WORKLIGHTS

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A strong argument for better working light
Worklights from HELLA provide you with optimum lighting conditions, even in the dark, allowing you to work faster, with greater precision and improved productivity.

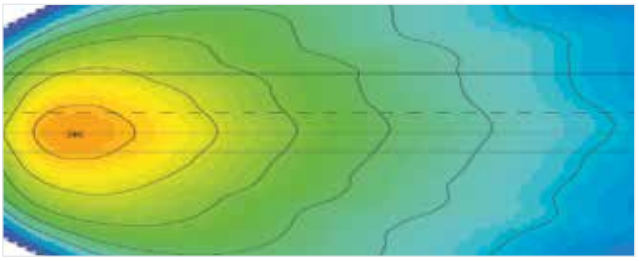
Pages 4 – 5

Lighting technology – what you need to know!
Everything you need to know about the different lighting technologies.

Page 106

Worklights mobile app – see more.

Turn your smartphone into an info display.

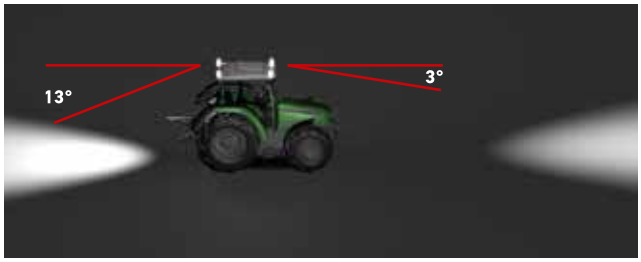


Light intensity round-up
The higher the lumen output, the brighter the worklight – a direct comparison of HELLA worklights.

Pages 10 –13

The different usage scenarios – fitting and product recommendations.
Find out more about the many worklights available for a huge range of requirements.

From page 14



Easy answers to technical questions
Questions and answers to technical aspects of worklights.

From page 108

HELLA quality: a comparison
Find out in detail why supposedly cheap products from other suppliers can turn out to be very expensive.

From page 116

How it works...
Use the FREE HELLA Worklights app to access extra content and find out more about our products.

1. Install the FREE HELLA Worklights app on your smartphone or tablet (Apple iOS or Android).
2. Open the app and scan in the pages where you see the smartphone symbol.
   Tip: hold your smartphone or tablet at an angle of about 45° to the page when scanning.

Scan symbol:
Detailed information, 360° views, films, light distributions, specials and much more are indicated by this symbol.

There's much to be said for better worklights!

For any usage scenario, optimum light conditions are essential to be able to work faster, more precisely and productively at twilight and in the dark. HELLA's worklights take care of this thanks to their reliable quality.

Stronger and better working light helps.
Sleep researchers* in Basel working together with scientists from the Fraunhofer Institute for Work Management Organisation have discovered that people react strongly to light. For example, the colour temperature of lighting has a considerable influence on responsiveness and performance. Experiments have proven that people get tired quicker if lighting is too weak in colour and temperature, such as dull yellowish. This is because the body perceives such light as twilight and starts to "switch off". Optimum working light as produced by HELLA worklights help you to remain awake and alert for longer in the evenings, boosting concentration, and thereby raising the night worker's productivity.

Only quality protects against tiredness.
Scientific studies have shown that the human eye has the capacity to always orient itself to the lightest point of a surface. For relaxed vision, however, balanced illumination is necessary. The lighting technicians at HELLA therefore design worklights so that the light concentration in the close, often very strongly illuminated area is reduced and is constantly increased in the distance. That means that the eye does not tire so quickly and the driver can concentrate for longer periods.

Quality pays off.
HELLA's uncompromising commitment to quality reduces repair and failure times to a minimum and, in the case of LED worklights, to practically zero. This enables HELLA worklights to be operated for up to 60,000 hours with no maintenance. In order to optimise the design life and performance of the light source, HELLA has developed a sophisticated thermal management system.

Take advantage of OEM quality.
HELLA quality offers the security of a reliable brand product. HELLA is established as a global OEM to all the leading international vehicle and agricultural machinery manufacturers, as we put emphasis on the highest quality in all areas. For example, all worklights are subjected to extreme stress tests in development and production. Further information on our quality tests can be found on page 114-115.

* Source: "Journal of Applied Physiology"

Halogen worklights:
The established standard.

HELLA has continually been improving the design of its halogen worklights for many decades. The challenge: halogen light sources generate a great deal of heat. This heat can only be dissipated if the headlights have a relatively large mounting depth. In order to still be able to offer the customer compact worklights, HELLA developed housing and disks made of synthetic material with a higher heat resilience to enable smaller headlights to be constructed with the same power.

Xenon worklights:
A leap in quality.

The use of xenon technology made it possible to significantly improve the luminous efficiency of worklights. HELLA launched the first xenon headlight in 1995. Since then, HELLA has made a significant contribution to its further development in its role as technology leader.

