

TOLEDO 16W
HIE 80W 19W
RAVENNA CAMPO
125W 46W
HST
HIT LED
70W
HME 250W VEDO 35W
100W 28W VIGO
HSE DE 15W CANTO
MADRID 28W
150W 50W 54W OSLO
FARO SERA



LED KITS
LED FLUSH-MOUNTED
LUMINAIRE HEADS

.hess

ENHANCING URBAN SPACES



Thanks to an extremely varied range of luminaires, Hess is able to fulfil every lighting design requirement for outdoor public spaces and exterior illumination of objects. Perfectly matched, high-quality site furnishings round out the product portfolio.

Combining lighting and site furnishings to optimum effect allows integrated concepts and customised special solutions to be implemented across urban and outdoor spaces in line with the Hess slogan “Enhancing urban spaces”.

Hess is a leading international brand built on a long tradition of innovation and exceptional design. Throughout Europe and far beyond, Hess supports and accompanies architects, planners, cities, municipalities and building contractors from industry, the hotel and food service sector as well as business and administration, starting from the planning stage and continuing all the way through to installation.

In addition to the main factory located in Villingen-Schwenningen, Germany, Hess also has a manufacturing site in Gaffney, South Carolina (USA). Hess has been a company of the Nordeon Group since 1 October 2013.

Our focus on high-quality materials, traditional craftsmanship and original stylistic elements results in designs of distinction, day after day.

Uniqueness made by Hess.

Hess – Enhancing urban spaces



LUMINAIRES – MADE BY HESS

Luminaires from Hess are known for their inimitable design, excellent quality and premium materials.

As a result of the high design standards, our luminaires decisively shape the cityscape and the overall impression of an urban space. The professional craftsmanship that is typical for Hess, as well as the use of the best possible materials, leads to exceptionally high quality and longevity of the luminaires.

Luminaires from Hess: Design and quality for decades – and thus design and quality that are worth maintaining and preserving.



TECHNOLOGICAL CHANGE

Hess luminaires are also subject to technological change, which has been extremely rapid in recent years. With the advent of LED technology, even very “young” luminaires are no longer necessarily up-to-date in terms of lighting and efficiency.

With LED flush-mounted luminaire heads – the LED KITS – we ensure that you can easily convert the existing, high-quality Hess luminaires to state-of-the-art and extremely efficient LED technology without changing your familiar cityscape.

In this way you can continue to enjoy your Hess luminaires for a long time to come.

Hess – Enhancing urban spaces



OVERVIEW

Note:
LED KITS can only
be sold in countries
with 220-240V/50-60Hz.



LED KIT VS

with directional reflector optics (DRO)
for luminaires with a vertical basic structure
up to approx. 5 m mounting height (LPH)



LED KIT HS

with dual soft range optics (DSO)
for bell-shaped and historic luminaires
up to 5 m mounting height



LED KIT SP

with spot optics for projectors as well as
mirror-projector luminaires and secondary
luminaires up to 8 m mounting height



LED KIT LA

with TIR lens optics for luminaires with
dedicated light distribution up to 10 m
mounting height



LED KIT SERA

offers a variety of light
characteristics and thus
has a particularly broad
range of applications



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THE ATMOSPHERE

Good lighting not only makes it easier to see but also conveys a sense of security.

Light defines spaces; light creates atmosphere and influences our mood as well as our perception of the surroundings. In addition to efficiency, the quality of light thus also plays a crucial role in the LED KITS.

Hess: Enhancing urban spaces – by day and by night.



LIGHT SPECTRUM

The spectral composition of artificial light determines the perception of space and the objects in it.

A high-colour rendering index (CRI) is favourable for good perception of real body colours. For this reason, we regularly use LED components with a CRI > 80 in the LED KITS. Light influences people's sense of well-being and biorhythms.

While cold white light spectra with a high blue component has an activating effect, warm light colours are more likely to be perceived as pleasant or cosy.

For planning purposes, it is therefore particularly important to select a light colour appropriate to the use.

Current observations from space show that brightening of the night sky is correlated with the spread of LED illumination. Blue light has a greater effect on diffusion of light than longer wavelengths.

Consequently, the blue component of LED light is considered to be the main cause for brightening of the night sky. As a consequence, we also offer LED KITS with the very warm light colour "candle white" (comparable to "amber") with a very low blue component as standard.

Neutral white

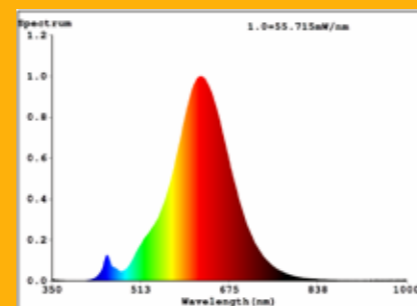
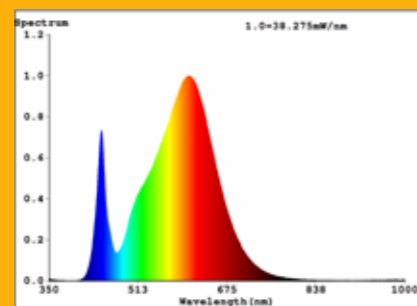
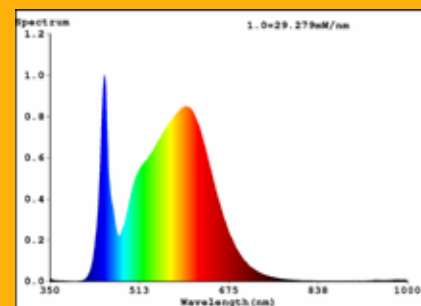
Warm white

Candle white

4000K

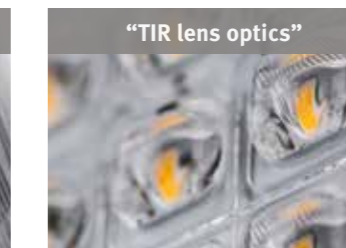
3000K

2000K



VISUAL COMFORT – THANKS TO SOPHISTICATED OPTICS

Many existing luminaires have no dedicated light control. They tend to create a "bright spot" under the luminaire that rapidly dims deeper into the surrounding space. The optical systems dual soft range optics (DSR) for LED KIT HS and directional reflector optics (DRO) for LED KIT VS, which have been specially developed for the application, increase the light intensity deeper in the surrounding space and provide good uniformity through their combination of different reflectors, refractors and TIR lenses (LED KIT LA). At the same time, the DSR and DRO optics feature a comparatively low glare effect.



Creating at least the same or better visual conditions with significantly less energy should be the objective of any conversion to LEDs. The LED KITS therefore have a range of optics tailored to the lighting situation, forming the basis for a tangible improvement to the quality of illumination. In accordance with the "luminaire-in-luminaire" principle, the LED KIT optics replace the lighting components in the existing luminaire.

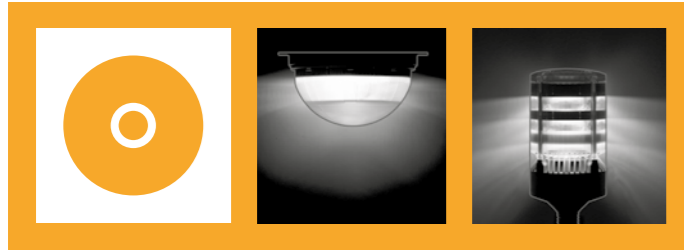


To achieve uniform distribution of light intensity on the usable area and to "fill in" dark zones between two light poles, we have dedicated light control systems. The interplay of precisely calculated reflectors and refractors ensures an optimised light distribution characteristic of the LED KITS. At the same time, the glare effect is limited to a comfortable level. For lighting tasks for which dedicated light distribution is required, we rely on a range of highly engineered TIR lenses for LED KIT LA.

NEEDS-BASED ILLUMINATION – RESOURCE-CONSERVING AND TARGETED

The lighting requirements for a particular illumination task are defined by the spatial distribution of the light and the lighting level over time. To optimise spatial distribution, the LED KITs VS, HS and LA are all available with symmetrical or asymmetrical light distribution.

SYMMETRICAL VERSION



The symmetrical versions are recommended for illuminating squares.

ASYMMETRICAL VERSION



The asymmetrical versions reduce unwanted illumination of house façades and front gardens, for example.

The asymmetrical light distribution ensures that less energy is wasted unintentionally in front gardens or on house façades on residential streets or in case of luminaires close to façades, for example.

