, 744-Practical and 741-Economy.

IP65

Option:

IP67

IP54

PC 850°C

FIELD OF APPLICATION:

Thanks to the construction principles of gasket, closing system and diffuser (cover) our LED-tube fixtures ensure a high grade of protection (IP 54, IP 65 or IP67) against dust, contamination and water permeation. In accordance with their IP grade they can be widely used to illuminate spaces with dusty, humid environment.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

See the relevant page of the chosen basic model

- **Electrical components:** At luminaires equipped with Retrofit LED-tubes the adequate power supply is ensured through electronic driver, that is built in into the LED-tube.

Main technical options

771-Favourite R, equipped with Philips Master LED tube. The distribution surface of the LED-tube is made of opalized material specially developed for LED applications. This ensures a well-balanced light distribution and the elimination of glaring.

Technical data (extract):

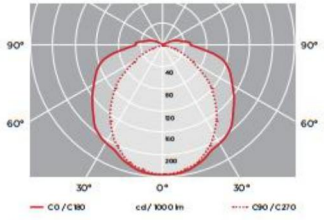
Type	Lampholder	Power (W)	Luminaire (lm)	Dimensions (mm) A	(mm) B	(mm) C	Weight (kg)
771-Favourite equipped with Retrofit LED-tube (Philips Master LED)							
771 118 RLED	T8/G13	1x10W	660	699	460	360	1,19
771 136 RLED	T8/G13	1x19W	1320	1277	800	700	2,47
771 158 RLED	T8/G13	1x24W	1520	1577	1100	1000	2,57
771 218 RLED	T8/G13	2x10W	1320	699	460	360	2,31
771 236 RLED	T8/G13	2x19W	2640	1277	800	700	3,35
771 258 RLED	T8/G13	2x24W	3040	1577	1100	1000	3,37
Type	**Lampholder**	**Power (W)**	**Luminaire (lm)**	**Dimensions (mm) A**	**(mm) B**		**Weight (kg)**
760-Batten equipped with Retrofit LED-tube							
760 118 RLED	T8/G13	1x10W	1000	661	320		1,06
760 136 RLED	T8/G13	1x18W	1600	1271	900		2,17
760 158 RLED	T8/G13	1x29W	3080	1571	900		2,27
760 218 RLED	T8/G13	2x10W	2000	661	320		2,10
760 236 RLED	T8/G13	2x18W	3200	1271	900		3,05
760 258 RLED	T8/G13	2x29W	6160	1571	900		3,06

Schematic drawing with main dimensions:

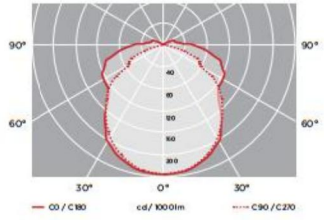
see on page with the corresponding basic type

Photometric curves:

771-Favourite 1x19 (LED-tube)



771-Favourite 2x24 (LED-tube)



The applying certification signs can vary at different types/ versions.

SERIES 771-FAVOURITE

Industrial dust- and waterproof luminaires

With LED or 1 and 2 fluorescent tubes for T5 or T8 lamps

YOUR MAIN BENEFITS:

A professional luminaire for wide usage, that fulfills the strongest quality requirements. Best price-performance ratio. Best sold model.

Full range available in T8, T5, IP 65, IP66 or IP 67

FIELD OF APPLICATION:

Due to the construction principals of gasket, closing system and diffuser our fixtures ensure a high grade of protection (IP 65, IP66 or IP 67) against dust, contamination and water permeation. In accordance with their IP grade they can be used widely to illuminate spaces with dusty, humid environment.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing:** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.

- **The diffuser is available in the following versions:**
  Injection moulded polycarbonate (PC)
  Main advantages: High mechanical strength and heat and shock resistance and excellent transparency.
  Injection moulded acrylic (PMMA)
  Main advantages: Very good transparency (better than the transparency of glass), unique non-aging properties and chemical resistance.
  Both diffusers are made with optically designed longitudinal, internal prisms and are **UV resistant**.

- **The gasket** between the diffuser and housing is made of non-aging PU (polyurethane) foam. As option gasket with enhanced resistance is available.

- **Fixing the diffuser to the body:** with highly resistant clips made of polyamide or with stainless steel clips

- **Gear tray (reflector):** White powder coated steel sheet.
  As an option glossy aluminium reflector is possible.

- **Electrical components:** in accordance with the requested specification: LED, low power factor, high power factor or electronic control gear.

IP65

IP66

IP67

Option:

PC 850°C

Main technical options

Option:
Through wiring

Ways of installing:

1. Direct (with screws) onto the wall or ceiling.
2. With stainless steel suspension brackets (easy-to-install) onto the ceiling.
3. Suspension on chains with stainless steel suspension brackets mounted with hooks.

Depending on installation options several possibilities for cable entry.

IP 67 protected (PC_diffuser, cable gland, stainless steel clips and suspension brackets).

The suspension of the diffuser is possible with special stainless steel clips. (On request)

Option: To accelerate on-site installation rapid connectors can be ordered, which makes possible the electrical connection without disassembling the luminaire, and ensuring the same IP grade (IP 65).

771-Favourite equipped with a new opalized diffuser with unique light transmissivity specially developed for LED-applications. More information see in LED-part of the catalogue.

Diffuser: Injection moulded polycarbonate (PC) or Acrylic (PMMA). Both diffusers are made with optically designed longitudinal internal prisms and are UV resistant.

Fixing the diffuser to the body: With secure, one part captive plastic or stainless steel clips. Cable entry through grommets or through cable glands.

Gear tray (reflector): white powder coated steel sheet, which is fixed to the body by flexible gear tray retaining clips. Therefore it is easy to remove and suspend it during installation.

Universal gear tray for both, T8 as well as T5 version

Further options:

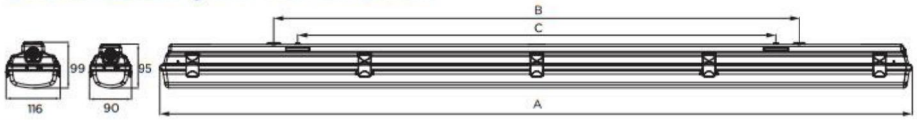
- LED
- emergency kit
- aluminium reflector
- dimmable ballast
- protection class II
- IP 66
- halogen-free wiring

771 - FAVOURITE

Technical Data

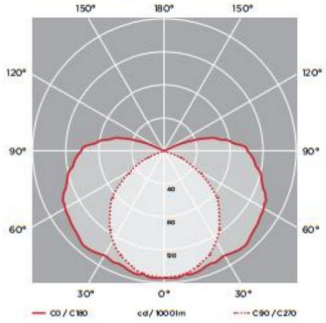
Type	Tube/Lampholder	Power (W)	Dimensions A	(mm) B	(mm) C	Weight (kg)
With B2 magnetic ballast for T8 fluorescent tubes						
771 118 IND	T8/G13	1 x 18	669	460	360	1,99
771 136 IND	T8/G13	1 x 36	1 277	800	700	2,41
771 158 IND	T8/G13	1 x 58	1 577	1 100	1 000	3,15
771 170 IND	T8/G13	1 x 70	1 841	1 164	1 265	3,93
771 218 IND	T8/G13	2 x 18	669	460	360	2,23
771 236 IND	T8/G13	2 x 36	1 277	800	700	3,33
771 258 IND	T8/G13	2 x 58	1 577	1 100	1 000	4,55
771 270 IND	T8/G13	2 x 70	1 841	1 164	1 265	5,08
With electronic control gear for T8 fluorescent tubes						
771 118 EVG	T8/G13	1 x 18	669	460	360	1,67
771 136 EVG	T8/G13	1 x 36	1 277	800	700	2,12
771 158 EVG	T8/G13	1 x 58	1 577	1 100	1 000	2,38
771 170 EVG	T8/G13	1 x 70	1 841	1 164	1 265	3,72
771 218 EVG	T8/G13	2 x 18	669	460	360	2,24
771 236 EVG	T8/G13	2 x 36	1 277	800	700	2,66
771 258 EVG	T8/G13	2 x 58	1 577	1 100	1 000	2,96
771 270 EVG	T8/G13	2 x 70	1 841	1 164	1 265	4,16
With electronic control gear for T5 HE class fluorescent tubes						
771 114 EVG	T5/G5	1 x 14	669	460	360	1,71
771 128 EVG	T5/G5	1 x 28	1 277	800	700	2,16
771 135 EVG	T5/G5	1 x 35	1 577	1 100	1 000	2,39
771 214 EVG	T5/G5	2 x 14	669	460	360	2,25
771 228 EVG	T5/G5	2 x 28	1 277	800	700	2,52
771 235 EVG	T5/G5	2 x 35	1 577	1 100	1 000	2,77
With electronic control gear for T5 HO fluorescent tubes						
771 124 EVG	T5/G5	1 x 24	669	460	360	1,63
771 154 EVG	T5/G5	1 x 54	1 277	800	700	2,16
771 149 EVG	T5/G5	1 x 49	1 577	1 100	1 000	2,53
771 180 EVG	T5/G5	1 x 80	1 577	1 100	1 000	2,58
771 224 EVG	T5/G5	2 x 24	669	460	360	2,23
771 254 EVG	T5/G5	2 x 54	1 277	800	700	2,52
771 249 EVG	T5/G5	2 x 49	1 577	1 100	1 000	2,77
771 280 EVG	T5/G5	2 x 80	1 577	1 100	1 000	2,84

Schematic drawing with main dimensions

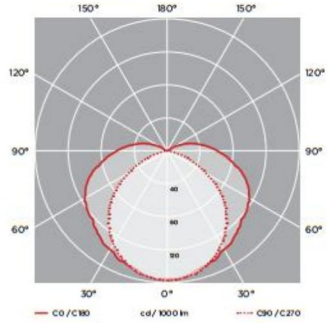


Photometric curves:

771-Favourite 1x58 W



771-Favourite 2x58 W



SERIES 771-ORIENT

Industrial dust- and waterproof luminaires

With 1 and 2 fluorescent tubes for T8 or T5 lamps

YOUR MAIN BENEFITS:

A professional luminaire for wide usage, that fulfills the strongest quality requirements.
Especially for applications, where **high heat resistance** (up to Ta +50 °C) is required.
Available in IP 65 or IP66

FIELD OF APPLICATION:

Field of application: Due to the construction principles of gasket, closing system and diffuser our fixtures ensure a high grade of protection (IP 65, IP66) against dust, contamination and water permeation. In accordance with their IP grade they can be used widely to illuminate spaces with dusty, humid environment. Thanks to its **enhanced heat resistance**, 771-Orient is especially suitable for applications, where **error-free functioning at higher ambient temperature** is desired.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing:** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- The **diffuser** is available in injection moulded polycarbonate (PC).
  Main advantages: High mechanical strength and high heat and shock resistance and excellent transparency.