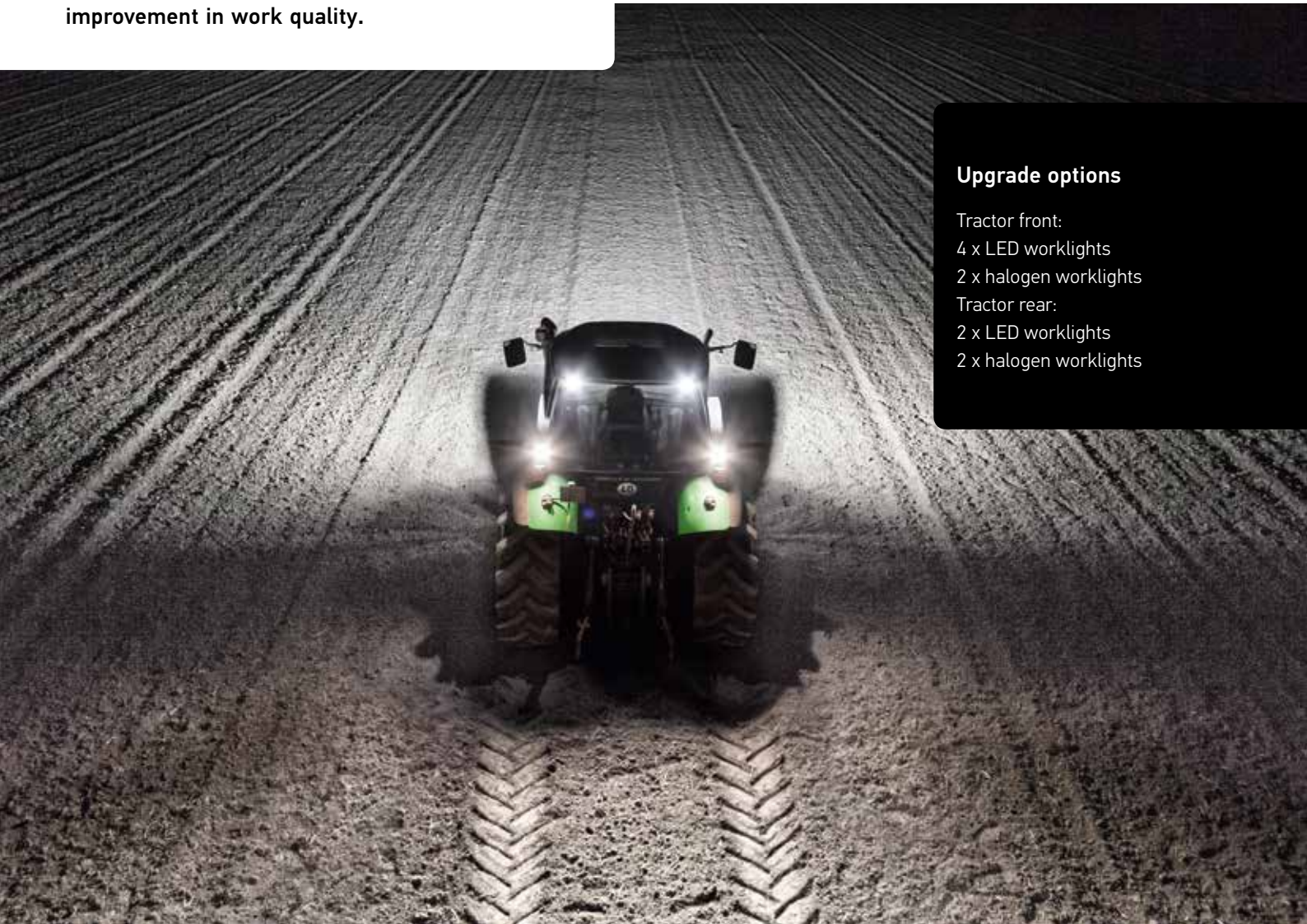
LED worklights:
The next generation.

LED technology is much more demanding than halogen and xenon lights. That's why quality differences are particularly evident in these devices. HELLA has been the market leader for LED lights for years.

Standard equipment:

Tractor front:
6 x halogen worklights
Tractor rear:
4 x halogen worklights

An improvement in light is an improvement in work quality.



Upgrade options

Tractor front:
4 x LED worklights
2 x halogen worklights
Tractor rear:
2 x LED worklights
2 x halogen worklights

A little assistance in selecting the right worklights

1. **Which lighting technology is already installed?**	Analyse what you've already got before choosing a new worklight. Only once you know what technology is currently installed can you effectively plan a replacement or lighting upgrade. Is a 1-to-1 replacement of the existing light sufficient? Or, do you want to increase the light intensity, efficiency and working convenience with more powerful lighting technologies? There are many benefits to switching to high-performance lighting technologies such as LED or Xenon.
2. **How big is the working area that needs to be illuminated?**	This question decides the light intensity you require, because ideal illumination differs for each usage scenario. Do you need long-range, narrow illumination? Or is short-range but intensive close-range illumination sufficient? The greater the range your illumination must ensure, the more light intensity you need.
3. **Can my existing lights be combined with another lighting technology to improve illumination?**	Yes! Additional worklights or partial replacement allow you to improve your illumination gradually, if necessary. There's no need to use the same technology. It is possible to combine existing halogen lighting with new and efficient LED worklights. This keeps the capital outlay low and allows you to benefit from greater luminous efficiency right away. To ensure even illumination, it is important that new lights are always installed in pairs.
4. **Do I need the worklights to operate in the dark for long periods?**	The longer you work in the dark, the more important ideal light conditions are to ensure you stay awake and focused. Halogen light causes fatigue over longer period, while LED light increases concentration and enables more precise and productive work because the human eye perceives it as white daylight. This light is less tiring to the eyes and improves your colour vision.
5. **How demanding are the outside conditions for the light?**	Halogen and Xenon lights are sensitive to vibration. The filaments in the light source may break in the event of strong vibration – with potentially devastating consequences for humans and animals in the work area, or for your own safety. LED worklights, with design lives up to 130 times longer, are recommended because they work without filaments and have the best vibration characteristics.

Further assistance and answers to technical questions can be found from page 112.

What the lumen output says about the brightness and light of a worklight.

The luminous flux emanating from a light source is measured in the physical unit of lumen (lm), reflecting the varying sensitivity of the human eye to light.

The lumen output of a light indicates how brightly the light it produces is perceived. That makes lumen output a better reference than the wattage, which only indicates the power consumption of a light but not how much brightness it actually produces. To aid easy comparison, the following overviews therefore list the lumen outputs of individual products. The lumen output, however, is not the only factor which decides how well a light can illuminate a work area.