The designs with directional optics have in common that their original light emission is limited to an angle $\leq 90^\circ$ to the vertical, that is, in the lower half of the space. In practice (depending on the geometry of the existing luminaire),

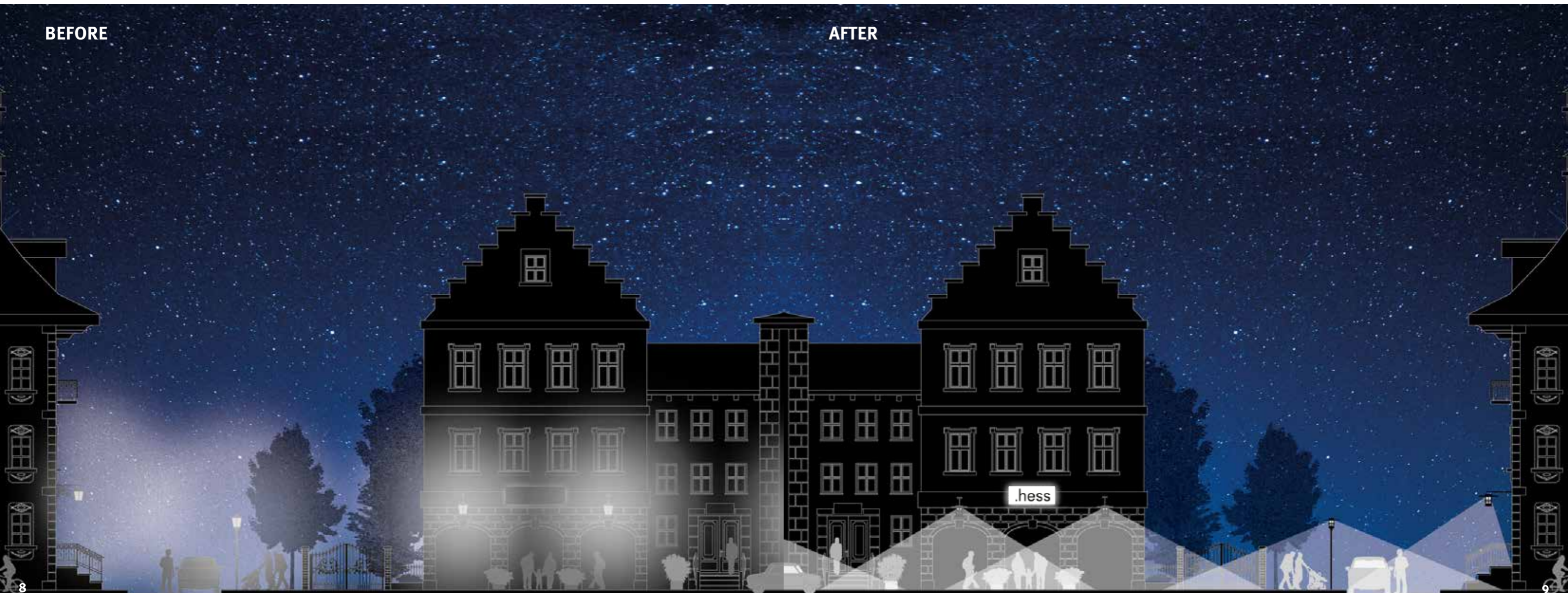
the generation of scattered light due to multiple reflections inside the luminaire or diffusion effects on the luminaire cover cannot be completely prevented, but the amount of light that is emitted directly into the night sky can be kept to a minimum.



These variants meet the so-called “full-cut-off” or “zero emission” criterion, which is required in some European regions.

BEFORE

AFTER



LIGHT – THE REQUIRED AMOUNT AT THE RIGHT TIME

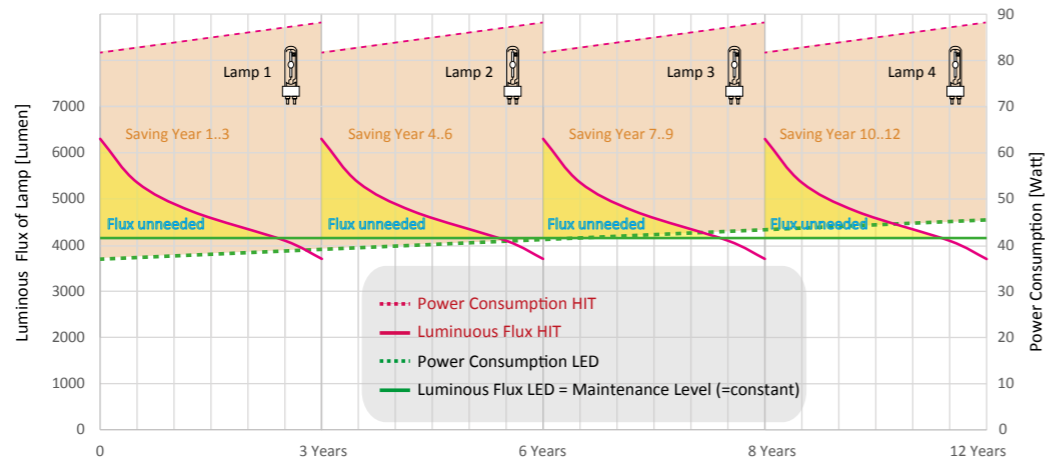
Depending on the type of conversion kit, the luminaire and the respective need, the requirements of lighting standard DIN EN13201 can be met.

Among other things, this standard stipulates compliance with a minimum light intensity at the time of maintenance of a lighting system.

Since each light source/luminaire has a degradation of the radiated luminous flux over time, an initial “over-illumination” is accepted in the planning at the start in order to be able to ensure minimum light intensity at the time of maintenance.

Starting with the “PROFESSIONAL” control equipment, a LED KIT contains integrated management of the electrical power of the LEDs and thus full retention of the luminous flux over the service life. Additional energy savings can also be achieved with time-based dimming control (AutomaticDimControl), which is also integrated.

While the lighting is operated at 100% output in the evening hours, it switches to reduced operation with approx. 35% power consumption (corresponds to approx. 40% luminous flux) at a



time that can be set on the LED KIT or by an external signal. In practice, this method of saving energy is safer than complete shutdown of every second streetlight, for example, which is inevitably associated with the creation of dangerous dark zones.

GREAT SAVINGS POTENTIAL

The combination of power management and dimming of the lighting system during the darkest hours of the night offers great savings potential. Even compared to the already very efficient metal halide lamps, over 70% energy savings are possible

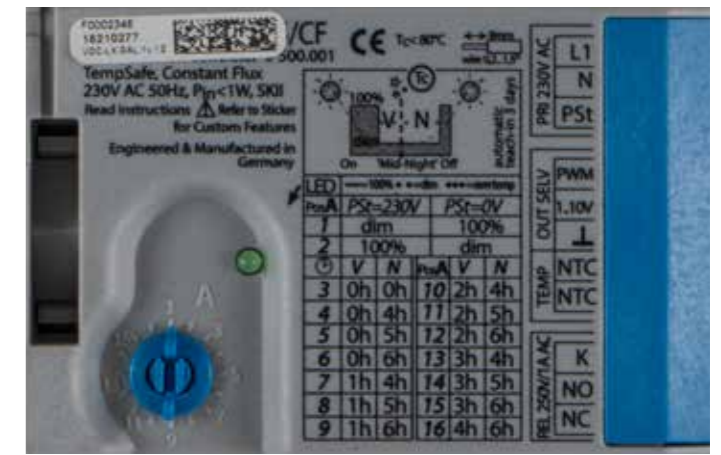
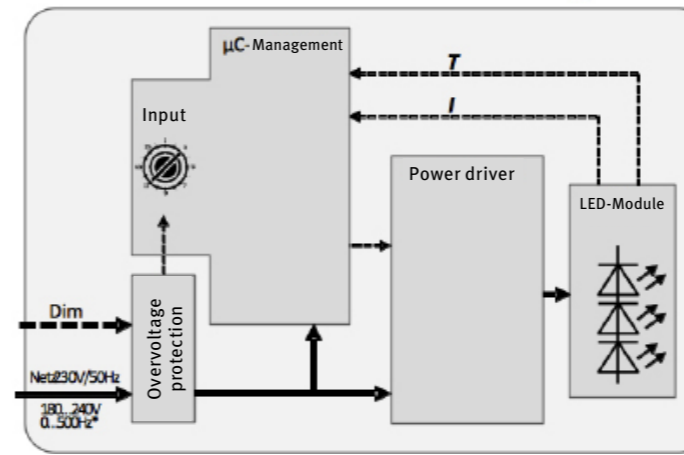
with the same lighting conditions, as the sample calculation shows. Added to this are the cost savings from the avoidance of four lamp changes.

| Assumptions | | Output specifications | HIT 70W | LED | HIT 150W | LED |
|---|------|---|---------|------|----------|------|
| Lighting hours per year [h] | 4000 | Output at start P_s [W] | | 38 | | 62 |
| Output in dimming mode [%] | 40% | Output at end P_e [W] | | 50 | | 88 |
| Dimming hours/night [h] | 6 | Average output P_m [W] | 88 | 44 | 178 | 75 |
| * Efficiency of LED driver [%] | 89 % | | | | | |
| * Efficiency of HIT ballast [%] | 84 % | Energy consumption per year [kWh/a] | | | | |
| * (Info required for funding application) | | in full-load mode | 352 | 176 | 712 | 300 |
| | | with dimming mode (not with HIT) | 352 | 119 | 712 | 202 |
| | | Savings, LED vs. HIT | | | | |
| | | in full-load mode abs. [kWh/a] / relative | 176 | 50 % | 412 | 58 % |
| | | in dimming mode abs. [kWh/a] / relative | 233 | 66 % | 510 | 72 % |

HOLISTIC LED CONTROL CONCEPT

The extreme range of climatic conditions places high demands on the operation of outdoor LED luminaires and their components. In order to guarantee safe and reliable operation of the sensitive LED electronics, in our LED KIT products we adhere to a holistic LED control concept that constantly records all relevant LED operating parameters on a microprocessor-controlled basis, guaranteeing optimum LED operation at all times. As a “user interface”, it contains rotary switches for direct input of the desired operating parameters as well as an input to which external control signals can be connected.