  The diffusers are designed with respect to their optical characteristics and are UV resistant.
- In order to ensure **maximum heat**, chemical and weather **resistance** even under tough conditions, the **gasket** between the diffuser and housing is made of **silicon-based foam** with enhanced resistance.
  Non-aging PU (polyurethane) foam is optionally available.
- **Fixing the diffuser to the body:** with highly resistant stainless steel clips
- **Gear tray** (reflector): White powder coated steel sheet. As an option glossy aluminium reflector is possible.
- **Electrical components:** electronic control gear.

IP65

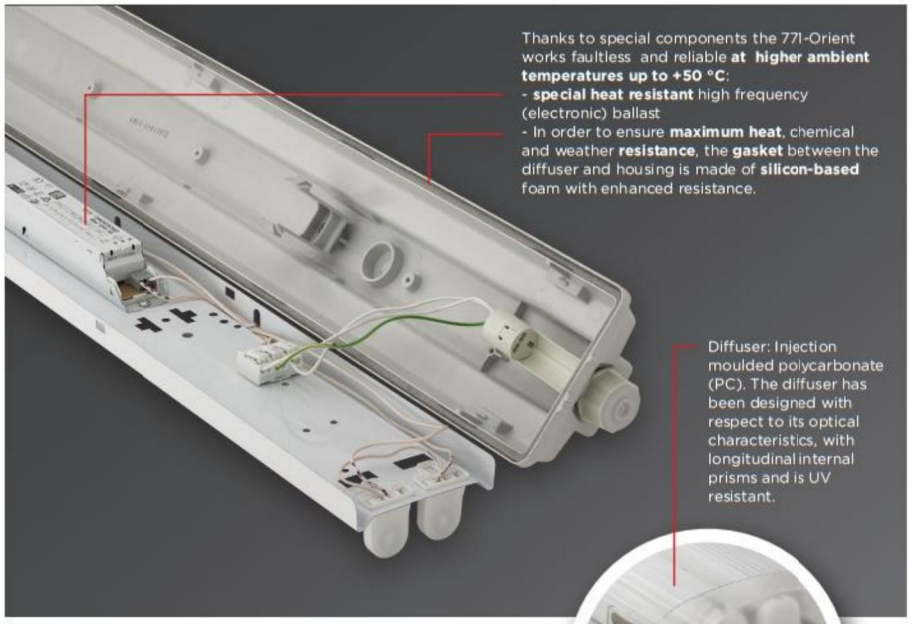
Option:

IP66

PC 850°C

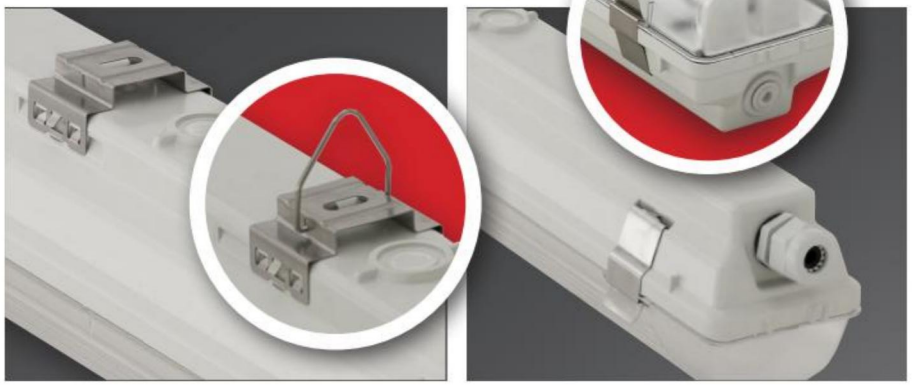
Main technical options

Gear tray (reflector): white powder coated steel sheet, which is fixed to the body by flexible gear tray retaining clips. Therefore it is easy to remove and suspend it during installation.



Thanks to special components the 771-Orient works faultless and reliable **at higher ambient temperatures up to +50 °C**:
- **special heat resistant** high frequency (electronic) ballast
- In order to ensure **maximum heat**, chemical and weather **resistance**, the **gasket** between the diffuser and housing is made of **silicon-based** foam with enhanced resistance.

Diffuser: Injection moulded polycarbonate (PC). The diffuser has been designed with respect to its optical characteristics, with longitudinal internal prisms and is UV resistant.



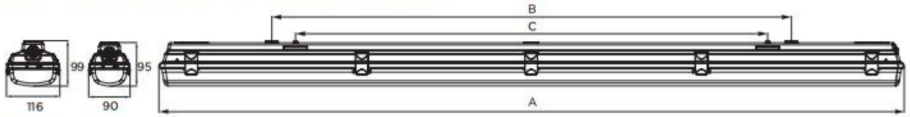
Ways of installing:
1. Direct (with screws) onto the wall or ceiling.
2. With stainless steel suspension brackets (easy-to-in-stall) onto the ceiling.
3. Suspension on chains with stainless steel suspension brackets mounted with hooks.

Fixing the diffuser to the body: With highly resistant stainless steel clips. Cable entry through grommets or through cable glands.

Technical Data

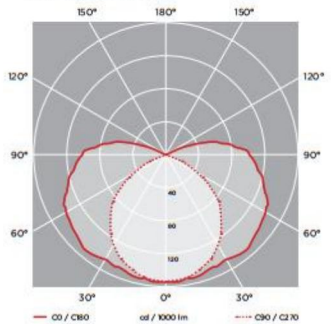
Type	Tube/Lampholder	Power (W)	Dimensions A	(mm) B	(mm) C	Weight (kg)
With electronic control gear for T8 fluorescent tubes						
Orient 136 EVG	T8/G13	1 x 36	1 277	800	700	2,12
Orient 158 EVG	T8/G13	1 x 58	1 577	1 100	1 000	2,38
Orient 236 EVG	T8/G13	2 x 36	1 277	800	700	2,66
Orient 258 EVG	T8/G13	2 x 58	1 577	1 100	1 000	2,96
With electronic control gear for T5 HE class fluorescent tubes						
Orient 128 EVG	T5/G5	1 x 28	1 277	800	700	2,16
Orient 135 EVG	T5/G5	1 x 35	1 577	1 100	1 000	2,39
Orient 228 EVG	T5/G5	2 x 28	1 277	800	700	2,52
Orient 235 EVG	T5/G5	2 x 35	1 577	1 100	1 000	2,77

Schematic drawing with main dimensions

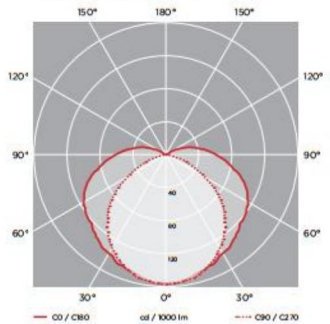


Photometric curves:

771-Orient 1x58 W



771-Orient 2x58 W



Further options:
- LED
- aluminium reflector
- dimmable ballast
- protection class II
- IP 66
- halogen-free wiring

771 - ORIENT

771-VENTILA

Industrial dust- and waterproof luminaires

With 1 or 2 fluorescent tubes in T8 or T5

YOUR MAIN BENEFITS:

A professional solution especially **for outdoor applications**. 771-Ventila withstands the impact of adverse weather conditions (sunlight, rain, wind etc.).
Ta = -20...+25°C
Full range available in IP65 or IP66.

FIELD OF APPLICATION:

Due to the construction principles of gasket, closing system and diffuser our fixtures ensure a high grade of protection (IP 65, IP 66) against dust, contamination and water permeation. In accordance with their IP grade they can be used widely to illuminate areas with dusty, humid environment.
Thanks to its **enhanced weather resistance**, 771-Ventila is especially suitable for applications, where **error-free functioning in outdoor conditions** is desired.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- The **diffuser** is available in injection moulded **acrylic (PMMA)** with longitudinal internal prisms. Main advantages: extremely high transparency (better than the transparency of glass), unique non-aging properties and weather resistance.
- The diffusers are designed with respect to their optical characteristics and are **UV resistant**.
- In order to ensure **maximum** heat, chemical and weather **resistance** even under tough conditions, the **gasket** between the diffuser and housing is made of **silicon-based foam** with enhanced durability.
- **Fixing of the diffuser to the body:** with highly resistant stainless steel clips (standard or anti-vandal version).
- **Gear tray** (reflector): White powder coated steel sheet according to **Zhaga** standards or customised.
- **Electrical components:** in accordance with electronic control gear (T5, T8)
- Conditions for applications at negative temperatures:
  - cold-resistant fluorescent tube, (e.g. Polar)
  - cold-resistant starter.

CE

771-VENTILA

IP65

Option:

IP66

PC 850°C

Technical options

In order to ensure **maximum** heat, chemical and **weather resistance** even under tough conditions, the **gasket** between the diffuser and housing is made of **silicon-based** foam with enhanced durability.

Gear tray (reflector): white powder coated steel sheet, which is fixed to the body by flexible gear tray retaining clips. Therefore it is easy to remove and suspend it during installation.

Universal gear tray for both, T8 as well as T5 version

771-VENTILA

IBV HUNGÁRIA Lighting and Plastic Processing

Ways of installing:

1. In order to withstand the outdoor weather conditions (wind, storm), we recommend to use **strengthened** stainless steel suspension brackets. They are easy to install onto the **wall and ceiling**.
2. **Usual** suspension brackets, suitable for installation onto the **ceiling**, are available on request.