Even more important is quality!
Homogeneous distribution of light is more important for optimum working light than the luminous flux from the light measured in lumen. The true quality of a light can be seen in the overall lighting technology concept which, with HELLA worklights, ensures extremely even illumination of the work area without shadows.

HELLA worklight quality factors.
The interplay and quality of the lighting technology components in a worklight are crucial to achieving ideal light conditions:

1. Quality of the light sources
Stringent tests and selection ensure an extremely long design life, e.g. up to 60,000 hours for LEDs.

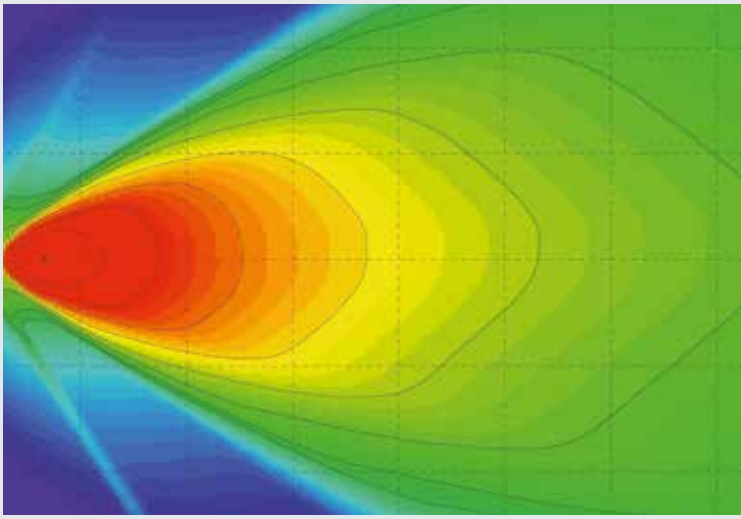
2. Quality of the reflector system
For homogeneous light distribution, the reflectors are designed to reduce light concentration at close range, where the light is otherwise extremely strong, and ensure increasing illumination as distance increases.

3. Quality of the lens material
Thanks to the use of premium, impact-resistant and scratch-proof synthetic material, the light emitted remains homogeneous, even after colliding with a branch or anything similar.

The HELLA reflector system: Optimum utilisation of lumen for homogenous illumination of the work area.

The reflector system is at the heart of HELLA's innovative lighting concept. Design is aided by the HELIOS software which tests the light distribution of a new reflector using an average of a million separate, simulated light beams.

This makes it possible for HELLA to ensure that worklights evenly illuminate the work area, prevent the separate lights from causing any interference or shadowing together and produce a harmonious light pattern. This is very important, because the human eye automatically focuses on the brightest point of a surface. That's also why worklights should always be replaced in pairs to prevent uneven illumination of the work area.



Computer simulation of the superimposed light produced by 2 x Oval 90 LED worklights shows how a harmonious overall pattern is produced.

More light, less consumption!

A meaningful evaluation of a light's power sees the lumen output in relation to the wattage required to produce the desired brightness.

Modern LED technology achieves a particularly good balance in this regard. The energy efficient lights reduce the strain on the generator, which is particularly useful for older tractors with limited generator power.

In general:
Lower fuel consumption in relation to light intensity makes energy efficient worklights economically sound in the long term, especially in the light of constantly rising fuel costs.

One example for comparison:
An LED worklight outputs 4,500 lm with just 70 W. A halogen worklight needs 140 W, double the energy, to produce just 2,800 lumen. LED technology is almost four times as efficient!

How many watts produce how many lumen (light output)?

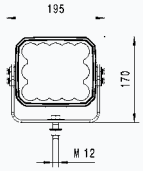
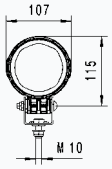
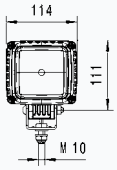
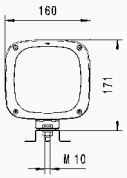
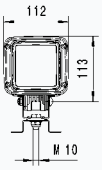
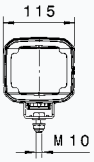
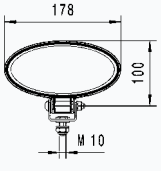
LED (watts)	Xenon (watts)	Halogen (watts)	Light output in lumen (lm)
70 W	–	–	**4,500 lm**
43 W	–	–	**3,000 lm**
–	42 W	140 W	**2,800 lm**
36 W	–	–	**2,700 lm**
–	42 W	–	**2,400 lm**
–	–	110 W	**2,300 lm**
30 W	–	–	**2,200 lm**
28 W	–	–	**2,000 lm**
36 W	–	–	**1,850 lm**
30 W	–	–	**1,800 lm**
25 W	–	65 W	**1,700 lm**
–	–	–	**1,400 lm**
22 W	–	–	**1,300 lm**
25 or 22 W	–	–	**1,200 lm**
–	–	55 W	**1,150 lm**
11 W	–	–	**1,100 lm**
13 or 15 W	–	–	**800 lm**
16 W	–	–	**700 lm**
7 W	–	–	**550 lm**
–	–	21 W	**400 lm**

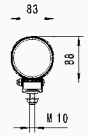
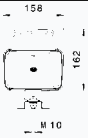
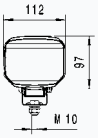
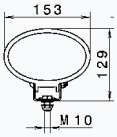
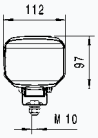
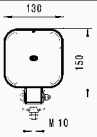
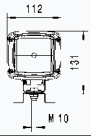
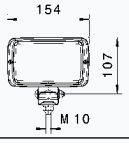
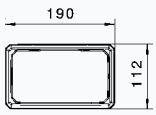
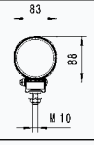
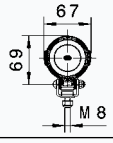
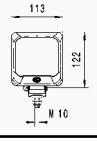
Light intensity in the close range

An overview of our worklights, ordered by light intensity.