Depending on the LED KIT family, the concept offers different control equipment, which can be specified as a product variant. The universal mapping of all functions and parameters in the firmware enables individual adaptability – for project-related special solutions, for example.

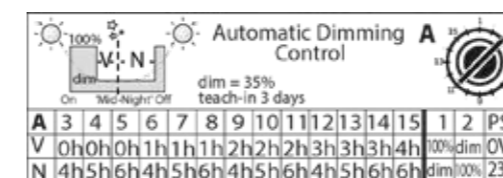


CONTROL EQUIPMENT

A major advantage of the LED light source is its ability to dim and switch as required. For the designer, this opens up new dimensions in the planning of outdoor lighting. If the following control equipment is not explicitly listed in the product section of this catalogue, please ask us about it.

| | | | |
|---------------------------|--|---|---|
| 1) BASIC | | Automatic output reduction in case of overheating | |
| PROFESSIONAL | | $\emptyset = \text{constant}$ | Selection of 14 dimming profiles, control with (PSt) control phase output management for constant luminous flux |
| 1) PROFESSIONAL HP | | $\emptyset = \text{constant}$ | Power + Extra output for more light |

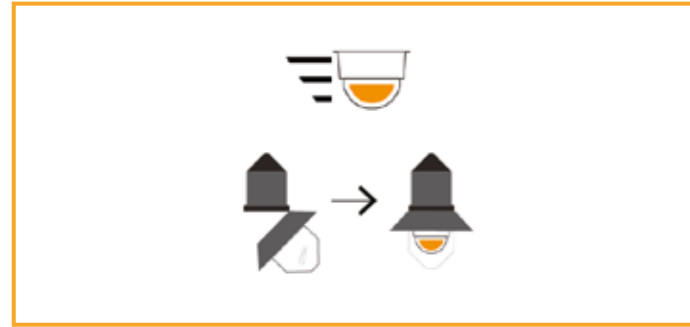
1) Not in combination with LED KIT SP or LA.



The rotary switch A can be used to select between 14 predefined dimming profiles. Alternatively, dimming via control phase (PSt) is available.

LED KIT – SIMPLY PRACTICAL

The LED KIT conversion solutions are designed so that they can be quickly, reliably and safely installed in many Hess luminaire models with simple assembly steps. For optimum results, the correct mounting position and orientation of the LED KIT in the luminaire are crucial.



If you cannot find a suitable product for your specific task in this catalogue, please contact us.



Difficult environmental conditions are often encountered in the field, making safe assembly with simple work steps essential.



Detailed installation instructions guide the installer safely through the conversion process.

ALWAYS PLAY IT SAFE!

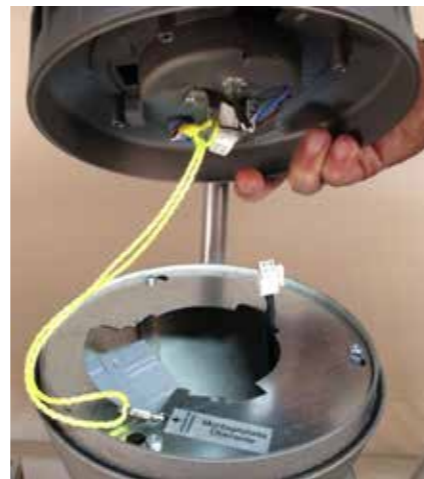
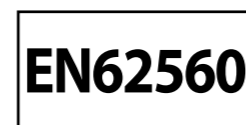
In outdoor lighting, luminaires with protection rating of both I and II are used. The ingress protection usually ranges from IP44 to IP65.

Regardless of the type of protection, the LED KITS are designed so that they function safely and reliably over the long term even in existing luminaires that are older. For example, the protective coating of electronic assemblies contribute to this, along with the drainage and ventilation details considered in the design. Universal design in protection rating II and design according to LED module standard EN62031, with certain requirements of luminaire standard EN60598 also taken into account, ensure operational safety in all applications consistent with intended use.

This also applies to the switching-on of the street lighting for maintenance work on hot summer days: thanks to the built-in TempSafe function, the LED KITS respond by reducing their output instead of overheating. Overvoltage protection (6KV surge) is also installed as standard.

In systems which are particularly susceptible to overvoltage, we recommend installation of additional protective elements in the existing luminaire/pole.

The LED KITS are tested for compliance with the conformity requirements, in particular EMC and the relevant safety standards. They also bear the CE marking, of course.



Helpful details, such as an arrestor cable, improve safety during installation.

Although some publications give the impression that surge protection permanently protects a product from destruction through overvoltage, in practice it depends on the energy content and the number of times that surge voltages occur.

For networks in which overvoltage is more frequent, we recommend installation of an overvoltage protection element near the cable junction box. As a wear element, it protects the LED luminaire head on a lasting basis and can be replaced quickly and easily – without the need for an elevated work platform or ladder. We offer appropriate overvoltage protection on request.

PRACTICAL TIP: CONVERSION ERRORS THAT CAN BE AVOIDED

Loss of efficiency due to incorrect use

The extensive product range and extremely economical prices make widespread use of LED replacement lamps an attractive option. As a rule, the types are selected from the catalogues of a variety of suppliers, with the new lamps having approximately the equivalent luminous flux as the original lamps. The specified power consumption then forms the basis for the calculation of energy savings or amortisation. It is often tacitly assumed that the LED replacement lamp produces illumination that is just as good as the original.

This assumption is correct in practice in certain applications where the lamp is operated either on a free-emitting basis or in combination with a diffuser cover. In cases where light optics such as mirror reflectors are arranged around the lamp, the lighting system no longer functions with the LED replacement lamp, which results in some cases in the combination with the LED replacement lamp having lower efficiency than the original. This statement is based on an objective comparison of light intensity and uniformity on the active surface. (IMPORTANT: The impression of brightness when staring into the luminaire is a measure of efficiency which is wrongly used and not meaningful.)

The cause of this effect is obvious. LED replacement bulbs, especially cornlights, are many times larger than the original bulb and are completely impervious to light transmission. Optical systems consisting of reflector and lamp are geometrically matched to each other perfectly. If a much larger lamp is inserted into a reflector instead of the original, the system can no longer function.



Cornlight (54W/6000lm) as a (supposed) replacement for a sodium-vapour lamp (70W/6600lm) in direct size comparison.

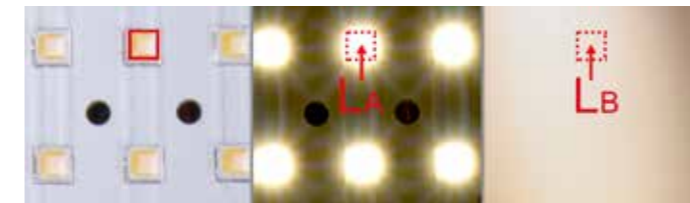
Cornlight operating in a highly engineered street luminaire reflector for HST lamps.



Glare effects due to extreme spot luminance

Cornlights are particularly efficient because their LED light sources radiate freely in every direction even without a cover.

What is energetically positive can also lead to a physiologically annoying and unpleasant glare, which must be strictly limited if the quality features are to be taken into account.



Light sources of free-emitting LEDs have luminances > 106 cd/m² (La), exceeding those of diffuse light emission surfaces (Lb) by orders of magnitude.

Thermal stress

High temperatures are a major stress factor for semiconductor devices. Sufficient cooling of LED modules and lamps is therefore important for achieving a long service life.

If LED replacement lamps are used in luminaires with insufficient air volume, this can lead to premature deterioration or thermal destruction.



The darkening and blue drift of the lamp on the left indicates "burning" of the conversion phosphor of the LEDs due to overheating.

Aesthetic impairment

For many existing luminaires, the crucial criterion for purchase was form and design. This applies in particular to historic and architectural luminaires whose design is based on the classic lamp shape. If the original lamp is replaced by a cornlight (which is usually much larger), this impairs the daylight appearance of the lamp and leads to annoying glare effects during operation.

LED KIT VS.02

MADRID, OSLO and TOLEDO (all hanging or upright)



TOLEDO

MADRID

OSLO

Perfectly tailored to our high-quality luminaires – by means of mounting adapters.

The old luminaire wiring/socket is no longer needed.

LED KIT VS.02

LED KIT VS offers a multitude of variants and application possibilities and is based on a modular system. LED modules with various optical elements are arranged around its aluminium thermal core. The intelligent LED operating unit is encased in a high-performance polymer housing and, depending on the control equipment, has up to two rotary switches on which individual system parameters can be set during installation.

Existing luminaires intended for installation of the LED KIT VS should have ingress protection IP44 or higher. In any case, the LED KIT must be protected from direct exposure to significant amounts of dripping water or rain. Heavy insect infestation can impair the function of the LED KIT over the long term. It should therefore be cleaned with the luminaire from time to time. Due to its cooling mechanism, the LED KIT always needs to be arranged vertically (upright or hanging). The housing parts are available in graphite as standard.



MADRID

OSLO

TOLEDO





LIGHTING TECHNOLOGY VARIANTS

Selection of the suitable lighting technology LED KIT variant depends on the type of cover and the condition of the light optics in the existing Hess luminaire. We generally recommend the use of LED KITS with directional optics instead of the existing optics. An exception to this are luminaires with white-opal covers.