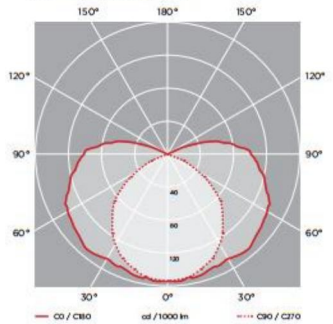
Technical Data

Type	Tube/Lampholder	Power (W)	Dimensions A	(mm) C	Weight (kg)
With B2 magnetic ballast for T8 fluorescent tubes					
771 Vent 118 IND	T8/G13	1 x 18	669	360	1,99
771 Vent 136 IND	T8/G13	1 x 36	1 277	700	2,41
771 Vent 158 IND	T8/G13	1 x 58	1 577	1 000	3,15
771 Vent 170 IND	T8/G13	1 x 70	1 841	1 265	3,93
771 Vent 218 IND	T8/G13	2 x 18	669	360	2,23
771 Vent 236 IND	T8/G13	2 x 36	1 277	700	3,33
771 Vent 258 IND	T8/G13	2 x 58	1 577	1 000	4,55
771 Vent 270 IND	T8/G13	2 x 70	1 841	1 265	5,08
With electronic control gear for T8 fluorescent tubes					
771 Vent 118 EVG	T8/G13	1 x 18	669	360	1,67
771 Vent 136 EVG	T8/G13	1 x 36	1 277	700	2,12
771 Vent 158 EVG	T8/G13	1 x 58	1 577	1 000	2,38
771 Vent 170 EVG	T8/G13	1 x 70	1 841	1 265	3,72
771 Vent 218 EVG	T8/G13	2 x 18	669	360	2,24
771 Vent 236 EVG	T8/G13	2 x 36	1 277	700	2,66
771 Vent 258 EVG	T8/G13	2 x 58	1 577	1 000	2,96
771 Vent 270 EVG	T8/G13	2 x 70	1 841	1 265	4,16
With electronic control gear for T5 HE class fluorescent tubes					
771 Vent 114 EVG	T5/G5	1 x 14	669	360	1,71
771 Vent 128 EVG	T5/G5	1 x 28	1 277	700	2,16
771 Vent 135 EVG	T5/G5	1 x 35	1 577	1 000	2,39
771 Vent 214 EVG	T5/G5	2 x 14	669	360	2,25
771 Vent 228 EVG	T5/G5	2 x 28	1 277	700	2,52
771 Vent 235 EVG	T5/G5	2 x 35	1 577	1 000	2,77
With electronic control gear for T5 HO fluorescent tubes					
771 Vent 124 EVG	T5/G5	1 x 24	669	360	1,63
771 Vent 154 EVG	T5/G5	1 x 54	1 277	700	2,16
771 Vent 149 EVG	T5/G5	1 x 49	1 577	1 000	2,53
771 Vent 180 EVG	T5/G5	1 x 80	1 577	1 000	2,58
771 Vent 224 EVG	T5/G5	2 x 24	669	360	2,23
771 Vent 254 EVG	T5/G5	2 x 54	1 277	700	2,52
771 Vent 249 EVG	T5/G5	2 x 49	1 577	1 000	2,77
771 Vent 280 EVG	T5/G5	2 x 80	1 577	1 000	2,84

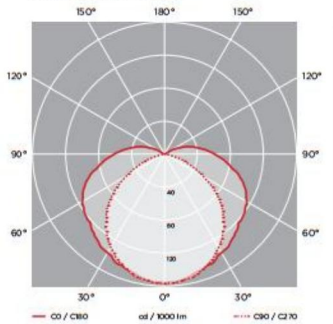
Schematic drawing with main dimensions

Photometric curves:

771-Ventila 1x58 W



771-Ventila 2x58 W



Further options:

- protection class II
- halogen-free wiring
- motion detector
- trough wiring
- Dali

771-VENTILA

Ø 26 G 13

Ø 16 G 5

VVG

EVG

EVG DIM

3F

775-PC LINE

Industrial dust- and waterproof luminaires

With 1 and 2 fluorescent tubes for T5 or T8 lamps, in IP 65 or IP66
775-PC Line is available in the following sizes:
1x36W (1x1200 mm), 1x58W (1x1500 mm), 2x36W (2x1200 mm), 2x58W (2x1500 mm)

YOUR MAIN BENEFITS:
A professional luminaire for wide usage, that fulfills the strongest quality requirements.
Especially for applications, where **high impact resistance (IK-rate)** is required.

FIELD OF APPLICATION:

Due to the construction principles of gasket, closing system and diffuser our fixtures ensure a high grade of protection (IP 65 or IP66) against dust, contamination and water permeation. In accordance with their IP-grade they can be used widely to illuminate spaces with dusty, humid environment. Thanks to its **enhanced impact resistance**, 775-PC Line is especially suitable for applications, where **high IK-rate** is required.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing** It is made of flame retardant **injection moulded polycarbonate (PC)** (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour.

  This material has very high mechanical strength and allows us to reach an excellent shock resistance of IK 10.

- The **diffuser** is available in the following versions:
  For fluorescent tubes: injection moulded polycarbonate **(PC), transparent**, with internal prisms designed with respect to their optical characteristics.
  For LED modules: injection moulded polycarbonate **(PC), opal**, with extremely high light permeability and well-balanced light dispersing.
  Remark: As option injection moulded acrylic (PMMA) diffuser in transparent as well as in opal version is available.
  The diffusers are designed with respect to their optical characteristics and are UV resistant.

- **The gasket** between the diffuser and housing is made of non-aging PU (polyurethane) foam.
  In order to ensure maximum chemical and weather resistance, silicon-based gasket with enhanced resistance is optionally available.

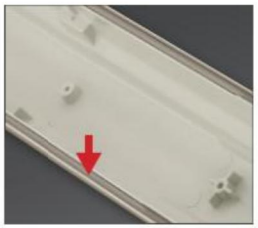
- **Fixing of the diffuser to the body:** with highly resistant clips made of polyamide or with stainless steel clips.

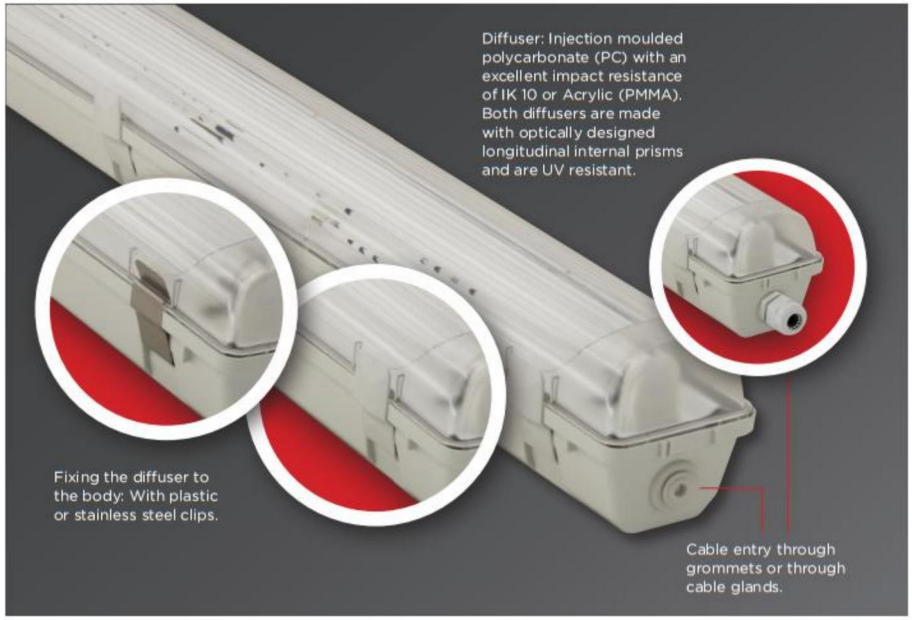
- **Gear tray** (reflector): White powder coated steel sheet. As an option glossy aluminium reflector is possible.

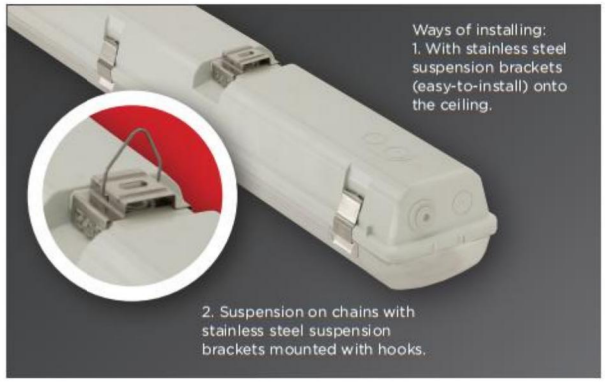
- **Electrical components:** in accordance with the requested specification: LED, low power factor, high power factor or electronic control gear.

Main technical options

In order to ensure maximum chemical and weather resistance, **silicon-based gasket** with enhanced resistance is optionally available.



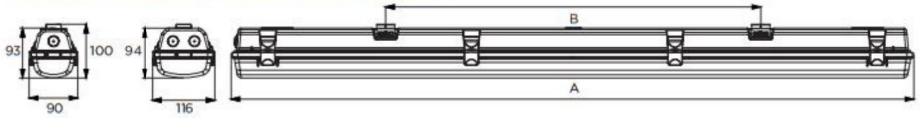




Technical Data

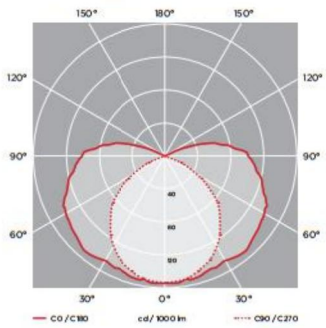
Type	Tube/Lampholder	Power (W)	Dimensions A	(mm) B	(mm) C	Weight (kg)
With B2 magnetic ballast for T8 fluorescent tubes						
775 136 IND	T8/G13	1 x 36	1 277	700	575	2,24
775 158 IND	T8/G13	1 x 58	1 577	1 000	575	2,93
775 236 IND	T8/G13	1 x 36	1 277	700	575	3,15
775 258 IND	T8/G13	2 x 58	1 577	1000	575	4,31
With electronic control gear for T8 fluorescent tubes						
775 136 EVG	T8/G13	1X36	1277	700	575	1,95
775 158 EVG	T8/G13	1X58	1577	1000	575	2,16
775 236 EVG	T8/G13	2X36	1277	700	575	2,48
775 258 EVG	T8/G13	2X58	1577	1000	575	2,72
With electronic control gear for T5 HE class fluorescent tubes						
775 128 EVG	T5/G5	1X28	1277	700	575	1,99
775 135 EVG	T5/G5	1X35	1577	1000	575	2,17
775 228 EVG	T5/G5	2X28	1277	700	575	2,34
775 235 EVG	T5/G5	2X35	1577	1000	575	2,53
With electronic control gear for T5 HO fluorescent tubes						
775 154 EVG	T5/G5	1X54	1277	700	575	1,99
775 149 EVG	T5/G5	1X49	1577	1000	575	2,31
775 254 EVG	T5/G5	2X54	1277	700	575	2,34
775 249 EVG	T5/G5	2X49	1577	1000	575	2,53