The higher the lumen output, the brighter the worklight.

The direct comparison aims to help you find just the right worklight for your close-range requirements – with high, medium or low intensity depending on the lumen output.

Product			Lumen
Highest light intensity			
LED		**Power Beam 5000** 1GB 996 194-001 Page 52	4,500 lm
LED		**Module 90 LED** 1G0 996 263-031 Page 54	3,400 lm
LED		**Power Beam 3000** 1GA 996 192-001 Page 53	3,000 lm
XENON		**AS 200** 1GA 996 142-001 Page 72	2,800 lm
XENON		**Ultra Beam Xenon** 1GA 998 534-431 Page 74	2,800 lm
LED		**Ultra Beam LED** 1GA 995 506-001 Page 55	2,200 lm
LED		**Oval 90 LED** 1GB 996 386-001 Page 56	2,000 lm

Product			Lumen
Medium light intensity			
LED		**Modul 70 LED Gen. IV** 1G0 996 476-001 Page 58	2,500 lm
HALOGEN		**Double Beam, H3** 1GA 006 991-031 Page 78	2,300 lm
LED		**Power Beam 1800** 1GA 996 388-001 Page 57	1,850 lm
LED		**Oval 100 LED** 1GA 996 661-001 Page 59	1,700 lm
LED		**Power Beam 1500** 1GA 996 288-011 Page 60	1,300 lm
LED		**AP 1200 LED** 1GA 011 720-041 Page 62	1,200 lm
Low light intensity			
HALOGEN		**Ultra Beam, H3** 1GA 007 506-001 Page 74	1,150 lm
HALOGEN		**Picador, H3** 1GA 988 522-011 Page 76	1,150 lm
LED		**Flat Beam 1000** 1GB 996 193-001 Page 64	1,100 lm
LED		**Module 70 LED Gen. III** 1G0 996 276-481 Page 66	800 lm
LED		**Module 50 LED** 1G0 995 050-001 Page 67	800 lm
LED		**Flat Beam 500** 1GA 995 193-001 Page 68	550 lm

Brightness perception

More light with lower wattage: LED achieves around four times greater luminous efficiency than halogen, at the same generator load. In addition, an LED light with 1,200 lm appears considerably brighter to the human eye than a halogen light with 1,200 lm.

This is due to the different colour temperatures of LED and halogen light.

Halogen worklights with 1,200 lm, colour temperature 2,400 Kelvin

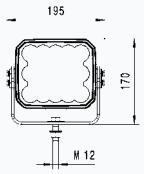
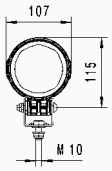
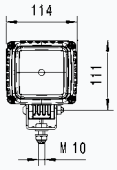
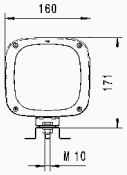
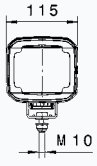
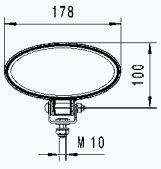
LED worklights with 1,200 lm, colour temperature 5,700 Kelvin

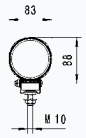
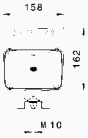
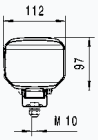
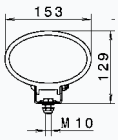
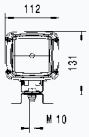
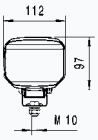
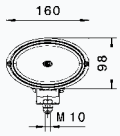
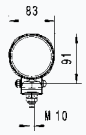
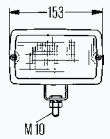
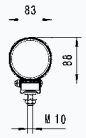
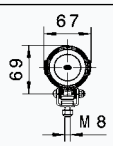
Light intensity in the far range

An overview of our worklights, ordered by light intensity.

The higher the lumen output, the brighter the worklight.

The direct comparison aims to help you find just the right worklight for your far-range requirements – with high, medium or low intensity depending on the lumen output.

Product			Lumen
Highest light intensity			
LED		**Power Beam 5000** 1GB 996 194-031 Page 52	4,500 lm
LED		**Module 90 LED** 1G0 996 263-051 Page 54	3,400 lm
LED		**Power Beam 3000** 1GA 996 192-011 Page 53	3,000 lm
XENON		**AS 200** 1GA 996 142-071 Page 72	2,800 lm
LED		**Ultra Beam LED** 1GA 995 506-031 Page 55	2,200 lm
LED		**Oval 90 LED** 1GB 996 386-021 Page 56	2,000 lm

Product			Lumen
Medium light intensity			
LED		**Modul 70 LED Gen. IV** 1G0 996 476-011 Page 58	2,500 lm
HALOGEN		**Double Beam, H3** 1GA 006 991-051 Page 78	2,300 lm
LED		**Power Beam 1800** 1GA 996 388-001 Page 57	1,850 lm
LED		**Oval 100 LED** 1GA 996 661-011 Page 59	1,700 lm
HALOGEN		**Ultra Beam, H9** 1GA 996 150-081 Page 74	1,700 lm
LED		**Power Beam 1500** 1GA 996 288-011 Page 60	1,300 lm
Low light intensity			
HALOGEN		**Oval 100, H3** 1GA 996 161-281 Page 83	1,150 lm
HALOGEN		**Module 70, H3** 1G0 996 176-011 Page 81	1,150 lm
HALOGEN		**Master** 1GA 005 060-001 Page 77	1,150 lm
LED		**Module 70 LED Gen. III** 1G0 996 376-001 Page 65	800 lm
LED		**Module 50 LED** 1G0 995 050-021 Page 67	800 lm

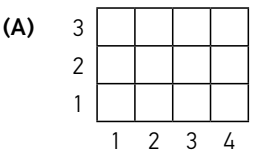
Luminous efficiency compared

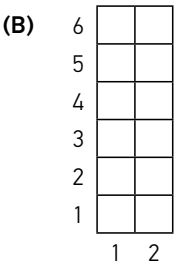
The brightness of a surface is dependent on two factors:

1. Lumen output (= emitted light)
2. Beam angle (= distribution of emitted light onto surface)

The more lumen a light source has, the brighter the emitted light. The oncoming brightness on a surface is, however, determined by the beam angle of the reflector. Higher beam angles illuminate larger areas but are less bright.

