

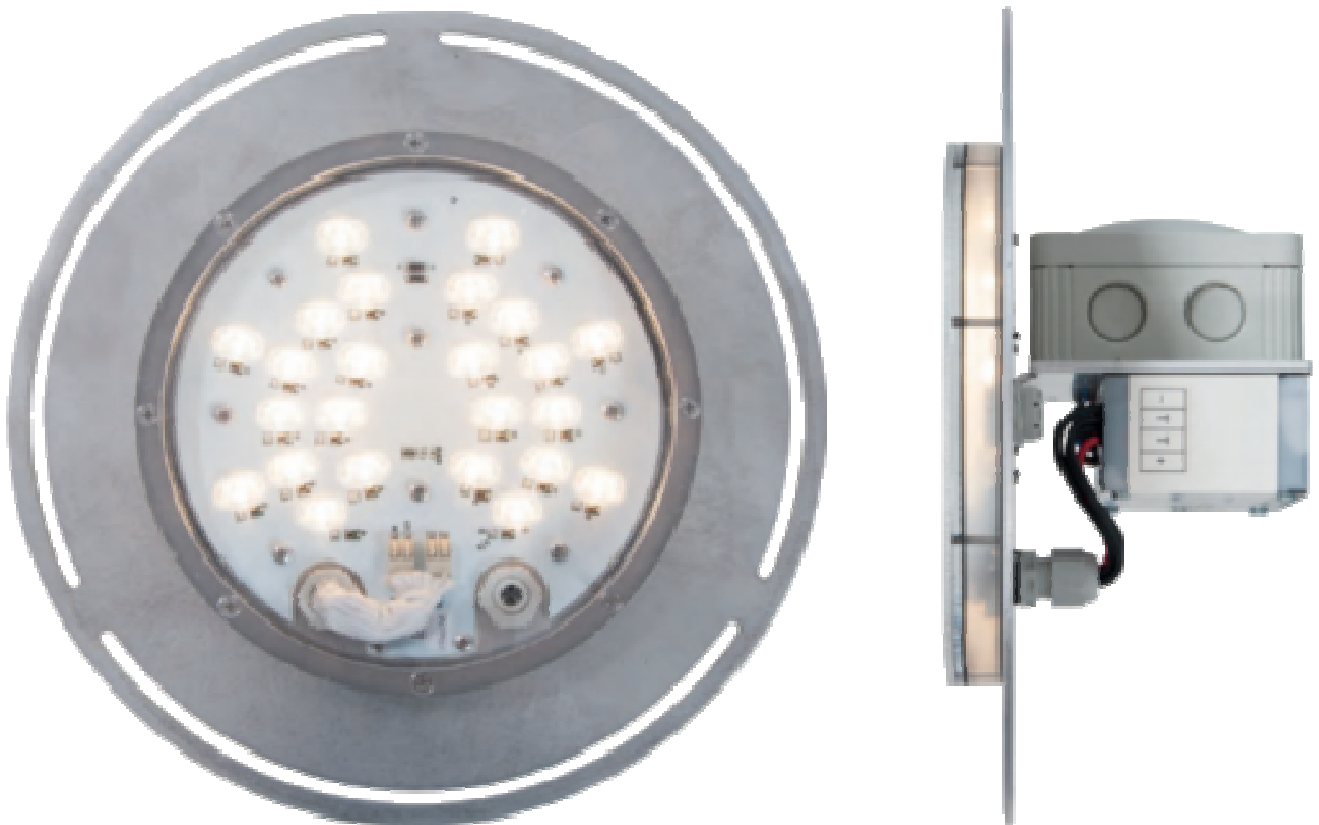


Friedhelm TRAPP GmbH

Ostring 15 - 63533 Mainhausen - Zentrale: 06182/9294-5 - Fax: 06182/9294-69 - Mail: trapp@f-trapp.de

www.f-trapp.de

LED CONVERSION KIT UM77 2DIM



HARMONY BETWEEN HISTORY AND MODERN LED CONVERSION KIT UM77 2DIM

The universal modules as LED conversion kits offer extensive possibilities for customized modernization of existing lighting systems to LED technology - from modern to historic luminaire.