Schematic drawing with main dimensions

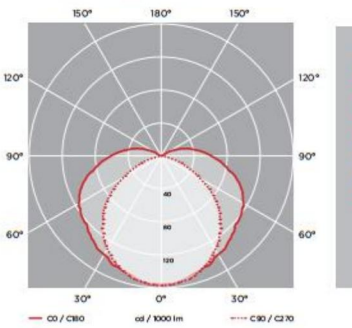


Photometric curves:

775-PC Line 1x58 W



775-PC Line 2x58 W



Further options:
- LED
- emergency kit
- through wiring
- aluminium reflector
- dimmable ballast
- protection class II
- IP 66
- halogen-free wiring

IBV HUNGÁRIA Lighting and Plastic Processing

SERIES 746-CLEVER

Industrial dust- and waterproof luminaires

In **basic** version (without gear tray) with 1 and 2 fluorescent tubes for **T8** lamps or with **LED-tubes**.
In version with gear tray with 1 and 2 fluorescent tubes for **T5** or **T8** lamps

YOUR MAIN BENEFITS:

Beauty and functionality go hand in hand with reasonable price. Thanks to its special construction this model offers you an **additional price advantage**: It **can be used without any gear tray** (the electrical components are mounted onto the housing directly). A clever solution. Full **range available** in T8, T5, **LED**, IP 65

FIELD OF APPLICATION:

Thanks to the construction principles of gasket, closing system and diffuser our fixtures ensure a high grade of protection (IP 65) against dust, contamination and water permeation. In accordance with their IP grade they can be widely used to illuminate spaces with dusty, humid environment. In order to reach the optimal cost-performance ratio **the basic version of 746-Clever has been developed without gear tray**. The electrical components are mounted directly into the housing.
When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing:** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- The **diffuser** is available in the following versions:
  Injection moulded acrylic (PMMA) in two versions:
  1. transparent, with longitudinal prisms.
  2. light opalescent, designed with respect to their optical characteristics, made with photo etching.
  Main advantages of PMMA: Very good transparency (better than the transparency of glass), unique non-aging properties, chemical and **UV-resistance**.
  Injection moulded polycarbonate (PC). Main advantages: high mechanical strength and high heat and shock resistance and excellent transparency. The PC diffusers are made with optically designed longitudinal, internal prisms and are **UV resistant**.
- **The gasket** between the diffuser and housing is made of non-aging PU (polyurethane) foam. As option gasket with enhanced resistance is available.
- **Fixing the diffuser to the body:** with highly resistant clips made of polyamide or with stainless steel clips
- **Gear tray (reflector):** As option white powder coated steel sheet gear tray or glossy aluminium reflector.
- **Way of installing:** direct (with screws) onto the wall or ceiling resp. suspended.
- **Electrical components:** in basic version (without gear tray) low power factor. In case of construction with gear tray, in accordance with the requested specification: LED, low power factor, high power factor or electronic control gear in T8 or T5.

IBV HUNGÁRIA Lighting and Plastic Processing

IP65

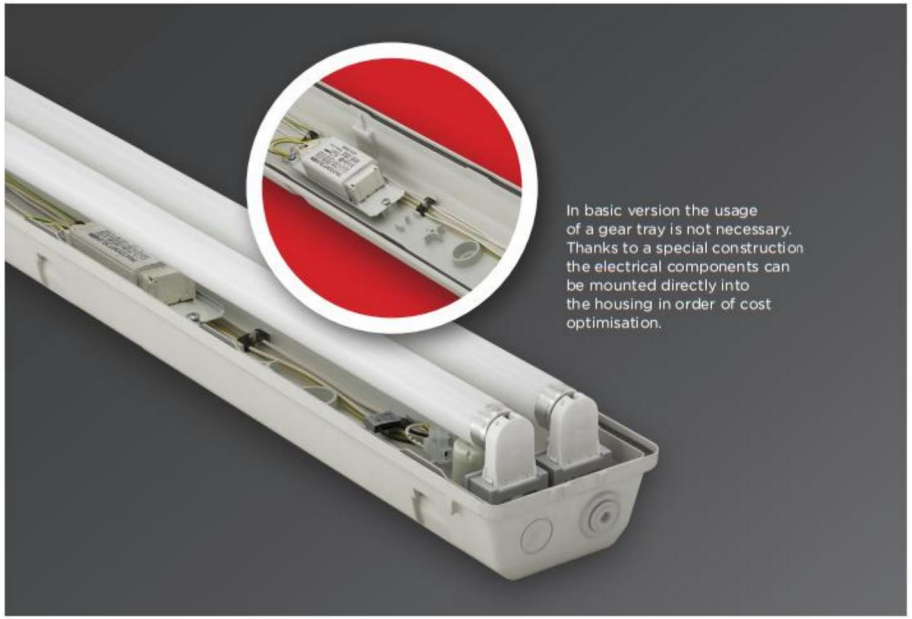
Option:

IP66

PC 850°C

Main technical options

746-Clever can be used in two versions: **without** gear tray (basic) as well as **with** gear tray (enhanced)



In basic version the usage of a gear tray is not necessary. Thanks to a special construction the electrical components can be mounted directly into the housing in order of cost optimisation.

Optimized economical packaging with plastic net. On request traditional carton box resp. 4-pcs-carton box packaging available.

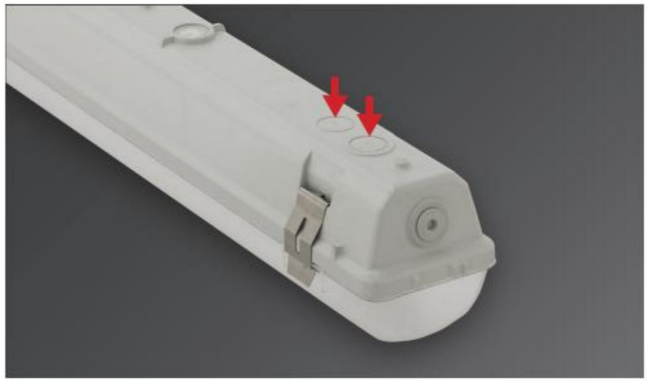
746-Clever equipped with LED-tubes

746-Clever equipped with a new opalized diffuser with unique light transmissivity specially developed for LED-applications. More information on LED-versions see in LED-part of the catalogue..

Transparent polycarbonate (PC) or Acrylic (PMMA) diffuser. Both are made with optically designed longitudinal internal prisms and are UV resistant.

The light opalescent PMMA diffusers, designed with respect to their optical characteristics, are made with photo etching and are UV resistant.

Fixing the diffuser to the body: With secure, one part captive plastic or stainless steel clips.



Several possibilities for cable entry.

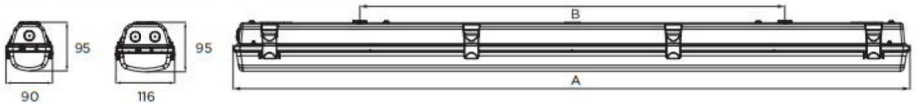
Further options:

- LED
- emergency kit
- through wiring
- aluminium reflector
- dimmable ballast
- rapid connector
- halogen-free wiring

Technical data

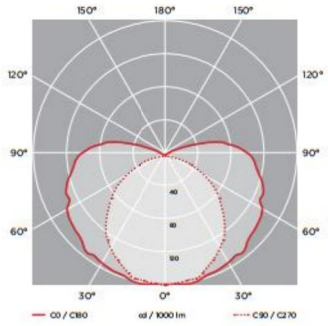
Type	Tube/Lampholder	Power (W)	Dimensions A (mm)	Dimensions B (mm)	Weight (kg)
With B2 magnetic ballast for T8 fluorescent tubes, version without gear tray					
746 118 IND	T8/G13	1 x 18	669	415	1,31
746 136 IND	T8/G13	1 x 36	1 277	800	1,74
746 158 IND	T8/G13	1 x 58	1 577	1 100	2,43
746 218 IND	T8/G13	2 x 18	669	415	1,49
746 236 IND	T8/G13	2 x 36	1 277	800	2,68
746 258 IND	T8/G13	2 x 58	1 577	1 100	3,91
With electronic control gear for T8 fluorescent tubes, version without gear tray					
746 118 EVG	T8/G13	1 x 18	669	415	0,89
746 136 EVG	T8/G13	1 x 36	1 277	800	1,37
746 158 EVG	T8/G13	1 x 58	1 577	1 100	1,67
746 218 EVG	T8/G13	2 x 18	669	415	1,09
746 236 EVG	T8/G13	2 x 36	1 277	800	1,79
746 258 EVG	T8/G13	2 x 58	1 577	1 100	2,13

Schematic drawing with main dimensions

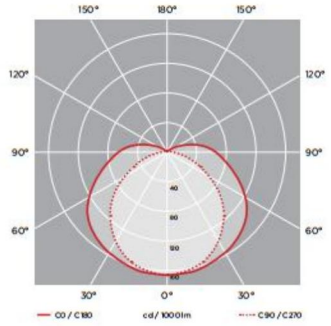


Photometric curves:

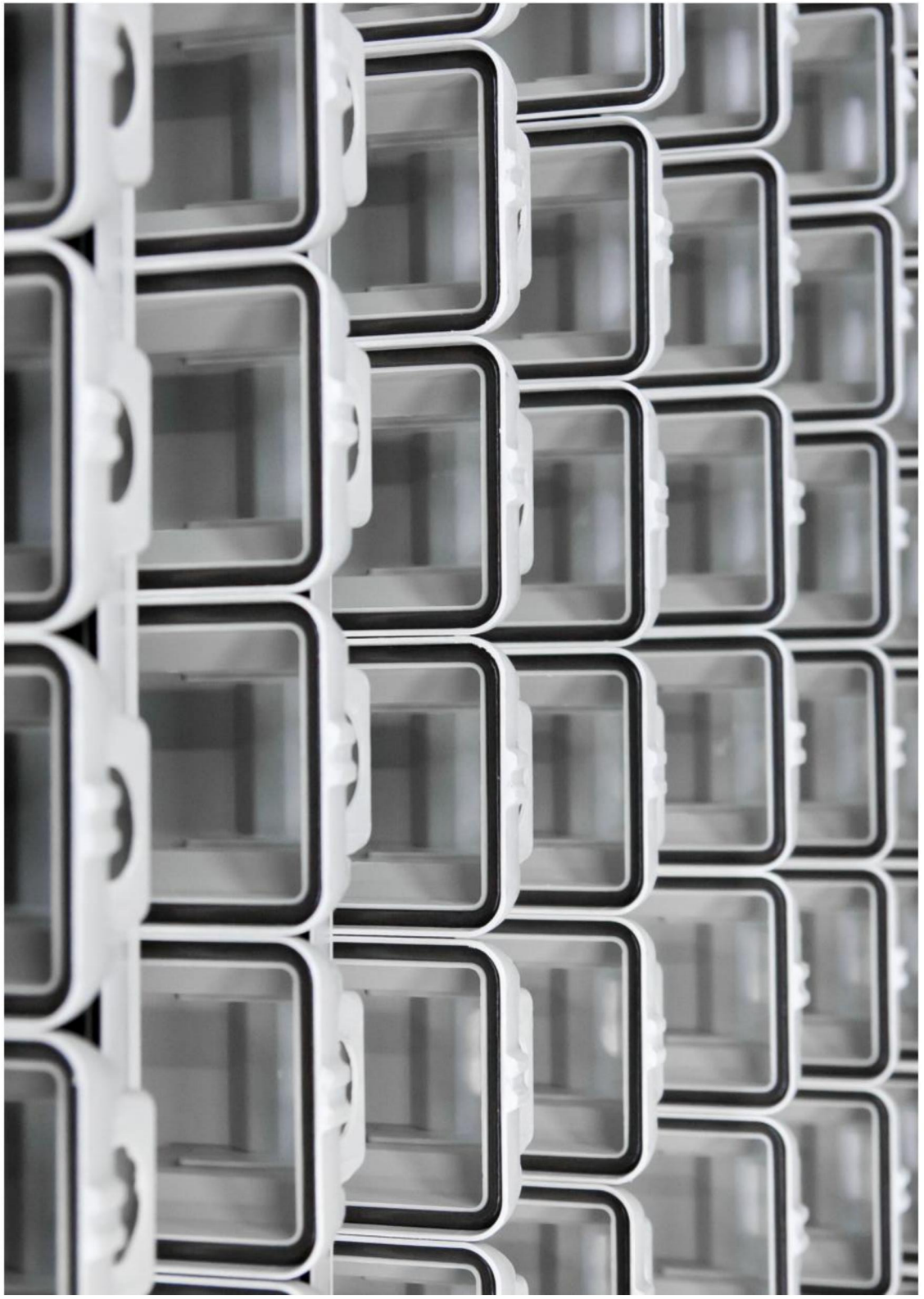
746-Clever 1x36 W



746-Clever 2x36 W



IBV HUNGÁRIA
Lighting and Plastic Processing



SERIES 770-FARMER

Industrial dust- and waterproof luminaires for chemically agressive environment

With 1 and 2 fluorescent tubes
For T8 lamps

CE

770-FARMER

IP65

YOUR MAIN BENEFITS:
The shape of 770-Classic adapted for applications in chemically agressive environment.

FIELD OF APPLICATION:

Thanks to their special construction our diffuser covered fittings ensure a high grade of protection (IP 65) against dust, contamination and water permeation. In accordance with their IP grade, they can be widely used to illuminate spaces with dusty, humid and **chemically aggressive** environment.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing:** It is made of flame retardant glass-fiber reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- **Diffuser:** For a long-term fight against chemicals we equipped the 770–Farmer with an injection moulded **SAN diffuser** (styrene acrylonitrile). Main advantages: strong, resistant, deformable in very slight degree only, transparent, UV-resistant.
- The **gasket** between the diffuser and the housing is ensured by a special sealing with enhanced resistance.
- **Fixing the diffuser to the body:** With highly resistant stainless steel or plastic (POM) clips.
- **Gear tray** (reflector): White powder coated steel sheet. On request glossy aluminium reflector is available.
- **Way of installing:** direct onto the wall or ceiling resp. suspended.
- **Electrical components:** in accordance with low power factor (magnetic ballast) or electronic control gear.

IBV HUNGÁRIA Lighting and Plastic Processing

Technical options

The maximum of chemical resistance can be achieved by using special components

Hermetically sealed electronic ballast for maximum resistance

770-FARMER

Ø 26 G13
VVG
EVG
EVG DIMM

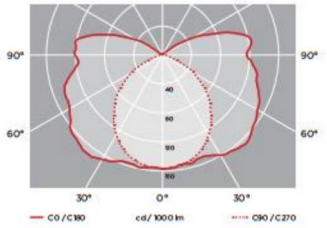
Technical data

Type	Tube/Lampholder	Power (W)	Dimensions (mm) A	Dimensions (mm) B	Weight (kg)
With B2 magnetic ballast for T8 fluorescent tubes					
770 136 IND	T8/G13	1 x 36	1278	800	3,47
770 158 IND	T8/G13	1 x 58	1578	1100	3,80
770 236 IND	T8/G13	2 x 36	1278	800	5,21
770 258 IND	T8/G13	2 x 58	1578	1100	5,74
With electronic control gear for T8 fluorescent tubes					
770 136 EVG	T8/G13	1 x 36	1278	800	3,47
770 158 EVG	T8/G13	1 x 58	1578	1100	3,80
770 236 EVG	T8/G13	2 x 36	1278	800	5,21
770 258 EVG	T8/G13	2 x 58	1578	1100	5,74

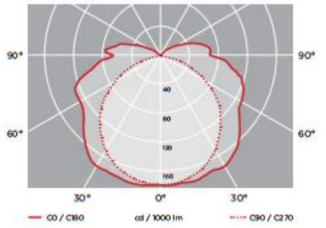
Schematic drawing with main dimensions:

Photometric curves:

770-Farmer 1x58 W



770-Farmer 2x58 W



IBV HUNGÁRIA Lighting and Plastic Processing

SERIES 770-EXTREME +60°C

Industrial dust- and waterproof luminaires for ambient temperature +60 °C

With 1 and 2 fluorescent tubes
For T8 lamps

CE

770-EXTREME +60°C

IP65

IP67

PC 850°C

YOUR MAIN BENEFITS:
The shape of 770-Classic adapted for extremely high (+60) ambient temperatures.

FIELD OF APPLICATION:

Thanks to their special construction our diffuser covered fittings ensure a high grade of protection (IP 65 or IP 67) against dust, contamination and water permeation even at extremely high ambient temperature. In accordance with their IP grade, they can be widely used to illuminate spaces with dusty, humid environment up to Ta +60 °C.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing and cover:** : It is made of flame retardant glass-fiber reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.

  The **diffuser** can be ordered in injection **moulded polycarbonate** (PC). Main advantages: high mechanical strength and high heat resistance, as well as excellent transparency and **UV-resistance.**

- The **gasket** between the diffuser and the housing is ensured by anti-aging silicone sealing.
- **Fixing the diffuser to the body:** with stainless steel clips.
- **Gear tray** (reflector): White powder coated steel sheet. On request glossy aluminium reflector is available.
- **Ways of installing:** direct onto the wall or ceiling resp. suspended.
- **Electrical components:** in accordance with low power factor (magnetic ballast).

IBV HUNGÁRIA Lighting and Plastic Processing

Technical options

770-EXTREME +60°C

Ø 26 G 13

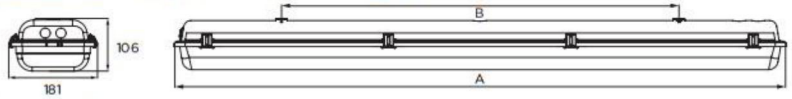
VVG

Technical Data

Type	Tube/Lampholder	Power (W)	Dimensions (mm) A	Dimensions (mm) B	Weight (kg)
With B1 magnetic ballast for T8 fluorescent tubes (Extreme +60°C)					
770 136 +60	T8/G13	1 x 36	1 278	800	3,14
770 158 +60	T8/G13	1 x 58	1 578	1100	4,04
770 236 +60	T8/G13	2 x 36	1 278	800	4,39
770 258 +60*	T8/G13	2 x 58	1 578	1100	5,42

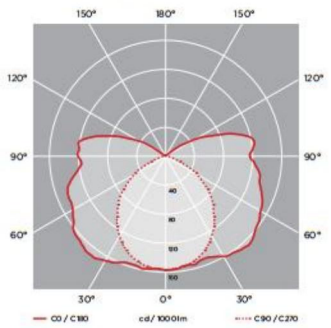
* coming soon

Schematic drawing with main dimensions:

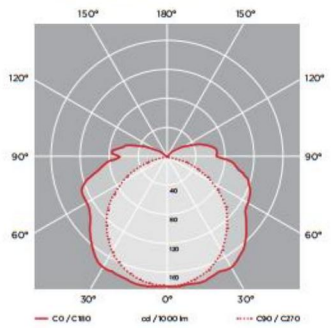


Photometric curves:

770-Extreme +60 1x36



770-Extreme +60 2x36



IBV HUNGÁRIA Lighting and Plastic Processing

SERIES 770-EXTREME -30°C

Industrial dust- and waterproof luminaires for ambient temperature -30 °C

With 1 and 2 fluorescent tubes
For T8 lamps

CE

770-EXTREME -30°C

IP65

PC 850°C

YOUR MAIN BENEFITS:
The shape of 770-Classic adapted for **extremely low (-30°C)** ambient temperatures.

FIELD OF APPLICATION:

Thanks to their special construction our diffuser covered fittings ensure a high grade of protection (IP 65 or IP 67) against dust, contamination and water permeation even at extremely low ambient temperature. In accordance with their IP grade, they can be widely used to illuminate spaces with dusty, humid environment down to Ta -30 °C.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing:** It is made of flame retardant glass-fiber reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- The **diffuser** can be ordered in injection **moulded polycarbonate** (PC). Main advantages: high mechanical strength and high heat resistance, as well as excellent transparency and **UV-resistance**.
- The **gasket** between the diffuser and the housing is ensured by anti-aging silicone sealing.
- **Fixing the diffuser to the body:** with stainless steel clips.
- **Gear tray** (reflector): White powder coated steel sheet. On request glossy aluminium reflector is available.
- **Ways of installing:** direct onto the wall or ceiling resp. suspended.
- **Electrical components:** in accordance with electronic control gear, on request through wiring is available

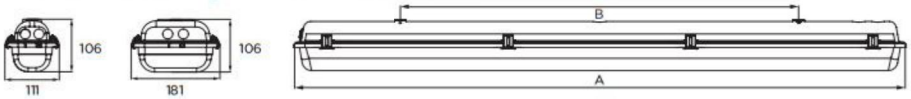
IBV HUNGÁRIA Lighting and Plastic Processing