In this case, the directional effect on the light is still retained in part even with structured and satin-finished covers. However, the optimum effect is achieved with luminaires with clear covers.

When making a selection, it is essential to pay attention to the mounting position of the existing lamp socket and to select directional optics accordingly for a hanging or upright position. For luminaires with a protruding interior roof or shade from below in a white or light colour (such as the MADRID or OSLO luminaire), the version with the indirect proportion can be used to raise the illumination level in the vicinity of the pole.

For conversion of luminaires near the façade or pole-mounted luminaires on residential streets, variants with asymmetrical light emission characteristics are universally available. Compared to the versions that radiate symmetrically, these have a connected load that is approx. 40 % lower, thus enabling further savings.

Directional optics

Sym



Asym



Pos

Upright



Upright + indirect



Hanging

Diffuser optics



Upright/hanging

Substitution up to HSE 70W

The luminous flux packages of the LED KITS are based on the luminous flux of the original lamps and the efficiency of the existing system. Decorative top-mounted luminaires are usually equipped with no more than HSE 70W.

Thanks to the highly efficient optics of the LED KITS, even a significantly lower net luminous flux achieves the same or an even higher illumination level. It is usually the case that the perceived impression of lighting after the upgrade is greater than before. We therefore advise you to be rather careful with luminous flux (output) in order to avoid complaints from adjacent residents.

LED KIT VS.02 for our OSLO, MADRID and TOLEDO

LED recessed luminaire head – precisely tailored to our luminaire models OSLO, MADRID and TOLEDO – equipped up to HME125W/HST70W and with pre-mounted adapter. Directional optics (DRO) for use in luminaires with a clear cover or, on request, with diffuser optics, either symmetrical (for lighting squares) or asymmetrical emission (for residential street lighting), recommended for lighting classes S4/S5 according to EN13201.

Control equipment Basic (TempSafe), PROFESSIONAL (AutomaticDimControl, constant luminous flux over the service life, TempSafe) or HighPower (higher output and luminous flux) CRI > 80. Operating voltage 180...250V/AC 50Hz or DC, PF > 0.9, SKII, overvoltage protection (L-N) 6KV surge.

Permissible ambient temperature -40 °C...+45 °C, IP42, corrosion protection coating, 0.3 m connecting cable 3-pole 0.75 mm² or 2-pole (Basic), DM 95 mm, H 272/285mm, m 850 g, service life 60,000 h (50,000 h HighPower).

Developed and manufactured according to EN62031, CE conformity.



MADRID / OSLO / TOLEDO – UPRIGHT VS.02 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|------------------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HME 80W / HST 50W | BASIC | 20W | 1.800 lm | 2000K | 21.10211.2V001 |
| | | 16W | | 4000K | 21.10211.2V002 |
| | | 16W | | 3000K | 21.10211.2V003 |
| | PROF | 20...24W | 1.800 lm (const.) | 2000K | 21.10212.2V001 |
| | | 16...19W | | 4000K | 21.10212.2V002 |
| | | 16...19W | | 3000K | 21.10212.2V003 |
| Replacement for HME 125W / HST 70W | HP | 30...35W | 2.500 lm (const.) | 2000K | 21.10213.2V001 |
| | | 23...28W | | 4000K | 21.10213.2V002 |
| | | 23...28W | | 3000K | 21.10213.2V003 |

MADRID / OSLO / TOLEDO – UPRIGHT INDIRECT VS.02 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|------------------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HME 80W / HST 50W | BASIC | 20W | 1.800 lm | 2000K | 21.10241.2V001 |
| | | 16W | | 4000K | 21.10241.2V002 |
| | | 16W | | 3000K | 21.10241.2V003 |
| | PROF | 20...24W | 1.800 lm (const.) | 2000K | 21.10242.2V001 |
| | | 16...19W | | 4000K | 21.10242.2V002 |
| | | 16...19W | | 3000K | 21.10242.2V003 |
| Replacement for HME 125W / HST 70W | HP | 30...35W | 2.500 lm (const.) | 2000K | 21.10243.2V001 |
| | | 23...28W | | 4000K | 21.10243.2V002 |
| | | 23...28W | | 3000K | 21.10243.2V003 |

MADRID / OSLO / TOLEDO – HANGING VS.02 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|------------------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HME 80W / HST 50W | BASIC | 20W | 1.800 lm | 2000K | 21.10211.2V004 |
| | | 16W | | 4000K | 21.10211.2V005 |
| | | 16W | | 3000K | 21.10211.2V006 |
| | PROF | 20...24W | 1.800 lm (const.) | 2000K | 21.10212.2V004 |
| | | 16...19W | | 4000K | 21.10212.2V005 |
| | | 16...19W | | 3000K | 21.10212.2V006 |
| Replacement for HME 125W / HST 70W | HP | 30...35W | 2.500 lm (const.) | 2000K | 21.10213.2V004 |
| | | 23...28W | | 4000K | 21.10213.2V005 |
| | | 23...28W | | 3000K | 21.10213.2V006 |

MADRID / OSLO / TOLEDO – UPRIGHT VS.02 | symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|------------------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HME 80W / HST 50W | BASIC | 30W | 2.500 lm | 2000K | 21.10221.2V001 |
| | | 24W | | 4000K | 21.10221.2V002 |
| | | 24W | | 3000K | 21.10221.2V003 |
| | PROF | 30...35W | 2.500 lm (const.) | 2000K | 21.10222.2V001 |
| | | 24...28W | | 4000K | 21.10222.2V002 |
| | | 24...28W | | 3000K | 21.10222.2V003 |
| Replacement for HME 125W / HST 70W | HP | 42...46W | 3.500 lm (const.) | 2000K | 21.10223.2V001 |
| | | 32...36W | | 4000K | 21.10223.2V002 |
| | | 32...36W | | 3000K | 21.10223.2V003 |

MADRID / OSLO / TOLEDO – HANGING VS.02 | symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|------------------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HME 80W / HST 50W | BASIC | 30W | 2.500 lm | 2000K | 21.10221.2V004 |
| | | 24W | | 4000K | 21.10221.2V005 |
| | | 24W | | 3000K | 21.10221.2V006 |
| | PROF | 30...35W | 2.500 lm (const.) | 2000K | 21.10222.2V004 |
| | | 24...28W | | 4000K | 21.10222.2V005 |
| | | 24...28W | | 3000K | 21.10222.2V006 |
| Replacement for HME 125W / HST 70W | HP | 42...46W | 3.500 lm (const.) | 2000K | 21.10223.2V004 |
| | | 32...36W | | 4000K | 21.10223.2V005 |
| | | 32...36W | | 3000K | 21.10223.2V006 |

MADRID / OSLO / TOLEDO – UPRIGHT INDIRECT VS.02 | symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|------------------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HME 80W / HST 50W | BASIC | 30W | 2.500 lm | 2000K | 21.10231.2V001 |
| | | 24W | | 4000K | 21.10231.2V002 |
| | | 24W | | 3000K | 21.10231.2V003 |
| | PROF | 30...35W | 2.500 lm (const.) | 2000K | 21.10232.2V001 |
| | | 24...28W | | 4000K | 21.10232.2V002 |
| | | 24...28W | | 3000K | 21.10232.2V003 |
| Replacement for HME 125W / HST 70W | HP | 42...46W | 3.500 lm (const.) | 2000K | 21.10233.2V001 |
| | | 32...36W | | 4000K | 21.10233.2V002 |
| | | 32...36W | | 3000K | 21.10233.2V003 |

LED KIT HS.07

BARCELONA 545 with bowl-shaped glass



For one of our classics: the BARCELONA 545!

By means of mounting adapter or as a replacement device carrier. The old luminaire wiring/socket is no longer needed.



LED KIT HS.07

The BARCELONA is characterised by the fact that the lamp is held on its top and can emit its light directly downwards without the pole being in the way. The design of LED KIT HS.07 follows the striking shape of the BARCELONA and has an aesthetic appearance when installed.

The high-quality dual soft range optics (DSR) are divided into a central light component for illuminating the surface directly below the luminaire and a perimetrical component for illumination of the surrounding space. The decoupling of the light using a large, hemispherical refractor with moderate luminance limits the glare effect to a very comfortable level.

In its installation situation, LED KIT HS.07 requires adequate protection against direct environmental influences only from above. In contrast to its aluminium housing, its diffuser cover is equipped with a sophisticated sealing and drainage system, so it complies with ingress protection IP54 when installed.



Dual soft range optics

A specifically engineered arrangement of LEDs, reflector and refractor components for optimal illumination results.

LED KIT HS.07 for our BARCELONA 545

LED recessed luminaire head for the BARCELONA 545 for the previous equipment with HME80W/HST50W and HME125W/HST70W (-> HighPower version) with pre-mounted adapter and optimised DSR optics. Choice of symmetrical (for illumination of squares) or asymmetrical emission (for residential street illumination), recommended for illumination classes S4/S5 according to EN13201. CRI > 80. Ball glass version available on request.

Operating voltage 180...250V/AC 50 Hz or DC, PF > 0.9, SKII, overvoltage protection (L-N) 6KV surge, permissible ambient temperature -40 °C...+45 °C, IP54 (when installed), corrosion protection coating, 0.3 m connecting cable 3-pole 0.75 mm² or 2-pole (Basic), DM 225 mm, H 170 mm, m 750 g, service life 60,000 h (50,000 h HighPower), developed and manufactured according to EN62031, CE conformity.