Example of luminous efficiency:
A worklight with 2,000 lm distributes its light onto 12 identical squares. The total lumen output remains the same, but the brightness is distributed differently depending on the beam angle: relative broadly in the close range (A) or further away on a narrower surface (B).





Agricultural and forestry vehicles

The targeted deployment of efficient worklights, particularly in agricultural use, dramatically increases efficiency. Modern owner-operators can work at full capacity at night and in twilight – older machinery can be used more efficiently by optimising its lighting. The extremely homogeneous illumination of HELLA worklights ensures ideal working conditions and a relaxed working environment.

Configure worklights recommended for your vehicle now with the FREE HELLA app for smartphones and tablets.

HELLA product recommendation

Tractor:
Cab roof, front

LED

Ultra Beam LED
1GA 995 506-011

→ All-rounder with outstanding luminous efficiency
→ Compact design enables installation in many different cabs
→ Fast and reliable installation with DT connectors

Close-range illumination
Page 55

LED

Oval 90 LED
1GB 996 386-001

→ Extremely wide illumination thanks to the convex cover lens
→ Ideal for wide illumination of a work area

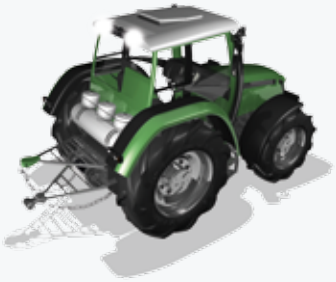
Close-range illumination
Page 56

LED

Power Beam 3000
1GA 996 192-001

→ Perfect when high light output is required

Close-range illumination
Page 53



Tractor:
Cab roof, rear

LED

Power Beam 1500
1GA 996 288-011

→ The flat design of the Power Beam 1500 is ideal for installation at the rear of the cab

Close-range illumination
Page 60

LED

Ultra Beam LED
1GA 995 506-011

→ Space-saving positioning on the cab roof thanks to compact design
→ Powerful light output

Close-range illumination
Page 55

LED

Oval 90 LED
1GB 996 386-001

→ Extremely wide illumination thanks to the convex cover lens
→ Ideal for wide illumination of a work area

Close-range illumination
Page 56

HELLA product recommendation

Tractor: Rear wing

LED

Module 90 LED
1G0 996 263-031

→ High light output with compact design
→ Excellent value for money

Close-range illumination
Page 54

LED

Oval 100 LED
1GA 996 661-001

→ Suitable for work with wide equipment
→ Special optics scatter light over a very wide range

Close-range illumination
Page 59

LED

Ultra Beam LED
1GA 995 506-001

→ With 2,200 lumen output, the Ultra Beam LED offers sufficient rear light and enables precise working

Close-range illumination
Page 55

Tractor: Step-up lighting

LED

Module 70 LED Gen. III
1G0 996 276-481

→ For safe access to the vehicle interior
→ Compact design ideal for illuminating vehicle door area

Close-range illumination
Page 66

LED

Flat Beam 500
1GA 995 193-001

→ The Flat Beam 500 features an extremely compact design
→ The luminous efficiency of 550 lumen is perfectly sufficient for reliable vehicle access lighting

Close-range illumination
Page 68

LED

Module 50 LED
1G0 995 050-001

→ Where space is tight, the Module 50 LED is ideal for illuminating the vehicle door

Close-range illumination
Page 67

HELLA product recommendation

Tractor: Mirror bracket

LED

Modul 70 LED Gen. IV
1G0 996 476-001

→ Outstanding light values
→ Rapid installation with associated mirror mount (8HG 990 263-111)

Close-range illumination
Page 58

LED

Module 70 LED Gen. III
1G0 996 276-481

→ Where less light is needed
→ Low weight and homogenous light distribution in the close range
→ Matching mirror mount (8HG 990 263-111)

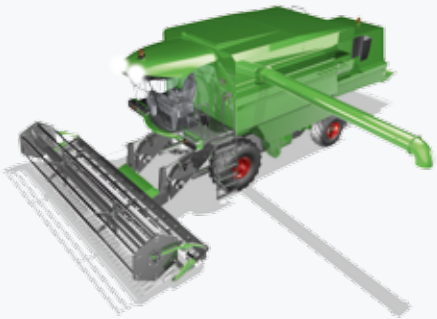
Close-range illumination
Page 66

LED

Q90 LED
1GA 996 283-001

→ Ideal for this attachment position thanks to light synthetic material housing
→ Reduced vibration, sufficient luminous efficiency
→ A good LED upgrade choice together with the mount (8HG 990 263-131)

Close-range illumination
Page 61



Combine harvesters: Cab roof, front

LED

Module 90 LED
1G0 996 263-031

→ Outstanding luminous efficiency
→ The Module 90 LED is the ideal solution if there's enough depth at the front of the cab roof

Close-range illumination
Page 54

LED

Ultra Beam LED
1GA 995 506-011

→ Space-saving positioning on the cab roof thanks to compact design
→ Powerful light output