The universal module 77 is designed as LED conversion kit preferably for lanterns, umbrella and bells luminaire.

It represents a completely prefabricated module which can be connected via its own terminals to the lamp or the power connector and replaced easily. The LED conversion kits fulfill independently all relevant safety requirements, are designed to protection class IP64 and are made of VDE-certified electronic components.



www.f-trapp.de

LED CONVERSION KIT UM77 2DIM

Luminaire type

LED conversion kit UM77 2DIM,
typical mounting height 3-6m
IP64, protection class I or II

Application areas

Conversion of existing historic city luminaires in modern, energy-saving LED technology

Preferably suitable for lanterns (Schinkel luminaire) as well as shade and bells luminaire

Predestined applications include residential roads, traffic-calmed streets, pedestrian areas, paths in parks and green areas, market places etc.

Temperature range: t_a -40 ° C to + 35 ° C

Lighting technology

Effective led lens combination, selectively insertable lens optics, flexible in radiation for street and area lighting

LED life:

> 100,000 hours (L80 / B10)

Reliability through LED Bypass

* Color temperatures:

4000 K (NW), 3000 K (WW), 2700 K

other color temperatures on request

Color rendering index:

$R_a > 70$ (NW, WW), $R_a > 80$ (2700 K)

Dimming by reducing the power of all the LED, no partial shutdown

Electronic control unit

with thermal monitoring of the LED module and current reduction

Permissible operating voltage:

220 - 240 V AC, 50/60 Hz control wire for half night switching,

Impulse Withstand Voltage > 6 kV L / N-GND, to 10 kV optional on request

Constant current mode, LED current set at the factory

fully encapsulated electronics block

* Tolerance deviations of $\pm 10\%$ We reserve the right



www.f-trapp.de

LED CONVERSION KIT UM77 2DIM

Light management

Autonomous dimming with two independent dimming levels between 10 ... 100%

0..10V interface for suitable control systems

Luminous flux tracking (CLO), factory programmed

Housing

Tough aluminum and PMMA components

Clear, flat and impact resistant cover made of organic glass

No overhead cooling fins

Hermetic lamps room with integrated pressure equalization valve, improved thermal management by separate modules for LED lamps and control gear, separately replaceable

Electrical connection

Direct connection of the mast line its own connection box with mains terminal, Connection terminal up to 2,5 mm²

Cable gland for strain relief, suitable for cable diameters of 6 to 12 mm optional incl. pre-assembled connection lead

Assembly

The LED conversion kit is equipped with a uniform mechanical mounting interface. Thus, the module can be used both in its photometric emission direction, as well as for various types of lamps equally.

The assembly in the luminaire take place by simple

Accessories such as an intermediate mounting plate that precisely the mechanical installation situation at the luminaire adapts.

Furthermore, it is possible to connect the mains supply through a prefabricated wiring harness. This makes it possible to replace the entire existing electrical kit to the LED system.

The direct connectivity of the power line and a few mechanical fittings, makes the installation remains real minimal.



www.f-trapp.de

LED CONVERSION KIT UM77 2DIM

Approbations

approval mark:
LED control gear:
ENEC 15

LED module:
VDE

connector box:
VDE, KEMA-KEUR

Production locations technologically certified by:
ISO 9001: 2008
ISO / TS 16949: 2009

VDE-monitoring by:
ECS / CIG 021-024

LED-System**

Streetoptics S					
LED current	number of LED	System performance at 50% operation	System performance at 100% operation	Luminous flux Light color 2700K	Luminous flux Light color NW/WW
200 mA	24	12 W	18 W	1.500 lm	1.900 lm
250 mA	24	13 W	21 W	1.850 lm	2.350 lm
300 mA	24	15 W	25 W	2.200 lm	2.800 lm
350 mA	24	17 W	28 W	2.550 lm	3.250 lm
400 mA	24	17 W	32 W	2.850 lm	3.600 lm
450 mA	24	20 W	35 W	3.150 lm	4.000 lm
500 mA	24	22 W	39 W	3.500 lm	4.450 lm
550 mA	24	24 W	42 W	3.800 lm	4.800 lm
600 mA	24	25 W	46 W	4.100 lm	5.200 lm
650 mA	24	27 W	49 W	4.400 lm	5.550 lm