BARCELONA 545 with bowl-shaped glass – HS.07 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|--|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HME 80W / HST 50W | BASIC | 24W | 1.800 lm | 2000K | 21.20711.1V001 |
| | | 15W | | 4000K | 21.20711.1V002 |
| | | 15W | | 3000K | 21.20711.1V003 |
| | PROF | 24...28W | 1.800 lm (const.) | 2000K | 21.20712.1V001 |
| | | 15...17W | | 4000K | 21.20712.1V002 |
| | | 15...17W | | 3000K | 21.20712.1V003 |
| Replacement for HME 125W / HST 70W | HP | 32...36W | 2.500 lm (const.) | 2000K | 21.20713.1V001 |
| | | 26...30W | | 4000K | 21.20713.1V002 |
| | | 26...30W | | 3000K | 21.20713.1V003 |



BARCELONA 545 with bowl-shaped glass – HS.07 | symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|--|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HME 80W / HST 50W | BASIC | 32W | 2.500 lm | 2000K | 21.20721.1V001 |
| | | 26W | | 4000K | 21.20721.1V002 |
| | | 26W | | 3000K | 21.20721.1V003 |
| | PROF | 32...36W | 2.500 lm (const.) | 2000K | 21.20722.1V001 |
| | | 26...30W | | 4000K | 21.20722.1V002 |
| | | 26...30W | | 3000K | 21.20722.1V003 |
| Replacement for HME 125W / HST 70W | HP | 42...48W | 3.500 lm (const.) | 2000K | 21.20723.1V001 |
| | | 30...35W | | 4000K | 21.20723.1V002 |
| | | 30...35W | | 3000K | 21.20723.1V003 |



BARCELONA

HS.07 replaces the original luminaire cover of the BARCELONA.

LED KIT SP

CAMPO, VEDO, AGENA, FARO, VIGO, RAVENNA



CAMPO

VEDO

AGENA

FARO

VIGO

RAVENNA

Tailored to the Hess luminaire models CAMPO, VEDO, AGENA, FARO, VIGO and RAVENNA. The old luminaire wiring or socket is no longer needed.



CAMPO

VEDO

AGENA

FARO

VIGO

RAVENNA

LED KIT SP

Mirror-projector systems and secondary-emitting luminaires play a special role in architectural lighting. They are characterised by a very low glare effect and extremely uniform illumination intensity on the target surfaces. The spatial separation of the projector (light projector) and deflecting mirror (secondary mirror) opens up new dimensions in formal design. This is reflected in practice in a variety of different design variants.

All have in common that they are equipped with metal halide lamps (HIT), which enable good consolidation of light with their arc tube that is almost punctiform in shape. Although HIT lamps already have high lamp efficiency, the overall system efficiency is rather limited. The lack of dimming options, the reduction in luminous flux, the colour drift and the comparatively short service life make further operation or reinstallation of this luminaire category questionable against the backdrop of energy conservation targets and high maintenance costs. Energy-saving refurbishment with an LED replacement lamp is not technically possible due to the high energy density in the available volume.

In order to make these luminaires “fit” in terms of energy efficiency, a slightly greater technical challenge must be met. We meet this challenge with our LED KIT SP. It is precisely tailored to our luminaire models CAMPO, VEDO, AGENA, FARO, VIGO and RAVENNA. The LED KITS score points with powerful, precisely consolidated light, a dimming function integrated as standard (PROFESSIONAL equipment package), freedom from maintenance, a long service life of up to 15 years and easy and safe installation.

Energy cost savings of more than 70 % and elimination of lamp replacement costs every 2–3 years amortise the investment in conversion with LED KIT SP within a few years.



SP.02

SP.03

SP.04

SP.05

SP.09

SP.10

CAMPO

VEDO

AGENA

FARO

VIGO

RAVENNA

LED KIT SP.02 for our CAMPO 4500 and 7700

This LED recessed luminaire head is specially tailored to our CAMPO luminaire, which is equipped with HIT-DE70W, 150W or 250W, consisting of ready-to-install pre-assembled operating unit carrier and luminaire head with spot optics, symmetrical emission for surface-locking installation in the existing luminaire housing, PROFESSIONAL equipment package (AutomaticDimControl, constant luminous flux over the service life of 60,000 h, TempSafe), PF > 0.9, SKII, surge protection (L-N) 6KV surge, permissible ambient temperature -40 °C...+45 °C, IP65 (in the installed state), corrosion protection coating, 0.3 m connecting cable with individual terminals, aluminium luminaire head with special shape for optimum heat transfer, specially tailored to the existing luminaire housing, L 360 mm, W 110 mm, H 90 mm, m 1.7 kg, developed and manufactured according to EN62031, CE conformity.



CAMPO 4500 – SP.02 | symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|-----------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HIT-DE 70W | PROF | 46...54W | 4.500 lm (const.) | 2200K | 21.30222.0V001 |
| | | 35...42W | | 4000K | 21.30222.0V002 |
| | | 35...42W | | 3000K | 21.30222.0V003 |
| Replacement for HIT-DE 150W | | 80...95W | 8.500 lm (const.) | 2200K | 21.30222.0V004 |
| | | 62...72W | | 4000K | 21.30222.0V005 |
| | | 62...72W | | 3000K | 21.30222.0V006 |



CAMPO 7700 – SP.02 | symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|-----------------------------|-----------|------------|--------------------|--------------|-------------------|
| Replacement for HIT-DE 250W | PROF | 100...115W | 12.000 lm (const.) | 2200K | 21.30222.0V007 |
| | | 82...96W | | 4000K | 21.30222.0V008 |
| | | 82...96W | | 3000K | 21.30222.0V009 |

CAMPO SP.02 | accessories

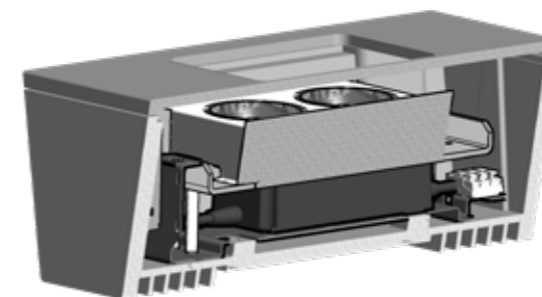
| | Designation | Description | Sales item number |
|--|-----------------------|--|-------------------|
| | Mounting adapter (MA) | For installation in housing Version 2 (without hinges) with bolted cover | 21.00000.0V002 |
| | Connecting set (LG) | For installation in housing Version 2 (without hinges) with bolted cover | 21.00000.0V001 |



Assembly video
CAMPO large



Design details may differ from the figure



LED KIT SP.02 is a module that is mounted in the respective luminaire housing to replace the existing fixtures. The respective existing luminaires therefore appear unchanged on the outside.



CAMPO

LED KIT SP.03 for our VEDO D S/P

LED conversion kit for projectors with HIT150W, consisting of ready-to-install pre-assembled luminaire head with spot optics with attachable dimming tube, symmetrical emission, for installation in the existing spotlight housing, CRI > 80, with 2 m connecting cable set 6 x 0.5 mm² prepared for on-site connection to supplied separate driver unit for placement in pole-side driver units / connection housings of luminaire, PROFESSIONAL equipment package (AutomaticDimControl, constant luminous flux over the service life of 60,000 h, TempSafe, PF > 0.9, SKII, overvoltage protection (L - N) 6KV surge, permissible ambient temperature -40 °C...+45 °C, IP65 (when installed), 0.2 m connecting cable with individual terminals, luminaire head DM 110 mm, H 130 mm, *m* 0.4 kg, driver unit L 140 mm, W 90 mm, H 45 mm, *m* 0.5 kg, developed and manufactured according to EN60598, CE conformity.



VEDO DS / P – SP.03 | symmetrical

| Equipment | Output | LED luminous flux | Light colour | Sales item number |
|-----------|----------|-------------------|--------------|-------------------|
| PROF | 68...82W | 7.200 lm (const.) | 2200K | 21.30322.0V001 |
| | 54...62W | | 4000K | 21.30322.0V002 |
| | 54...62W | | 3000K | 21.30322.0V003 |

Replacement for
HIT 150W



VEDO D

Note: Please determine and communicate the placement of the driver unit with regard to the existing luminaire (separate housing outside of the pole or additional compartment in the pole).

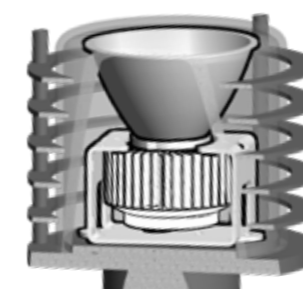
LED KIT SP.04 for our AGENA 4500

LED recessed luminaire head for projectors with HIT70W or HIT150W, consisting of ready-to-install pre-assembled luminaire head with spot optics, symmetrical emission for form-fit installation in the existing AGENA luminaire head, CRI > 80, with 5 m connecting cable set for connection to the supplied separate driver unit for installation in the pole, PROFESSIONAL equipment package (Automatic DimControl, constant luminous flux over the service life of 60,000 h, TempSafe), PF > 0.9, SKII, overvoltage protection (L - N) 6KV surge, permissible ambient temperature -40 °C...+45 °C, 0.5 m connecting cable 3 x 0.75 mm², luminaire head DM 95 mm, H 100 mm, *m* 0.4 kg, driver unit L 140 mm, W 90 mm, H 45 mm, *m* 0.5 kg, developed and manufactured according to EN62031, CE conformity.