Technical options

Technical data

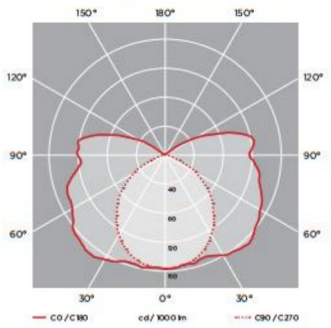
Type	Tube/Lampholder	Power (W)	Dimensions (mm) A	Dimensions (mm) B	Weight (kg)
With electronic control gear for T8 fluorescent tubes (Extreme -30°C)					
770 136 -30	T8/G13	1 x 36	1 278	800	3,14
770 158 -30	T8/G13	1 x 58	1 578	1 100	4,04
770 236 -30	T8/G13	2 x 36	1 278	800	4,39
770 258 -30	T8/G13	2 x 58	1 578	1 100	5,42

Schematic drawing with main dimensions:

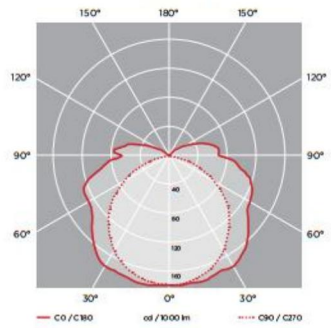


Photometric curves:

770-Extreme -30 1x36



770-Extreme -30 2x36



770-EXTREME -30°C

Ø 26 G13

EVG

IBV HUNGÁRIA Lighting and Plastic Processing

744-PRACTICAL

Universal, dust- and waterproof luminaires for versatile application

For 2 fluorescent tubes
For T8, T5 lamps or LED´s

Patent weltweit
Worldwide patent

YOUR MAIN BENEFITS:
Unique in versatility. An all-round luminaire with worldwide patented clipless closing mechanism.
New and unique! Available in IP 54 or IP 65

FIELD OF APPLICATION:

Thanks to the completely new production technology 744-Practical is very **versatile** and **can be used in a variety of applications**.

Even without gasket it ensures a protection grade of IP 54 against dust, contamination and water permeation, applaying a gasket the protection grade can be increased to IP 65. In IP 54 version with the optically designed prismatic diffuser the luminaire is **predestinated to any indoor application**, the IP 65 version can be widely used to illuminate spaces with dusty, humid environment.

When using outdoors, 744-Practical should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing and diffuser:** Both are made of moisture, UV- and temperature resistant polypropylene (PP) in transparent or opalized colour.
  The diffusers are designed with respect to their optical characteristics, are UV-stabilized, at versions with LED´s opalized diffusers are available.
- At IP 65 version the **gasket** between the diffuser and housing is made of non-aging PU (Polyurethane) foam, in case of IP 54 version the sealing is ensured through the most precise joining between the housing and diffuser (no gasket needed!).
- **Gear tray** (reflector): In order to reach the optimal cost-performance ratio, 744-Practical can be used without any gear tray. The electrical components are mounted directly into the housing.
  As option white powder coated steel sheet is available.
- **Fixing of the diffuser to the body:** with unique clipless solution (worldwide patent)
- **Way of installing:** with ceiling (suspension) brackets onto the ceiling.
- **Electrical components:** in accordance with the requested specification: low power factor, electronic control gear as well as LED-tubes.

Main technical options

744-Practical will impress you by its numerous new features, that represent further benefits for the enduser additionally to the IP rate: **Transparent housing** for brighter illumination of the ceiling, unique **clipless** solution, easy-to-install **ceiling** (suspension) **brackets** etc.

Cost-saving alternative without gear tray. The electrical components are mounted directly into the housing. Version with gear tray available on request.

744-Practical equipped with LED-tubes. More information on LED-versions see in LED-part of the catalogue.

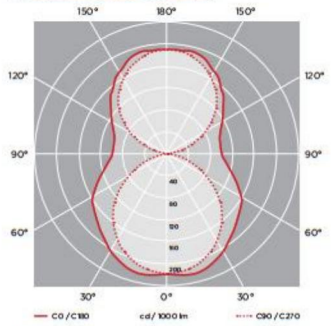
Thanks to its aesthetical appearance and versatility 744-Practical can be used in a plenty of applications universally.

Technical data (extract):

Type	Power (W)	Dimensions (mm) A	Dimensions (mm) B	Weight (kg)
With B2 magnetic ballast for T8 fluorescent tubes, without gear tray				
744 236 IND	2 x 36	1275	800	2,90
With electronic control gear for T8 fluorescent tubes, without gear tray				
744 236 EVG	2 x 36	1275	800	1,14
With LED-tubes (T8), without gear tray				
744 236 LT	can vary	1275	800	1,40

Schematic drawing with main dimensions:

Photometric curves:



744-Practical 2x36
(without gear tray)

The remaining technical data of the versions of 744-Practical will be updated continuously in our website: www.ibv.hu

SERIES 770-CLASSIC

Industrial dust- and waterproof luminaires

With 1 and 2 fluorescent tubes for **T5** or **T8** lamps or with **LED-tubes**

YOUR MAIN BENEFITS:

Highest class luminaire in traditional construction. Premium product!
Full range available in T8, T5, IP 65 or IP 67

FIELD OF APPLICATION:

Thanks to the gasketed fixtures our diffuser covered fittings ensure a high grade of protection (IP 65 or IP 67) against dust, contamination and water permeation. In accordance with their IP grade, they can be widely used to illuminate spaces with dusty, humid environment.

When using outdoors, the fittings should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing:** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance, mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.

- **The diffuser** can be ordered in several alternatives:
  Injection moulded or blown moulded polycarbonate (PC). Main advantages: high mechanical strength and high heat resistance, as well as excellent transparency.
  Injection moulded or blown moulded acrylic (PMMA). Main advantages: Very good transparency (better than the transparency of glass), unique anti-aging properties and chemical resistance.
  Injection moulded styrene acrylonitrile (SAN). Main advantages: strong, resistant, deformable in very slight degree only, transparent.
  All diffusers are optically designed and are **UV resistant**.

- **The gasket** between the diffuser and the housing is ensured by anti-aging PU (polyurethane) foam, EPDM rubber or silicone sealing.

- **Fixing the diffuser to the body:** with highly resistant clips made of Polyoxymethylene (POM) or with stainless steel clips

- **Gear tray** (reflector): White powder coated steel sheet. As an option glossy aluminium reflector is available.

- **Electrical components:** in accordance with the requested specification: low power factor, high power factor, electronic control gear or LED-tubes.

IP65

IP67

Option:

PC 850°C

Main technical options

Ways of installing: The fittings can be installed direct (with screws) onto wall, ceiling or suspended on chains

Gear tray (reflector): white painted steel sheet, which is fixed to the housing by flexible gear tray retaining clips. Therefore it is easy to remove and suspend it during installation

On request mirror aluminium reflector made of anodised aluminium available

Equipped with Retrofit LED tubes. More information on LED-products see in LED-part of the catalogue.

Further options:
- LED
- dimmable ballast
- protection class II
- through wiring
- rapid connector
- halogen-free wiring

On demand 3 hour maintained emergency module can be ordered

770 - CLASSIC

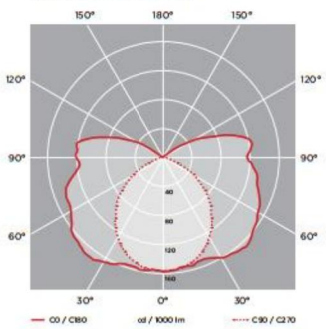
Technical Data

Type	Tube/Lampholder	Power (W)	Dimensions A (mm)	Dimensions B (mm)	Weight (kg)
With B2 magnetic ballast for T8 fluorescent tubes					
770 118 IND	T8/G13	1 x 18	670	460	1,71
770 136 IND	T8/G13	1 x 36	1 278	800	2,63
770 158 IND	T8/G13	1 x 58	1 578	1 100	3,56
770 218 IND	T8/G13	2 x 18	670	460	2,20
770 236 IND	T8/G13	2 x 36	1 278	800	4,09
770 258 IND	T8/G13	2 x 58	1 578	1 100	5,73
With electronic control gear for T8 fluorescent tubes					
770 118 EVG	T8/G13	1 x 18	670	460	1,35
770 136 EVG	T8/G13	1 x 36	1 278	800	2,32
770 158 EVG	T8/G13	1 x 58	1 578	1 100	2,75
770 218 EVG	T8/G13	2 x 18	670	460	1,55
770 236 EVG	T8/G13	2 x 36	1 278	800	3,29
770 258 EVG	T8/G13	2 x 58	1 578	1 100	3,99
With electronic control gear for T5 HE class fluorescent tubes					
770 114 EVG	T5/G5	1 x 14	670	460	1,37
770 128 EVG	T5/G5	1 x 28	1 278	800	2,86
770 135 EVG	T5/G5	1 x 35	1 578	1 100	2,77
770 214 EVG	T5/G5	2 x 14	670	460	1,84
770 228 EVG	T5/G5	2 x 28	1 278	800	3,33
770 235 EVG	T5/G5	2 x 35	1 578	1 100	3,99
With electronic control gear for T5 HO fluorescent tubes					
770 124 EVG	T5/G5	1 x 24	670	460	1,36
770 154 EVG	T5/G5	1 x 54	1 278	800	2,89
770 149 EVG	T5/G5	1 x 49	1 578	1 100	2,96
770 180 EVG	T5/G5	2 x 80	1 578	1 100	2,84
770 224 EVG	T5/G5	2 x 24	670	460	1,93
770 254 EVG	T5/G5	2 x 54	1 278	800	3,44
770 249 EVG	T5/G5	2 x 49	1 578	1 100	4,08
770 280 EVG	T5/G5	2 x 80	1 578	1 100	4,13

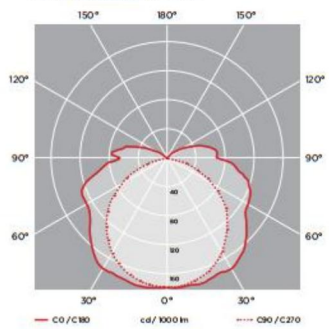
Schematic drawing with main dimensions

Photometric curves:

770-Classic 1x18 W



770-Classic 2x18 W



IBV HUNGÁRIA Lighting and Plastic Processing

SERIES 760-BATTEN

Industrial dust- and waterproof batten luminaires

With 1 and 2 fluorescent tubes for **T5** or **T8** lamps or with **LED**-tubes

YOUR MAIN BENEFITS:

Our batten is made for professionals.
Full range available in T8, T5, LED-tube, IP 65

FIELD OF APPLICATION:

Due to the gasketed fixtures, our batten luminaires ensure high grade of protection (IP 65) against dust, contamination and water penetration. In accordance with their IP grade, they can be used widely to illuminate spaces with dusty, humid environment.