** Subject to technical modifications



www.f-trapp.de

LED CONVERSION KIT UM77 2DIM

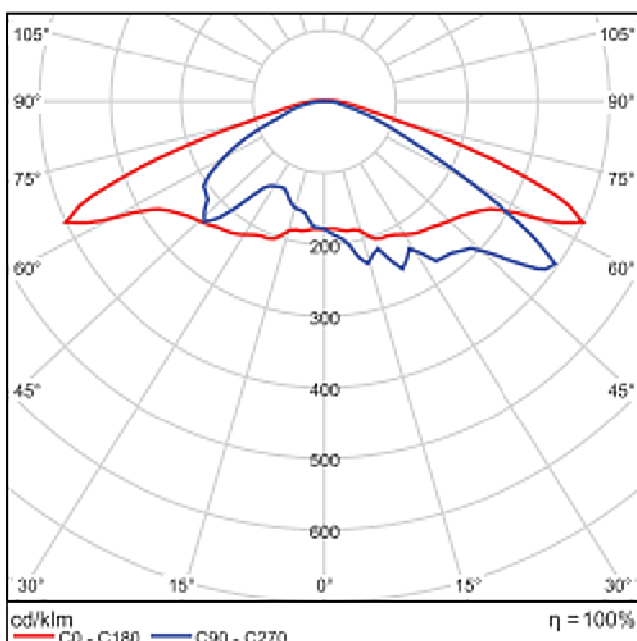
LED-System**

Parkingslot optics P					
LED current	number of LED	System performance at 50% operation	System performance at 100% operation	Luminous flux Light color 2700K	Luminous flux Light color NW/WW
200 mA	24	12 W	18 W	1.700 lm	2.150 lm
250 mA	24	13 W	21 W	2.100 lm	2.650 lm
300 mA	24	15 W	25 W	2.500 lm	3.150 lm
350 mA	24	17 W	28 W	2.900 lm	3.650 lm
400 mA	24	17 W	32 W	3.200 lm	4.100 lm
450 mA	24	20 W	35 W	3.550 lm	4.500 lm
500 mA	24	22 W	39 W	3.950 lm	5.000 lm
550 mA	24	24 W	42 W	4.300 lm	5.400 lm
600 mA	24	25 W	46 W	4.600 lm	5.850 lm
650 mA	24	27 W	49 W	4.950 lm	6.250 lm

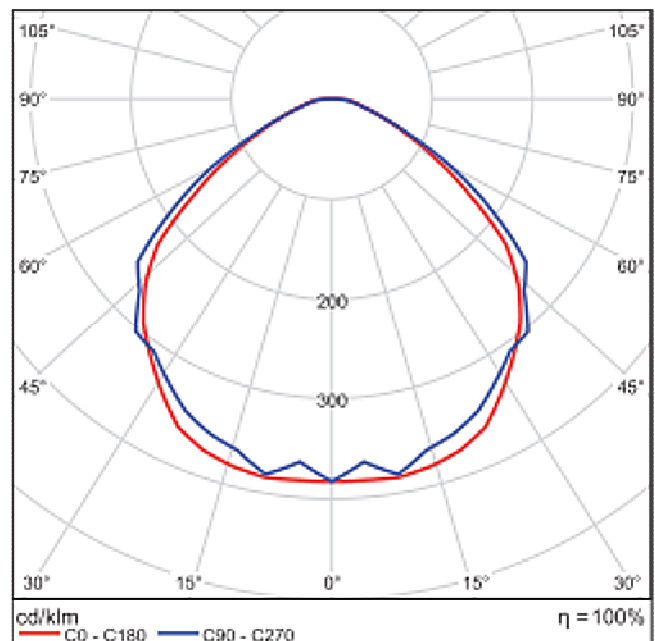
** Subject to technical modifications

Light distribution

Conversation Kit 77 S



Conversation Kit 77 P





www.f-trapp.de

LED CONVERSION KIT UM77 2DIM

Accessories

Intermediate mounting plate



Intermediate mounting aluminum sheet tailored to the geometry of the constituent luminaire inserted nuts for mounting the conversion kit, nature aluminum or in in RAL powder coated