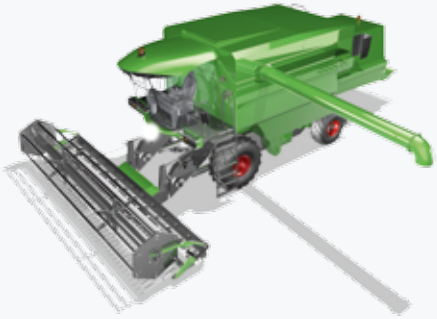
Close-range illumination
Page 55

LED

Power Beam 3000
1GA 996 192-001

→ Perfect when high light output is required

Close-range illumination
Page 53



HELLA product recommendation

Combine harvesters: Cab front/bottom

LED

Oval 100 LED
1GA 996 661-001

→ Ideal for wide combine harvesters
→ Special optics scatter light over a very wide and homogeneous range

Close-range illumination
Page 59

LED

Power Beam 1500
1GA 996 288-011

→ Wide, homogeneous close-range illumination

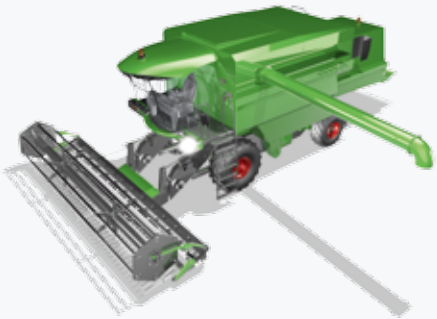
Close-range illumination
Page 60

LED

Ultra Beam LED
1GA 995 506-011

→ The Ultra Beam LED with 2,200 lumen is recommended if more light is required

Close-range illumination
Page 55



Combine harvesters: Cab bottom/side

LED

Power Beam 1500
1GA 996 288-011

→ Flat design
→ Homogeneous close-range illumination

Close-range illumination
Page 60

LED

Module 70 LED Gen. III
1G0 996 276-481

→ Where less light is needed
→ Low weight and homogenous light distribution in the close range
→ Matching mirror mount (8HG 990 263-111)

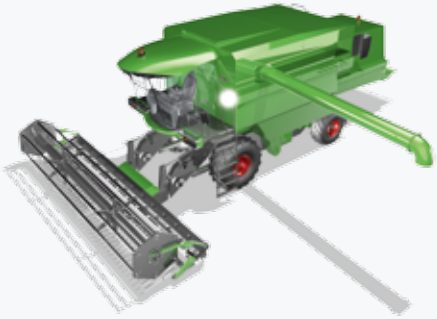
Close-range illumination
Page 66

LED

Ultra Beam LED
1GA 995 506-001

→ The Ultra Beam LED with 2,200 lumen is recommended if more light is required

Close-range illumination
Page 55



HELLA product recommendation

Combine harvesters: Mirror bracket

LED

Module 70 LED Gen. IV
1G0 996 476-001

→ Outstanding light values
→ Rapid installation with associated mirror mount (8HG 990 263-111)

Close-range illumination
Page 58

LED

Q90 LED
1GA 996 283-001

→ Ideal for this attachment position thanks to light synthetic material housing
→ Reduced vibration, sufficient luminous efficiency
→ A good LED upgrade choice together with the mount (8HG 990 263-131)

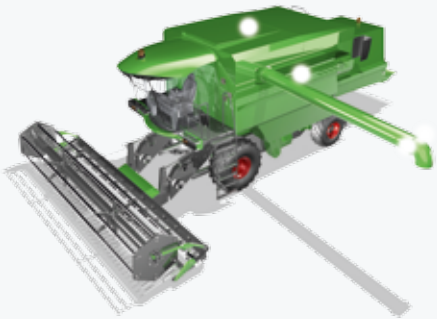
Close-range illumination
Page 61

LED

Module 70 LED Gen. III
1G0 996 276-481

→ Where less light is needed
→ Low weight and homogenous light distribution in the close range
→ Matching mirror mount (8HG 990 263-111)

Close-range illumination
Page 66



Combine harvesters: Side wall, top

LED

Flat Beam 1000
1GD 996 193-051

→ With flat design and 45° downward illumination, it is ideal for mounting on the vehicle side. Offers wide, homogeneous close-range illumination right around the vehicle

Close-range illumination
Page 64

LED

Power Beam 1500
1GA 996 288-011

→ Wide, homogeneous close-range illumination makes the Power Beam 1500 the ideal worklight for a range of mounting positions on combine harvesters.

Close-range illumination
Page 60

LED

Q90 LED
1GA 996 283-001

→ Flat, space-saving design
→ Light synthetic material housing

Close-range illumination
Page 61

HELLA product recommendation

Combine harvesters: Tail board

LED

Oval 100 LED
1GA 996 661-001

→ Ideal for wide combine harvesters
→ Special optics scatter light over a very wide and homogeneous range

Close-range illumination
Page 59

LED

Power Beam 1500
1GA 996 288-011

→ The flat design of the Power Beam 1500 is ideal for installation at the rear of the cab

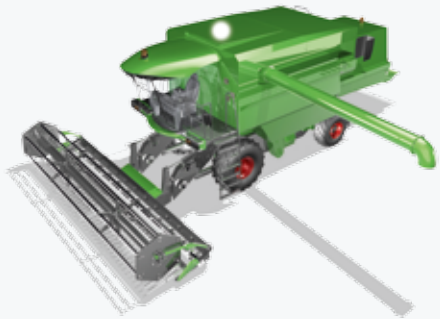
Close-range illumination
Page 60

LED

AP 1200 LED
1GA 011 720-041

→ Ideal for maintenance at the rear end of the vehicle
→ Flat design, robust housing and excellent value for money

Close-range illumination
Page 62



Combine harvesters: On the grain tank

LED

Module 70 LED Gen. IV
1G0 996 476-001

→ Compact dimensions and excellent light values enable safe and consistent working
→ The Module 70 LED is recommended for good visibility of the combine harvester's discharge opening, even at night