When using outdoors, the luminaires should be protected against direct sunlight and adverse weather conditions.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing and cover:** These are made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good temperature resistance and mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent. The housing and cover are fastened to each other with a normal bolt and nut.
- The **gasket** between the housing and cover is ensured by anti-aging PU (polyurethane) foam or EPDM rubber (on request).
- **Reflector:** As an option glossy aluminium reflector or oval turnable protection tubes with internal anodized aluminium mirror reflector can be ordered. Following accessories are available as well: PC or glass protecting tubes, protection grids, white powder coated steel reflector.
- **Ways of installing:** direct onto the ceiling or suspended on chains.
- **Electrical components:** in accordance with the requested specification: LED-tubes, low power factor, high power factor or electronic control gear.

IP65

PC 850°C

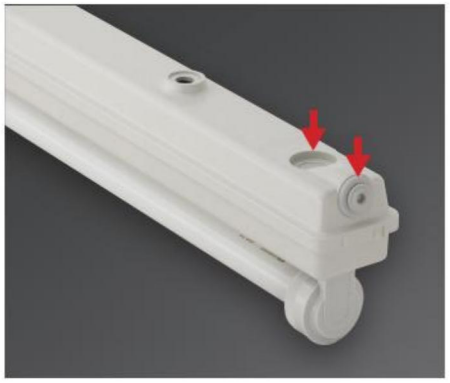
IBV HUNGÁRIA Lighting and Plastic Processing

Main technical options

Equipped with protecting grid

Fixing the housing and the cover with screw release system

Turnable oval protective tube with mirror reflector (available for **T8** tubes only)



Several possibilities for cable entry

White powder coated steel sheet reflector

LED

Batten luminaire with Retrofit LED tubes in IP 65. More information on LED-products see in LED-part of the catalogue.

Glossy aluminium reflector

Equipped with protecting tube

Further options:
- LED
- dimmable ballast
- protection class II
- through wiring
- halogen-free wiring

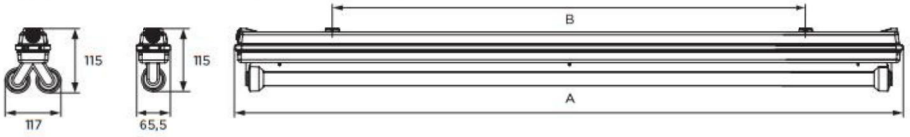
IBV HUNGÁRIA Lighting and Plastic Processing

760 - BATTEN

Technical Data

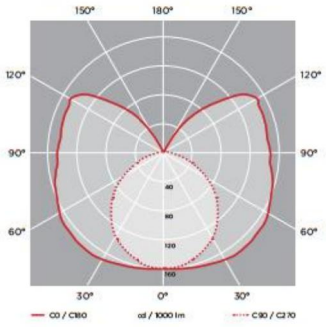
Type	Tube/Lampholder	Power (W)	Dimensions A	(mm) B	Weight (kg)
With B2 magnetic ballast for T8 fluorescent tubes					
760 118 IND	T8/G13	1 x 18	661	320	1,29
760 136 IND	T8/G13	1 x 36	1 271	900	1,73
760 158 IND	T8/G13	1 x 58	1 571	900	2,51
760 218 IND	T8/G13	2 x 18	661	320	1,37
760 236 IND	T8/G13	2 x 36	1 271	900	2,44
760 258 IND	T8/G13	2 x 58	1 571	900	3,74
With electronic control gear for T8 fluorescent tubes					
760 118 EVG	T8/G13	1 x 18	661	320	0,88
760 136 EVG	T8/G13	1 x 36	1 271	900	1,36
760 158 EVG	T8/G13	1 x 58	1 571	900	1,68
760 218 EVG	T8/G13	2 x 18	661	320	1,22
760 236 EVG	T8/G13	2 x 36	1 271	900	2,19
760 258 EVG	T8/G13	2 x 58	1 571	900	1,93
With electronic control gear for T5 HO fluorescent tubes					
760 124 EVG	T5/G5	1 x 24	661	320	0,96
760 154 EVG	T5/G5	1 x 54	1 271	900	1,41
760 180 EVG	T5/G5	1 x 80	1 571	900	1,74
760 224 EVG	T5/G5	2 x 24	661	320	1,09
760 254 EVG	T5/G5	2 x 54	1 271	900	1,66
760 280 EVG	T5/G5	2 x 80	1 571	900	2,01

Schematic drawing with main dimensions:

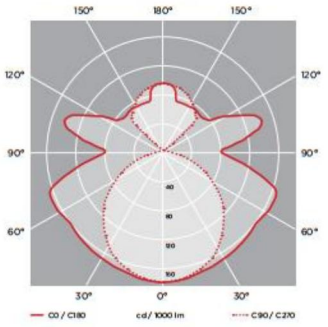


Photometric curves:

760-Batten 1x18 W



760-Batten 2x18 W



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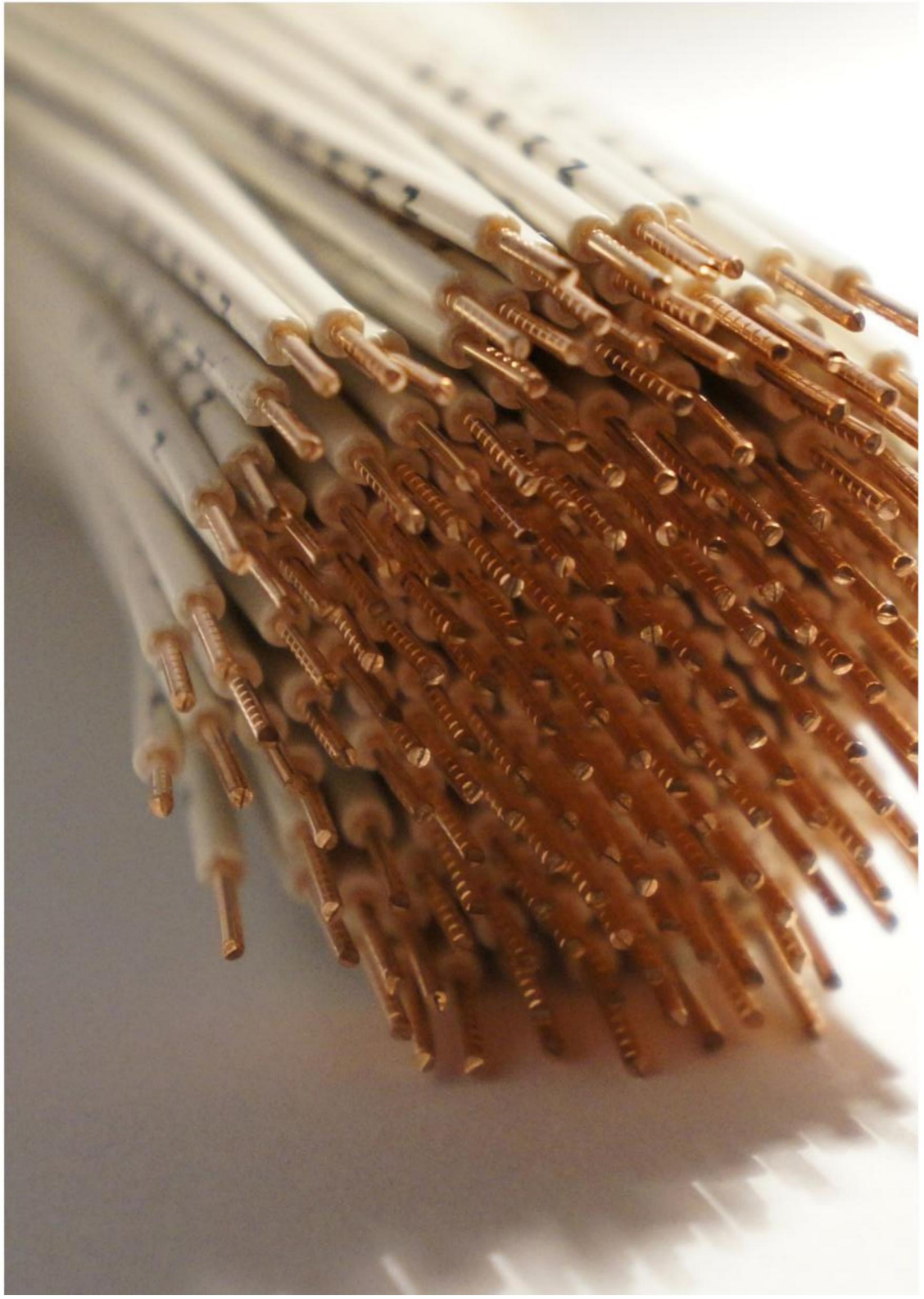
Lighting and Plastic Processing



741-ECONOMY

Industrial dust- and waterproof luminaires

With 1 fluorescent tube for T8 lamps or with LED-tube

LED

CE

11

741-ECONOMY

IP65

PC 850°C

YOUR MAIN BENEFITS:

For applications, where high quality for **limited budget** is needed. Optimized for LED-tubes.
Available in 1x36 version, IP 65

FIELD OF APPLICATION:

Thanks to the gasketed fixtures our diffuser covered fittings ensure a high grade of protection (IP 65) against dust, contamination and water permeation. These luminaires are recommended for applications, where good price/quality ratio is the primary requirement (garages, corridors, cellars).

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing:** It is made of flame retardant glass-fibre reinforced polyester (on request suitable for 850°C glow wire test too), in light grey (RAL7035) colour. This material has very good heat resistance and mechanical stability, furthermore it is a good electrical insulator, it resists the impacts of several chemicals and the impacts of weather conditions. Its stability of size and shape at changing temperatures is excellent.
- **Diffuser:** available in two versions: Injection moulded **polypropylene** (PP) or polycarbonate (PC). Main advantages: high mechanical strength and high heat resistance, as well as excellent transparency. The diffusers are optically designed and are **UV resistant**.
- The **gasket** between the diffuser and the body is ensured by non-aging PU (polyurethane) foam.
- **Fixing the diffuser to the housing:**
  with highly resistant clips made of Polyoxymethylene (POM) or with stainless steel clips
- **Ways of installing:** The fixtures can be mounted onto the ceiling or wall, or can be suspended on chains.
- **Electrical components:** in accordance with the requested specification: low power factor, high power factor, electronic control gear or LED-tubes.

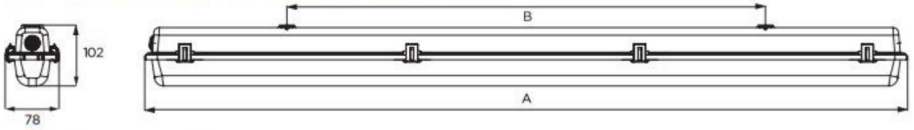
Main technical options

The electrical components are directly mounted into the housing, so the usage of a gear tray is needless, which leads to cost optimisation.