Connection cable with IP68 connector



Mast cable, length 5.0 m with IP68 connector

Mast cable, length 8.0 m with IP68 connector

Connecting cable, length 0.3 m with I P68 connector

Connecting lead, length 12.0 m

Other cable lengths on request

Covering hoods



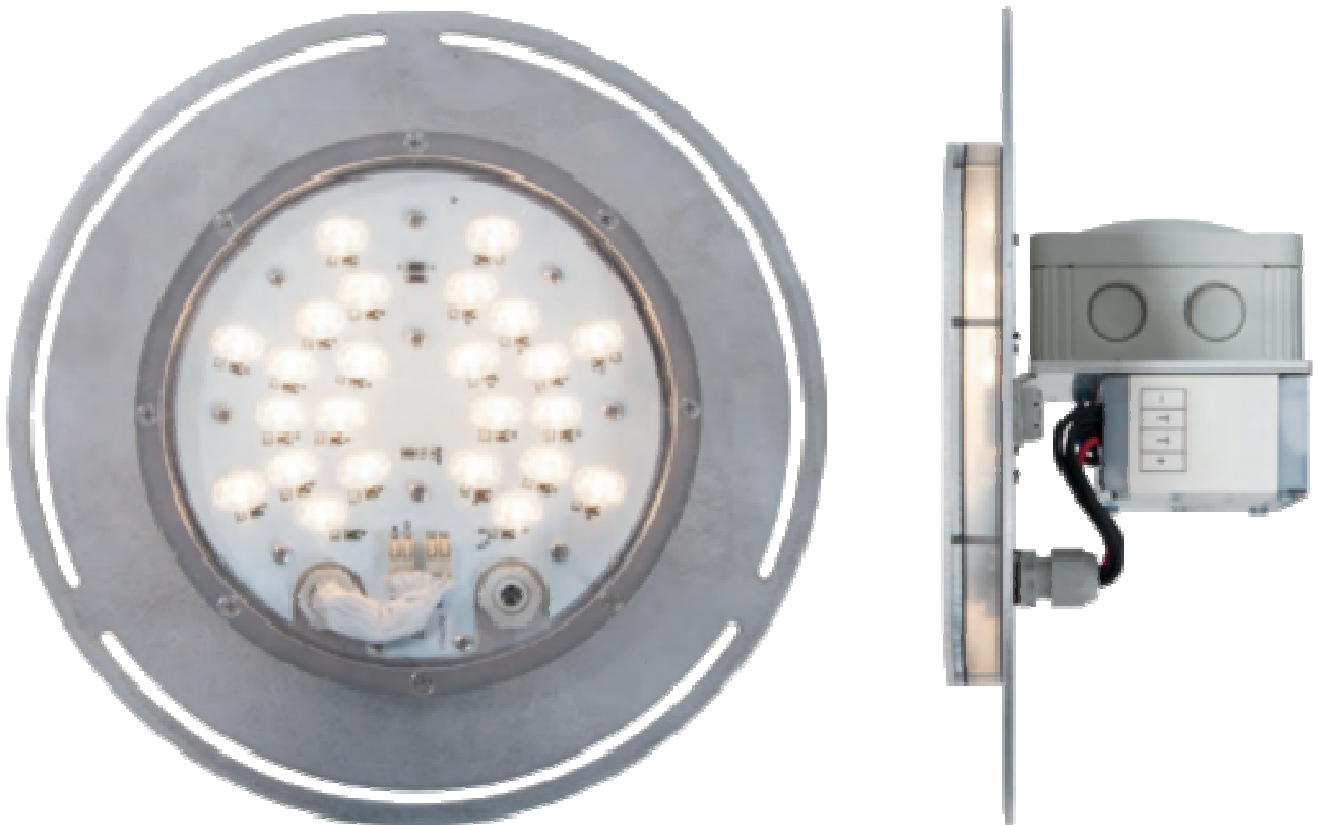
Domecover made of PMMA for bells lights incl. sealing and ventilation element with mosquito repellent

Dome diameter on request



www.f-trapp.de

LED CONVERSION KIT UM77 HPS



HARMONY BETWEEN HISTORY AND MODERN LED CONVERSION KIT UM77 HPS

The universal modules as LED conversion kits offer extensive possibilities for customized modernization of existing lighting systems to LED technology - from modern to historic luminaire.