AGENA 4500 – SP.04 | symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|---|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HIT 70W or HIT 150W | PROF | 46...54W | 4.500 lm (const.) | 2200K | 21.30422.0V001 |
| | | 35...42W | | 4000K | 21.30422.0V002 |
| | | 35...42W | | 3000K | 21.30422.0V003 |



AGENA

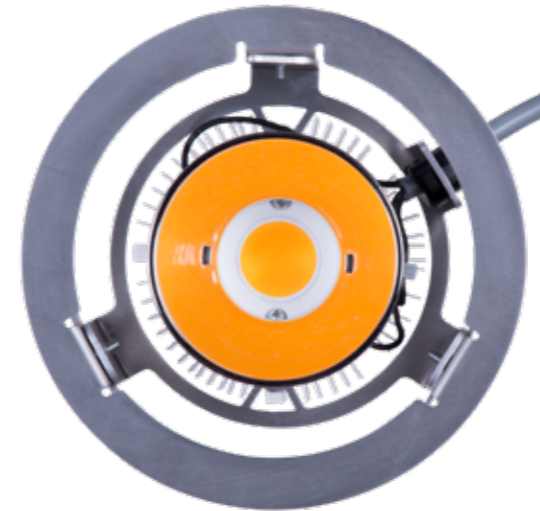
LED KIT SP.05 for our FARO 720/960

LED recessed luminaire head for projectors with HIT 70W or HIT 150W, consisting of ready-to-install pre-assembled luminaire head with spot optics, symmetrical emission for form-fit installation into the existing FARO, CRI > 80, with 5 m connecting cable set for connection to the supplied separate driver unit for placement in the pole, PROFESSIONAL equipment package (AutomaticDimControl, constant luminous flux over the service life of 60,000 h, TempSafe), ambient temperature -40° C ... +45° C, 0.5 m connecting cable 3 x 0.75 mm², luminaire head (70W HIT) DM 145 mm, H 90 mm, m 0.4 kg, luminaire head (150W HIT) DM 245 mm, H 180 mm, m 0.8 kg, driver unit L 140 mm, W 90 mm, H 45 mm, m 0.5 kg, developed and manufactured according to EN62031, CE conformity.



FARO 720/960 – SP.05 | symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|--------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HIT 70W | PROF | 46...54W | 4.500 lm (const.) | 2200K | 21.30522.0V001 |
| | | 35...42W | | 4000K | 21.30522.0V002 |
| | | 35...42W | | 3000K | 21.30522.0V003 |
| Replacement for HIT 150W | PROF | 68...82W | 7.200 lm (const.) | 2200K | 21.30522.0V004 |
| | | 54...62W | | 4000K | 21.30522.0V005 |
| | | 54...62W | | 3000K | 21.30522.0V006 |



FARO



LED KIT SP.09 for our VIGO 4000 / G 4000

LED recessed luminaire head for VIGO 4000 / VIGO G 4000 with HIT70W or HIT150W, consisting of ready-to-install pre-assembled luminaire head with spot optics, symmetrical emission, for form-fit installation in the existing upper part of the luminaire with 5 m connecting cable 6 x 0.5 mm², prepared for on-site connection to the separate driver unit supplied for placement in the driver unit/ connection housing of the luminaire on the pole side, PROFESSIONAL equipment package (AutomaticDimControl, constant luminous flux over the service life of 60,000 h, TempSafe), rated power 54...62W, PF > 0.9, SKII, overvoltage protection (L - N) 6KV surge, permissible ambient temperature -40°C...+45°C, IP65 (when installed), corrosion protection coating, 0.3 m connecting cable with individual terminals, luminaire head DM 110 mm, H 130 mm, *m* 0.4 kg, driver unit L 140 mm, B 90 mm, H 45 mm, *m* 0.5 kg, developed and manufactured according to EN62031, CE conformity.



VIGO



VIGO 4000 / G 4000 – SP.09 | symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|--------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HIT 70W | PROF | 46...54W | 4.500 lm (const.) | 2200K | 21.30922.0V001 |
| | | 35...42W | | 4000K | 21.30922.0V002 |
| | | 35...42W | | 3000K | 21.30922.0V003 |
| Replacement for HIT 150W | PROF | 68...82W | 7.200 lm (const.) | 2200K | 21.30922.0V004 |
| | | 54...62W | | 4000K | 21.30922.0V005 |
| | | 54...62W | | 3000K | 21.30922.0V006 |

LED KIT SP.10 for our RAVENNA 220 / G220

The LED recessed luminaire head is specially designed for the RAVENNA 220 / G220 with HIT70W, consisting of ready-to-install pre-assembled luminaire head with 15° spot optics, symmetrical emission, direction of emission +/- 8° adjustable, for form-fit installation in the RAVENNA housing, PROFESSIONAL equipment package (Automatic DimControl, constant luminous flux over the service life of 60,000 h, TempSafe), PF > 0.9, SKII, overvoltage protection (L-N) 6KV surge, permissible ambient temperature -40 °C...+45 °C, corrosion protection coating, terminal 3-pole, luminaire head DM 150 mm, H 230 mm, *m* 0.9 kg, developed and manufactured according to EN62031, CE conformity.



RAVENNA 220 / G220 – SP.10 | symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|----------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HIT 70W | PROF | 46...54W | 4.500 lm (const.) | 2200K | 21.31022.0V001 |
| | | 35...42W | | 4000K | 21.31022.0V002 |
| | | 35...42W | | 3000K | 21.31022.0V003 |



RAVENNA



LED KIT LA.06

CANTO 550 / 4500 / G 4500



Exactly tailored to the CANTO in the form of a replacement device carrier.



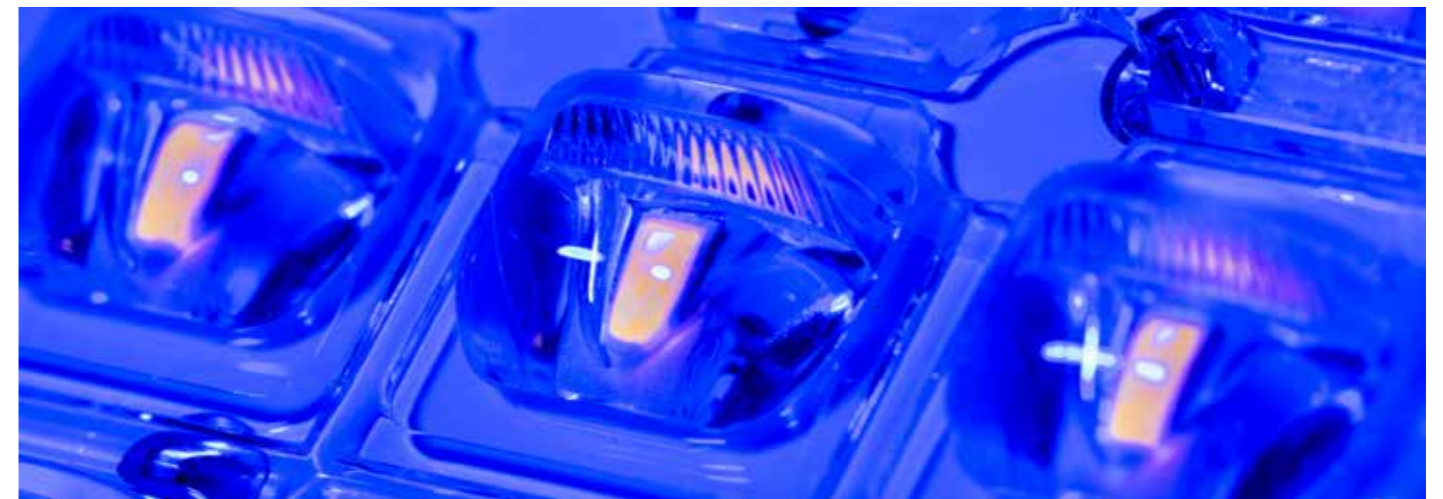
CANTO G

LED KIT LA.06

The conversion of the rather functionally oriented streetlights is particularly demanding for several reasons. On the one hand, they are equipped with a comparatively efficient lighting system consisting of an HID lamp and a mirror reflector, which ensures adequate fulfilment of the illumination task. On the other hand, they also typically use very efficient, powerful and long-lasting light sources with high-pressure sodium vapour technology.

For sustainable conversion to LED, a combination of highly efficient LEDs with highly efficient light control optics is required, which must be able to be precisely adjusted to the effective area. Only with such a concept is it possible to achieve a lighting result that is equivalent to or even better than with sodium vapour lamps. Against the backdrop of cost amortisation, the conversion only becomes financially attractive with the possibility of automatic dimming.

The installation size of the LED module is based on how the CANTO is equipped. Installation size 2x2 is designed for the replacement of HS 50W, installation size 3x2 for HS 70W and installation size 4x2 for HS 100W. For light control, more than 10 different TIR lens optics are available for different applications.