Close-range illumination
Page 58

LED

Power Beam 1500
1GA 996 288-011

→ Wide, homogeneous close-range illumination
→ Flat design

Close-range illumination
Page 60

LED

Module 70 LED Gen. III
1G0 996 276-481

→ Where less light is needed
→ Low weight and homogenous light distribution in the close range

Close-range illumination
Page 66

HELLA product recommendation

Combine harvesters:
In the grain tank and service light

LED

Flat Beam 500
1GA 995 193-001

→ The ultra-flat Flat Beam 500 is recommended as a service light in the grain tank

Close-range illumination
Page 68

LED

Q90 LED
1GA 996 283-001

→ Thanks to its light synthetic material housing and flat design, the Q90 LED is an ideal service light

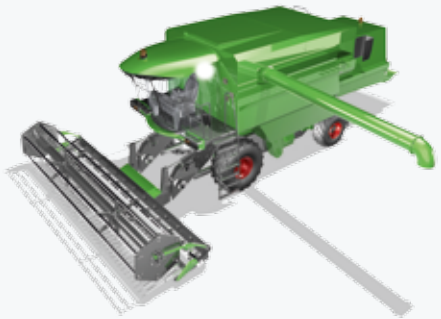
Close-range illumination
Page 61

HALOGEN

Picador H3
1GA 998 522-011

→ When less luminous efficiency is sufficient

Close-range illumination
Page 76



Combine harvesters:
Step-up

LED

Module 70 LED Gen. III
1G0 996 276-481

→ For safe access to the vehicle interior
→ Compact design ideal for illuminating vehicle door area

Close-range illumination
Page 66

LED

Flat Beam 500
1GA 995 193-001

→ The Flat Beam 500 features an extremely compact design
→ The luminous efficiency of 550 lumen is perfectly sufficient for reliable vehicle access lighting

Close-range illumination
Page 68

LED

Module 50 LED
1G0 995 050-001

→ Where space is tight, the Module 50 LED is ideal for illuminating the vehicle door

Close-range illumination
Page 67

HELLA product recommendation

Sprayer: Rear wing

LED

Module 70 LED blue
1G0 996 276-701

→ Blue lens for greater efficiency
→ Less dazzle when lighting spray mist, more precise check of individual nozzle function
→ 13 watts energy consumption, 800 lm

Close-range illumination
Page 66

HALOGEN

Module 70, H9 blue
1G0 996 176-671

→ Specially developed for sprayer vehicles and snow ploughs
→ Less dazzle when lighting spray mist, more precise check of individual nozzle function possible

Close-range illumination
Page 80

LED

Power Beam 3000
1GA 996 192-001

→ The Power Beam 3000 with 3,000 lumen is recommended if more light is required

Close-range illumination
Page 53

Sprayer: linkage

LED

Module 70 LED blue
1G0 996 276-701

→ When installed on the linkage, the blue Module 70 LED shines straight through the spray mist, making all nozzles visible to the driver without dazzling him

Close-range illumination
Page 66

HALOGEN

Module 70, H9 blue
1G0 996 176-671

→ Less dazzle when lighting spray mist, more precise check of individual nozzle function possible

Close-range illumination
Page 80

LED

Power Beam 1500
1GA 996 288-001

→ Narrow, long-range illumination penetrates the spray mist and greatly facilitates work at night

Close-range illumination
Page 60

HELLA product recommendation

Harvesters: Cab, front

LED

Power Beam 5000
1GB 996 194-001

→ Brightest illumination up to 100 metres with close-range illumination and up to 300 metres in the long-range version
→ Extremely robust and powerful

Close-range illumination
Page 52

LED

Power Beam 3000
1GA 996 192-001

→ Ideal for all-round vehicle lighting

Close-range illumination
Page 53

XENON

AS 200 Xenon
1GA 996 142-001

→ Outstanding light values help the driver to carry out his work precisely and efficiently
→ Proven in forestry

Close-range illumination
Page 72

Harvesters: Cab, rear/side

LED

Power Beam 3000
1GA 996 192-001

→ Sufficient light for the rear view
→ Extremely robust

Close-range illumination
Page 53

LED

Module 90 LED
1G0 996 263-031

→ Powerful illumination with compact design
→ Excellent value for money

Close-range illumination
Page 54

LED

Ultra Beam LED
1GA 995 506-011

→ Compact design enables installation in many different cabs
→ Universal all-rounder

Close-range illumination
Page 55

HELLA product recommendation

Harvesters: Jib

LED

Ultra Beam LED
1GA 995 506-001

→ Space-saving thanks to compact design
→ Outstanding illumination of the close-range work area

Close-range illumination
Page 55

LED

Module 70 LED Gen. IV
1G0 996 476-001

→ Compact dimensions and excellent light values enable safe and consistent working

Close-range illumination
Page 58

LED

Power Beam 3000
1GA 996 192-001

→ The Power Beam 3000 is recommended for high lighting requirements

Close-range illumination
Page 53

Harvesters: Service light

LED

Module 70 LED Gen. III
1G0 996 276-481

→ The compact design of the Module 70 LED offers an excellent solution
→ The 800 lumen of the Module 70 LED illuminate the work area all around the vehicle and simplify work at night

Close-range illumination
Page 66

LED

Q90 LED
1GA 996 283-001

→ Thanks to its flat design, the Q90 LED is also suitable for this mounting position
→ With close-range illumination, the area around the vehicle can be evenly illuminated

Close-range illumination
Page 61

LED

Module 50 LED
1G0 995 050-001

→ Where space is tight, the Module 50 LED is an ideal service light

Close-range illumination
Page 67

HELLA product recommendation

Forwarder: crane

LED

Ultra Beam LED
1GA 995 506-001

→ Even, wide illumination of the entire work area

Close-range illumination
Page 55

LED

Power Beam 3000
1GA 996 192-001

→ Suitable where lighting requirements are extremely high

Close-range illumination
Page 53

XENON

Ultra Beam X-PowerPack
1GA 998 534-431

→ Has long been used in forestry
→ Outstanding light values help the driver to carry out his work precisely and efficiently