The universal module 77 is designed as LED conversion kit preferably for lanterns, umbrella and bells luminaire.

It represents a completely prefabricated module which can be connected via its own terminals to the lamp or the power connector and replaced easily. The LED conversion kits fulfill independently all relevant safety requirements, are designed to protection class IP64 and are made of VDE-certified electronic components.



www.f-trapp.de

LED CONVERSION KIT UM77 HPS

Luminaire type

LED conversion kit UM77 HPS,
typical mounting height 3-6m
IP64, protection class I or II

Application areas

Conversion of existing historic city luminaires in modern, energy-saving LED technology

Preferably suitable for lanterns (Schinkel luminaire) as well as shade and bells luminaire

Predestined applications include residential roads, traffic-calmed streets, pedestrian areas, paths in parks and green areas, market places etc.

Temperature range: t_a -40 ° C to + 35 ° C

Lighting technology

Effective led lens combination, selectively insertable lens optics, flexible in radiation for street and area lighting

LED life:

> 100,000 hours (L80 / B10)

Reliability through LED Bypass

* Color temperatures:

4000 K (NW), 3000 K (WW), 2700 K

other color temperatures on request

Color rendering index:

$R_a > 70$ (NW, WW), $R_a > 80$ (2700 K)

Dimming by reducing the power of all the LED, no partial shutdown

Electronic control unit

with thermal monitoring of the LED module and current reduction

Permissible operating voltage:

220 - 240 V AC, 50/60 Hz control wire for half night switching,

Impulse Withstand Voltage > 6 kV L / N-GND, to 10 kV optional on request

Constant current mode, LED current set at the factory

fully encapsulated electronics block

* Tolerance deviations of $\pm 10\%$ We reserve the right



www.f-trapp.de

LED CONVERSION KIT UM77 HPS

Light management

Autonomous dimming with two independent dimming levels between 10 ... 100%

0..10V interface for suitable control systems

Luminous flux tracking (CLO), factory programmed

Housing

Tough aluminum and PMMA components

Clear, flat and impact resistant cover made of organic glass

No overhead cooling fins

Hermetic lamps room with integrated pressure equalization valve, improved thermal management by separate modules for LED lamps and control gear, separately replaceable

Electrical connection

Direct connection of the mast line its own connection box with mains terminal, Connection terminal up to 2,5 mm²

Cable gland for strain relief, suitable for cable diameters of 6 to 12 mm optional incl. pre-assembled connection lead

Assembly

The LED conversion kit is equipped with a uniform mechanical mounting interface. Thus, the module can be used both in its photometric emission direction, as well as for various types of lamps equally.

The assembly in the luminaire take place by simple

Accessories such as an intermediate mounting plate that precisely the mechanical installation situation at the luminaire adapts.

Furthermore, it is possible to connect the mains supply through a prefabricated wiring harness. This makes it possible to replace the entire existing electrical kit to the LED system.

The direct connectivity of the power line and a few mechanical fittings, makes the installation remains real minimal.



www.f-trapp.de

LED CONVERSION KIT UM77 HPS

Approbations

approval mark:
LED control gear:
ENEC 15

LED module:
VDE

connector box:
VDE, KEMA-KEUR

Production locations technologically certified by:
ISO 9001: 2008
ISO / TS 16949: 2009

VDE-monitoring by:
ECS / CIG 021-024

LED-System**

Streetoptics S					
LED current	number of LED	System performance at 50% operation	System performance at 100% operation	Luminous flux Light color 2700K	Luminous flux Light color NW/WW
370 mA	16	13 W	21 W	1.800 lm	2.300 lm
370 mA	24	17 W	29 W	2.750 lm	3.450 lm
** Subject to technical modifications					