High-precision TIR lens optics ensure targeted distribution of light on the effective surface.

LED KIT LA.o6 for our CANTO 550 / 4500 / G 4500

The LED recessed luminaire head LED KIT LA.o6 is specially tailored to our pole-mounted luminaire CANTO 4500 / G 4500, wall-mounted luminaire CANTO 550 and catenary suspended luminaire CANTO 550 – until now with up to HSE100W. Consisting of heat sink/device carrier made of aluminium, powder-coated in white RAL9010, LED printed circuit board with 3x2 or 4x2 multi-lens array, asymmetrical wide-beam or symmetrical, PROFESSIONAL equipment package (AutomaticDimControl, constant luminous flux over the service life, TempSafe), operating voltage 220...240V/AC 50/60 Hz, PF > 0.9, SKII, overvoltage protection (L-N) 6KV surge, permissible ambient temperature -40 °C...+45 °C, ingress protection IP20, 0.3 m connecting cable 3-pole 0.75 mm², L 330 mm, W 325 mm, H 140 mm, m 1100 g, service life 60,000 h, developed and manufactured according to EN62031, CE conformity.



CANTO G

CANTO 550 / 4500 / G 4500 – LA.o6 – OPTICS LA4-8 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|---------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HSE 70W | PROF | 45...53W | 4.400 lm (const.) | 2000K | 21.40612.1V022 |
| | | 36...42W | | 4000K | 21.40612.1V023 |
| | | 36...42W | | 3000K | 21.40612.1V024 |
| Replacement for HSE 100 W | PROF | 60...68W | 6.200 lm (const.) | 2000K | 21.40612.1V025 |
| | | 48...54W | | 4000K | 21.40612.1V026 |
| | | 48...54W | | 3000K | 21.40612.1V027 |

CANTO 550 / 4500 / G 4500 – LA.o6 – OPTICS LA4-6 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|-------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HSE 70W | PROF | 45...53W | 4.400 lm (const.) | 2000K | 21.40612.1V019 |
| | | 36...42W | | 4000K | 21.40612.1V020 |
| | | 36...42W | | 3000K | 21.40612.1V021 |

CANTO 550 / 4500 / G 4500 – LA.o6 – OPTICS LA4-5 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|---------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HSE 70W | PROF | 45...53W | 4.400 lm (const.) | 2000K | 21.40612.1V013 |
| | | 36...42W | | 4000K | 21.40612.1V014 |
| | | 36...42W | | 3000K | 21.40612.1V015 |
| Replacement for HSE 100 W | PROF | 60...68W | 6.200 lm (const.) | 2000K | 21.40612.1V016 |
| | | 48...54W | | 4000K | 21.40612.1V017 |
| | | 48...54W | | 3000K | 21.40612.1V018 |

CANTO 550 / 4500 / G 4500 – LA.o6 – OPTICS LA4-2 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|---------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HSE 70W | PROF | 45...53W | 4.400 lm (const.) | 2000K | 21.40612.1V001 |
| | | 36...42W | | 4000K | 21.40612.1V002 |
| | | 36...42W | | 3000K | 21.40612.1V003 |
| Replacement for HSE 100 W | PROF | 60...68W | 6.200 lm (const.) | 2000K | 21.40612.1V004 |
| | | 48...54W | | 3000K | 21.40612.1V005 |
| | | 48...54W | | 4000K | 21.40612.1V006 |

CANTO 550 / 4500 / G 4500 – LA.o6 – OPTICS LA4-3 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|---------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HSE 70W | PROF | 45...53W | 4.400 lm (const.) | 2000K | 21.40612.1V007 |
| | | 36...42W | | 4000K | 21.40612.1V008 |
| | | 36...42W | | 3000K | 21.40612.1V009 |
| Replacement for HSE 100 W | PROF | 60...68W | 6.200 lm (const.) | 2000K | 21.40612.1V010 |
| | | 48...54W | | 4000K | 21.40612.1V011 |
| | | 48...54W | | 3000K | 21.40612.1V012 |

CANTO Catenary suspended 550 – LA.o6 – OPTICS LA4-C symmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|---------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HSE 70W | PROF | 45...53W | 4.400 lm (const.) | 2000K | 21.40612.1V028 |
| | | 36...42W | | 4000K | 21.40612.1V029 |
| | | 36...42W | | 3000K | 21.40612.1V030 |
| Replacement for HSE 100 W | PROF | 60...68W | 6.200 lm (const.) | 2000K | 21.40612.1V031 |
| | | 48...54W | | 4000K | 21.40612.1V032 |
| | | 48...54W | | 3000K | 21.40612.1V033 |

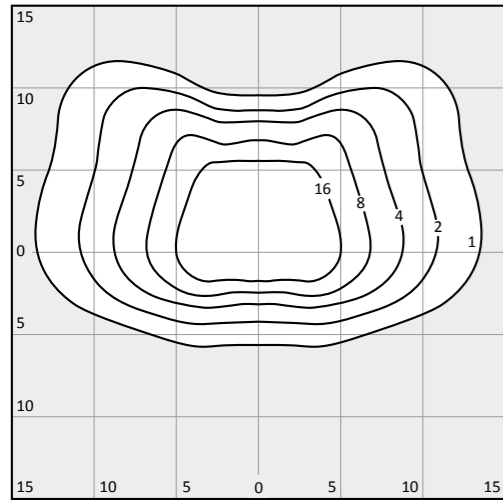
LIGHTING TECHNOLOGY VARIANTS

The LED KIT LA is available with 6 different light distribution characteristics. The Isolux diagrams listed below give an initial indication of the possible application. For more details, further planning information, in the form of EULUMDAT files, is available for download at www.hess.eu/en/Produkte/Produkte_Leuchten/LED_KITs/. The respective file names can be found in the lettering of the Isolux diagrams. Other LID variants are available on request.

Area

From side pole position

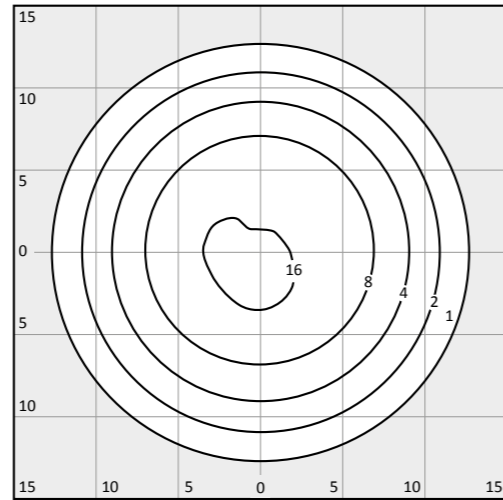
LA4-8 (LA4-8.ldt)
LPH: 6m 4500lm



Area

Catenary suspended luminaire

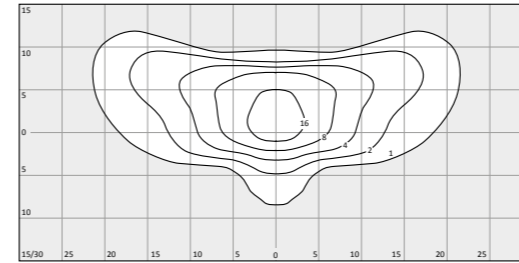
LA4-C (LA4-C.ldt)
LPH: 6m 4500lm



Thoroughfare (ME class)

From side pole position

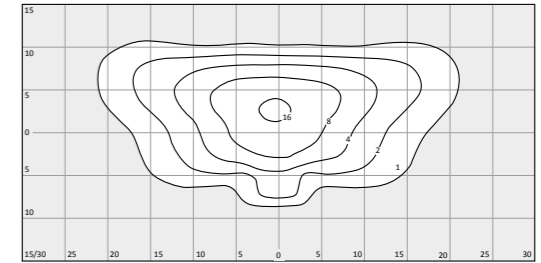
LA4-2 (LA4-2.ldt)
LPH: 6m 4500lm



Wider thoroughfare (ME class)

From side pole position

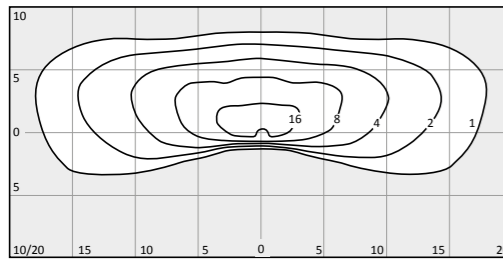
LA4-3 (LA4-3.ldt)
LPH: 6m 4500lm



Path, narrow road

From side pole position

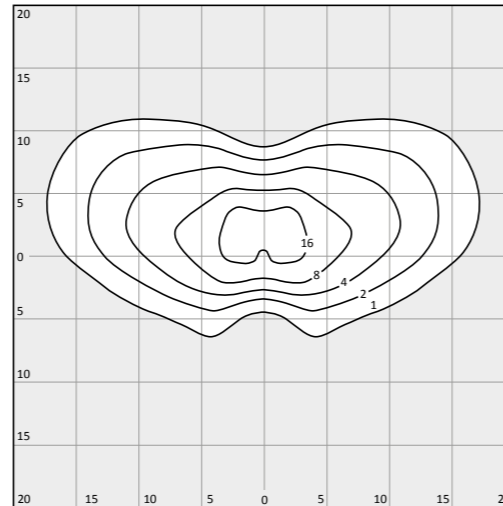
LA4-6 (LA4-6.ldt)
LPH: 4m 2500lm



Road with rear area

From side pole position

LA4-5 (LA4-5.ldt)
LPH: 6m 4500lm



LED KIT SERA

SERA 600 und SERA 740

LED KIT SERA is precisely tailored to SERA 600 and SERA 740.