Technical Data

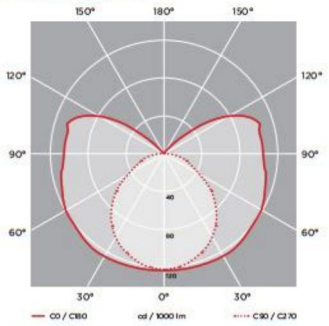
Type	Tube/Lampholder	Power (W)	Dimensions (mm) A	Dimensions (mm) B	Weight (kg)
With B2 magnetic ballast for T8 fluorescent tubes					
741 136 IND	T8/G13	1 x 36	1 275	800	1,69
With electronic control gear for T8 fluorescent tubes					
741 136 EVG	T8/G13	1 x 36	1 275	800	1,14
With LED-tubes (T8), without gear tray					
741 136 LT	T8/G13	can vary	1 275	800	1,71

Schematic drawing with main dimensions



Photometric curves

741-Economy 1x36 W



Further options:
- LED-tube
- halogen-free wiring

Ø 26 G 13

VVG

EVG

742-TRANSPARENT

Industrial dust- and waterproof luminaires

For 1 fluorescent tube for T8 lamps

YOUR MAIN BENEFITS:

Clipless luminaire in IP 65 with **transparent** housing.
High quality for unbeatable price.
Available in 1x36 version, IP 65

FIELD OF APPLICATION:

Thanks to the construction principles of gasket, closing system and diffuser our fixtures ensure a high grade of protection (IP 65) against dust, contamination and water permeation. In accordance with their IP grade they can be widely used to illuminate spaces with dusty, humid environment in the most economical way.

In order to reach the optimal cost-performance ratio the 742-Transparent has been developed without gear tray. The electrical components are mounted directly into the housing.

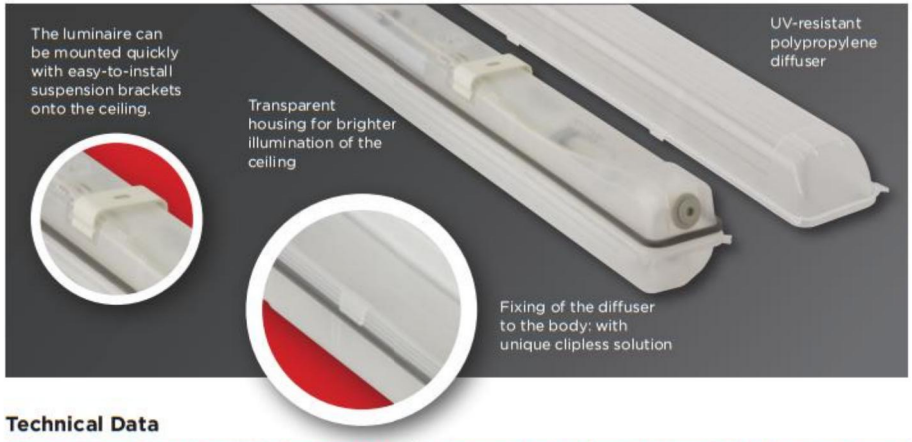
742-Transparent is suitable for indoor applications.

TECHNICAL DESCRIPTION AND BENEFITS:

- **Housing and diffuser:** Both are made of moisture, UV- and temperature resistant polypropylene (PP) in light opalescent colour.
  Main advantages: The optically designed opalescent diffusers are made with photo etching and are UV resistant.
- The **gasket** between the diffuser and housing is made of non-aging PU (polyurethane) foam.
- **Fixing of the diffuser to the body:** with unique clipless solution
- **Way of installing:** with suspension brackets onto the ceiling.
- **Electrical components:** in accordance with the requested specification: low power factor (magnetic ballast) or electronic control gear

Main technical options

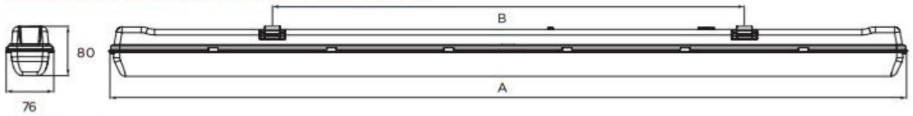
Thanks to the special construction of the luminaire no gear tray is necessary. The electrical components are mounted directly into the housing in order of cost optimisation. This luminaire represents the cheapest solution for your waterproof lighting with that.



Technical Data

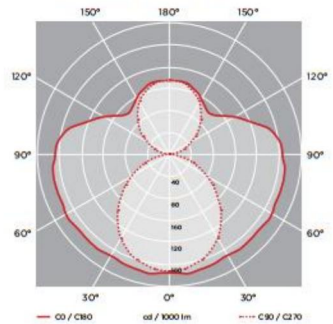
Type	Tube/Lampholder	Power (W)	Dimensions (mm) A	Dimensions (mm) B	Weight (kg)
With B2 magnetic ballast for T8 fluorescent tubes, version without gear tray					
742 136 IND	T8/G13	1 x 36	1 275	752	1,39
With electronic control gear for T8 fluorescent tubes, version without gear tray					
742 136 EVG	T8/G13	1 x 36	1 275	752	0,854

Schematic drawing with main dimensions



Photometric curves:

742-Transparent 1x36 W



Further options:
- LED-tube
- halogen-free wiring

RESISTANCE TO CHEMICALS

Since the aggressive agents in liquid or gas form can destroy the plastic parts of the lighting fixtures, one must pay increased attention to the selection of the proper materials. The following table will help in this selection. It contains the most frequently used chemicals. More information can be found on our website (www.ibv.hu).

CHEMICALS	diffuser PMMA	diffuser PC	housing GRP
ALCOHOLS			
Alcohol up to 30%	+++	+++	+++
Alcohol concentrate	o	o	o
Methanol	o	o	o
Glycerine	+++	++	+++
Glycol	+++	+++	+++
AQUEOUS SOLUTIONS			
Sea water	+++	+++	+++
Hydrogen Peroxide up to 40%	o	++	o
Hydrogen Peroxide over 40%	o	++	o
Metal salts and their aqueous solutions	+++	+++	+++
Salt solutions	+++	+++	+++
GASES			
Carbon dioxide	+++	+++	+++
Carbon monoxide	+++	+++	+++
HYDROCARBONS			
Benzene	o	o	o
Diesel oil	+++	++	+++
Petroleum Ether	+++	++	+++
Aliphatic Hydrocarbons	++	+++	++
Aromatic Hydrocarbons	o	o	++
OILS			
Aniline	o	o	o
Machine-tool oils	o	o	+++
Diesel oil	o	o	+++
Brake oil	o	o	o
Flammable acid oils	o	++	+++
Camphor oil	o	o	o
Lubricating oil	++	+++	+++
Silicone oil	+++	+++	+++
Paraffin oil	++	+++	+++
Saturated mineral oil	o	o	++

	diffuser PMMA	diffuser PC	housing GRP
INORGANIC ACIDS			
Battery acid	+++	+++	+++
Bromic acid	o	o	o
Hydrochloric acid up to 20%	+++	+++	+++
Hydrochloric acid over 20%	+++	++	+++
Nitric acid up to 10%	+++	+++	+++
Nitric acid between 10% and 20%	++	++	++
Nitric acid over 20%	o	o	o
Sulphydric acid	+++	+++	+++
Sulphuric acid up to 50%	+++	+++	+++
Sulphuric acid up to 70%	++	++	+++
Sulphuric acid over 70%	o	o	o
Sulphurous acid up to 5%	++	o	++
ORGANIC ACIDS			
Acetic acid up to 5%	++	+++	+++
Acetic acid up to 30%	o	++	+++
Butyric acid	o	++	+++
Citric acid	++	+++	+++
Lactic acid	++	+++	+++
BASIC COMPOUNDS			
Ammonia 25%	+++	o	o
Milk of lime	+++	++	+++
Synthetic basic compounds	+++	++	+++
Sodium hydroxide up to 2%	+++	o	++
Sodium hydroxide up to 10%	+++	o	o
SOLVENTS			
Acetone	o	o	o
Ketone	o	o	o
Chlorofenol	o	o	o
Chloroform	o	o	o
Methylene Chloride	o	o	o
Dioxane	o	o	+++
Ether	o	o	++
Ethyl Acetate	o	o	o
Phenol	o	o	o
Methyl-ethyl ketone	o	o	o
Turpentine	++	++	+++
Pyridine	o	o	o
Carbon tetrachloride	o	o	+++
Xylene	o	o	o

Before installation it must be checked, if there are agents or fumes of agents in the environment of the luminaires, that may damage their plastic parts. The above table refers to an ambient temperature of 25°C±10°C. It is valid only if there are no mechanical effects, which may cause surface deformation, elongation or evolution of capillary cracks.

Legend:

+++ **resistant**
++ **limited resistance**
o **not resistant**

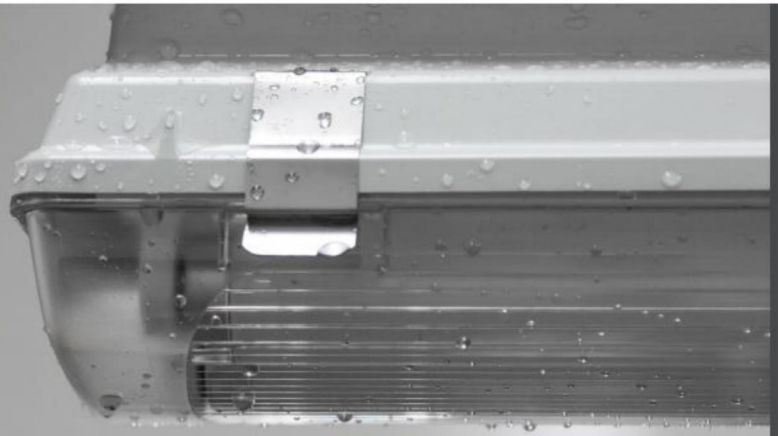
It is recommended to consult installation of the luminaires in chemically hazardous areas with the manufacturer in advance.

Our products are continuously developed, therefore we reserve the right to make technical modifications of the dimensions, technical data, weight and construction stated.

We provide a 2 year general guarantee for our products.

The luminaires presented in this catalogue are available as unassembled sets (without electrical components) on request.

We guarantee the availability of spare parts for our products for 3 years counted from the date of purchase.



IBV HUNGÁRIA
Lighting and Plastic Processing

Light embodied

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