Parkingslot optics P					
LED current	number of LED	System performance at 50% operation	System performance at 100% operation	Luminous flux Light color 2700K	Luminous flux Light color NW/WW
370 mA	16	12 W	21 W	2.050 lm	2.600 lm
370 mA	24	13 W	29 W	3.050 lm	3.900 lm
** Subject to technical modifications					

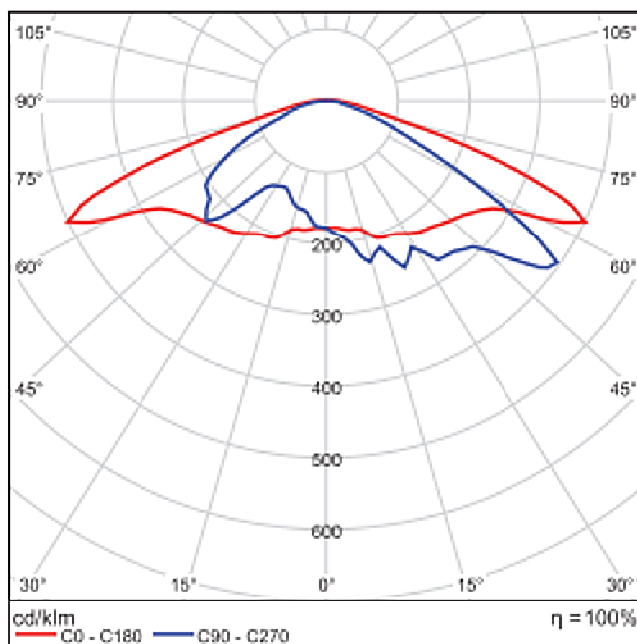


www.f-trapp.de

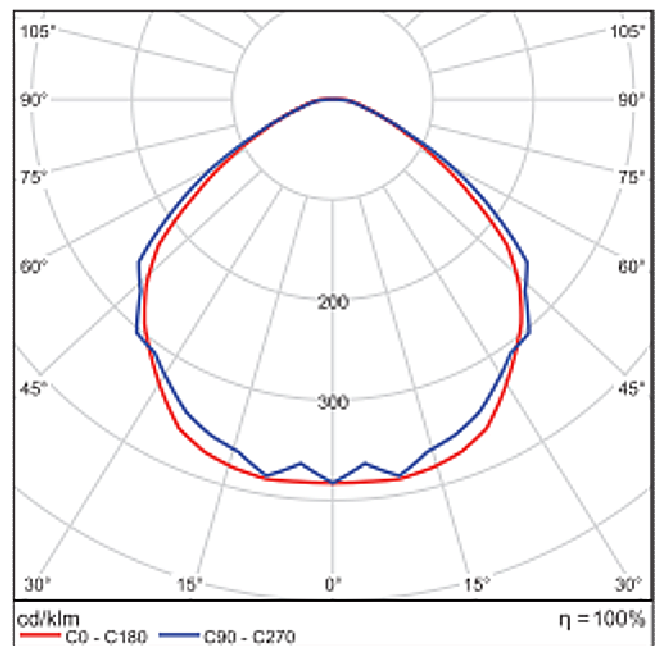
LED CONVERSION KIT UM77 HPS

Light distribution

Conversation Kit 77 S



Conversation Kit 77 P





www.f-trapp.de

LED CONVERSION KIT UM77 HPS

Accessories

Intermediate mounting plate



Intermediate mounting aluminum sheet tailored to the geometry of the constituent luminaire inserted nuts for mounting the conversion kit, nature aluminum or in in RAL powder coated

Connection cable with IP68 connector



Mast cable, length 5.0 m with IP68 connector

Mast cable, length 8.0 m with IP68 connector

Connecting cable, length 0.3 m with I P68 connector

Connecting lead, length 12.0 m

Other cable lengths on request

Covering hoods



Domecover made of PMMA for bells lights incl. sealing and ventilation element with mosquito repellent

Dome diameter on request