LED CONVERSION SET SERA

SERA from Hess convinces with its straightforwardness, simplicity and attractive appearance. Due to its elegant, curved shape, SERA is a luminaire that is extremely pleasing to the eye. In order to keep it that way in your cityscape, we designed the LED KIT SERA.

The LED KIT SERA features outstanding quality of light and a significant increase in efficiency – for long-lasting enjoyment of your SERA.



SERA



The LED module offers a variety of light characteristics and thus has a particularly wide range of applications. LEVO₃ is prepared for almost all lighting requirements in urban areas.

Applications

Primary thoroughfares, pedestrian and cycle paths, pedestrian crossings, residential streets, carparks or public squares.

LED KIT SERA for our SERA 600 and 740

LED KIT for the SERA luminaire with HIT70W or HIT150W, white aluminium electrical carrier plate with LED printed circuit boards and driver, asymmetrical emission characteristics. Control equipment BASIC (TempSafe), PROFESSIONAL (AutomaticDimControl, constant luminous flux over the service life and TempSafe), CRI min. 70, operating voltage 220-240 V / 50-60 Hz. Overvoltage protection 10kV (1pulse), 8kV for SK II. Integrated, electronically controlled temperature monitoring. LED service life: L80 B10 / 100.00 h; TA -40 °C...<= 25 °C | L70 B10 / 50,000 h; TA -25 °C...50 °C.



SERA 600

SERA 600 – Optics O1 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|---|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HST 50W | PROF | 20...28W | 2.800 lm (const.) | 3000K | 99.00400.1V002 |
| | | 20...28W | | 4000K | 99.00400.1V004 |
| Replacement for HIT/HSE 70W, 100W, 150W | PROF | 37...53W | 5.180 lm (const.) | 3000K | 99.00400.1V030 |
| | | 37...53W | | 4000K | 99.00400.1V032 |

SERA 600 – Optics O3 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|---|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HST 50W | PROF | 20...28W | 2.800 lm (const.) | 3000K | 99.00400.1V006 |
| | | 20...28W | | 4000K | 99.00400.1V008 |
| Replacement for HIT/HSE 70W, 100W, 150W | PROF | 37...53W | 5.180 lm (const.) | 3000K | 99.00400.1V034 |
| | | 37...53W | | 4000K | 99.00400.1V036 |

SERA 600 – Optics O4 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|---|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HST 50W | PROF | 20...28W | 2.800 lm (const.) | 3000K | 99.00400.1V010 |
| | | 20...28W | | 4000K | 99.00400.1V012 |
| Replacement for HIT/HSE 70W, 100W, 150W | PROF | 37...53W | 5.180 lm (const.) | 3000K | 99.00400.1V038 |
| | | 37...53W | | 4000K | 99.00400.1V040 |

SERA 600 – Optics O6R | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|---|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HIT/HSE 70W, 100W, 150W | PROF | 37...53W | 5.180 lm (const.) | 3000K | 99.00400.1V046 |
| | | 37...53W | | 4000K | 99.00400.1V048 |

SERA 740

SERA 740 – Optics O1 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|------------------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HIT/HST 150W, 250W | BASIC | 72W | 10.080 lm | 3000K | 99.00401.1V030 |
| | | 72W | | 4000K | 99.00401.1V032 |
| Replacement for HIT/HST 100W | PROF | 37...53W | 5.180 lm (const.) | 3000K | 99.00401.1V002 |
| | | 37...53W | | 4000K | 99.00401.1V004 |

SERA 740 – Optics O3 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|------------------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HIT/HST 150W, 250W | BASIC | 72W | 10.080 lm | 3000K | 99.00401.1V034 |
| | | 72W | | 4000K | 99.00401.1V036 |
| Replacement for HIT/HST 100W | PROF | 37...53W | 5.180 lm (const.) | 3000K | 99.00401.1V006 |
| | | 37...53W | | 4000K | 99.00401.1V008 |

SERA 740 – Optics O4 | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|------------------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HIT/HST 150W, 250W | BASIC | 72W | 10.080 lm | 3000K | 99.00401.1V038 |
| | | 72W | | 4000K | 99.00401.1V040 |
| Replacement for HIT/HST 100W | PROF | 37...53W | 5.180 lm (const.) | 3000K | 99.00401.1V010 |
| | | 37...53W | | 4000K | 99.00401.1V012 |

SERA 740 – Optics O6R | asymmetrical

| | Equipment | Output | LED luminous flux | Light colour | Sales item number |
|------------------------------------|-----------|----------|-------------------|--------------|-------------------|
| Replacement for HIT/HST 150W, 250W | BASIC | 72W | 10.080 lm | 3000K | 99.00401.1V046 |
| | | 72W | | 4000K | 99.00401.1V048 |
| Replacement for HIT/HST 100W | PROF | 37...53W | 5.180 lm (const.) | 3000K | 99.00401.1V018 |
| | | 37...53W | | 4000K | 99.00401.1V020 |

SERA



Markt Eichendorf . GER (LED KIT VS.02 / OSLO)



Aulendorf . GER (LED KIT VS.02 / 2.000K / OSLO)



Markt Eichendorf . GER (LED KIT SP.02 / CAMPO 7700)



Bracke . GER (LED KIT VS.02 / OSLO)

Lamp LED27 ECO III

While the use of LED KITS is aimed at a medium to long-term residual service life horizon for existing luminaires, the use of LED replacement lamps is suitable for a shorter residual service life or for very small refurbishment budgets. The LED27 ECO III lamp, for example, was developed for use in the MADRID and TOLEDO illuminating bollards.

As with the installation of LED KIT recessed luminaire heads, the driver of existing luminaires with high-pressure discharge lamps must be bridged and the igniter removed. The details are listed in the installation instructions.

LED27 ECO III

Highly efficient LED replacement lamp (150lm/W). Compact design suitable for illuminating bollards MADRID and TOLEDO, for example. Extremely low weight of only 130 g or 150 g.

Uniformly luminous diffuser cover made of impact-resistant high-performance polymer with moderate luminance and soft lighting effect.

Operating voltage 180...250V/AC 50 Hz or DC, SKII, overvoltage protection (L - N) 4KV surge acc. to EN61000-4-5, permissible ambient temperature -35 °C...+35 °C, convection cooling, with socket E27, ingress protection IP55 (without considering the socket), service life 30,000 h, developed and manufactured acc. to EN62560, CE conformity. Recommended for use in outdoor luminaires with ingress protection >= IPx3.



Figure in original size of 21W version

General information

The products listed in this catalogue have been developed and manufactured in accordance with the recognised rules of engineering. Despite the simplicity of installation, they may only be installed by qualified personnel in compliance with the relevant safety regulations. The assembly instructions enclosed with the delivery of the products must be followed.

Depending on geographical location and individual characteristics of the electrical street lighting network, there is a potential risk in outdoor lighting systems of transient overvoltages spreading as a result of switching operations, lightning strikes or other disruptions. The products are equipped at the factory with switching elements which, within certain limits, protect against damage caused by overvoltage. These protective elements may fail and the product may be destroyed if the voltage is sufficiently high or the impulses are sufficiently charged with energy. In systems that are known or suspected to be subjected to overvoltages, taking appropriate protective measures before converting the existing luminaires is recommended. Further information can be obtained from the manufacturers of the surge protection equipment.

Warranty terms

We will gladly send you our warranty policy on request.

Inquiries, contact persons, product availability

Please note that we only manufacture LED KITS to order. We therefore ask you to inquire about their deliverability/availability. The contact details of our field sales representatives are listed on our website (www.hess.eu). Alternatively, we look forward to receiving your enquiries by e-mail at info@hess.eu or by telephone at +49 7721 920 0.

Planning information

On the respective product detail pages of our website (www.hess.eu), we provide downloadable items including lighting planning information, data sheets and assembly instructions.

Sampling service

Before you carry out conversion measures, we generally recommend that the intended product be tested in the application. We would be happy to provide you with a product sample free of charge for a period of 6 weeks. At the end of the sampling period, you can decide whether you want to return the product or pay for it.

Site notice

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Lamp LED27 ECOIII | symmetrical

| | Output | LED luminous flux | Light colour | Length | Sales item number |
|--------------------------------------|--------|-------------------|--------------|--------|-------------------|
| Replacement for HME50W/AGL100W | 12W | 1.200 lm | 2000K | 165mm | 21.52721.0V001 |
| | 12W | 1.600 lm | 3000K | 165mm | 21.52721.0V002 |
| | 12W | 1.700 lm | 4000K | 165mm | 21.52721.0V003 |
| Replacement for HME80W/HSE50W/HIE35W | 21W | 2.100 lm | 2000K | 185mm | 21.52721.0V004 |
| | 21W | 2.800 lm | 3000K | 185mm | 21.52721.0V005 |
| | 21W | 3.000 lm | 4000K | 185mm | 21.52721.0V006 |

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