Close-range illumination
Page 71

Forwarder: Cab rear panel

LED

Power Beam 1500
1GA 996 288-011

→ The flat design of the Power Beam 1500 is ideal for installation at the rear of the cab

Close-range illumination
Page 60

LED

Q90 LED
1GA 996 283-001

→ Flat design
→ Even, homogenous illumination depending on alignment

Close-range illumination
Page 61

LED

Flat Beam 1000
1GD 996 193-001

→ Ideal with its flat design and wide illumination

Close-range illumination
Page 64

HELLA product recommendation

Pick-up: Roof, front

LED

Oval 100 LED
1GA 996 661-011

→ Homogenous light distribution in front of the vehicle

Close-range illumination
Page 59

LED

Ultra Beam LED
1GA 995 506-001

→ With 2,200 lumen, it offers even more light and thus an improvement in work quality

Close-range illumination
Page 55

XENON

Oval 100 X-PowerPack
1GA 996 461-311

→ 2,800 lumen help the driver to carry out his work precisely and efficiently

Close-range illumination
Page 70

Pick-up: load area lighting

LED

Flat Beam 1000
1GD 996 193-051

→ Thanks to a flat design and 45° downward illumination, ideal for installation on tail board
→ The entire bed of the trailer is evenly illuminated, allowing precise and safe work

Close-range illumination
Page 64

LED

Q90 LED
1GA 996 283-001

→ Thanks to its compact design, also suitable for this mounting position

Close-range illumination
Page 61

LED

AP 1200 LED
1GA 011 720-041

→ Flat design, robust housing and excellent value for money

Close-range illumination
Page 62

Construction vehicles

Construction sites are a really tough test for any material. Not a problem for HELLA worklights, though, because they have had to undergo tough tests of their own in the testing laboratory and in field trials. This includes a series of tests against water and dust ingress, electromagnetic compatibility tests, thermal tests, endurance tests, electronic tests and vibration tests, of course.

Configure worklights recommended for your vehicle now with the FREE HELLA app for smartphones and tablets.

HELLA product recommendation

Construction machinery, excavator: Excavator arm, front/rear

LED

Module 70 LED Gen. IV
1G0 996 476-001

→ The excavator arm is somewhere with little space for work lighting
→ Compact worklight with excellent light values enables safe and consistent working

Close-range illumination
Page 58

LED

Power Beam 1500
1GA 996 288-001

→ Narrower long-range illumination offers focused illumination of the bucket's work area

Close-range illumination
Page 60

LED

Ultra Beam LED
1GA 995 506-001

→ More light is often needed for larger excavators. In such cases, the Ultra Beam LED with 2,200 lumen is recommended.

Close-range illumination
Page 55

Construction machinery, excavator: Roof, front/rear

LED

Module 90 LED
1G0 996 263-031

→ Efficient and safe work thanks to 2,700 lumen output

Close-range illumination
Page 54

LED

Ultra Beam LED
1GA 995 506-011

→ All-rounder with outstanding luminous efficiency
→ Compact design enables installation in many different excavator cabs

Close-range illumination
Page 55

LED

Power Beam 3000
1GA 996 192-001

→ Perfect when high light output is required

Close-range illumination
Page 53

HELLA product recommendation

Asphalt paver: Roof, front/rear

LED

Power Beam 5000
1GB 996 194-001

→ Powerful 4,500 lumen turn night into day and facilitate work
→ Particularly resistant to vibrations

Close-range illumination
Page 52

XENON

Ultra Beam X-PowerPack
1GA 998 534-451

→ Outstanding front light with 2,800 lumen
→ Even light distribution helps the driver to carry out his work precisely and efficiently

Close-range illumination
Page 71

LED

Ultra Beam LED
1GA 995 506-001

→ Space-saving positioning on the cab roof thanks to compact design
→ Powerful light output

Close-range illumination
Page 55

Asphalt paver: Wheels, side

LED

Q90 LED
1GA 996 283-001

→ Thanks to its flat design, the Q90 LED is suitable for this mounting position
→ With close-range illumination, the area around the vehicle can be evenly illuminated

Close-range illumination
Page 61

LED

Module 70 LED Gen. III
1G0 996 276-481

→ Even when mounted low, produces wide illumination of the ground around the vehicle
→ 800 lumen with only 13 watts energy consumption

Close-range illumination
Page 66

LED

Ultra Beam LED
1GA 995 506-001

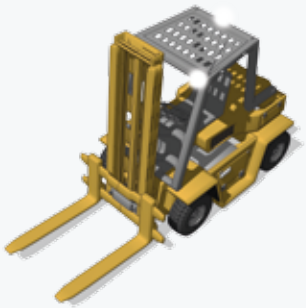
→ The Ultra Beam LED with 2,200 lumen is recommended if more light is required

Close-range illumination
Page 55

Forklifts

HELLA worklights are extremely energy efficient. A clear advantage when used on electric forklifts. After all, efficient worklights mean less charging and minimised downtime for the vehicle.

Configure worklights recommended for your vehicle now with the FREE HELLA app for smartphones and tablets.



HELLA product recommendation

Forklift: Roof, front/rear

HALOGEN

Oval 100 FL
1GN 996 361-461

→ Double worklights were developed for forklifts and are used to illuminate the entire forklift range, from the ground to the high-bay racking
→ To save power, the bulbs can be switched on and off separately as needed

Close-range illumination
Page 84

LED

Q90 LED
1GA 996 283-001

→ Depending on alignment, either the forklift arm or the rack can be illuminated
→ A combination of two worklights is recommended

Close-range illumination
Page 61

LED

Module 70 LED Gen. III
1G0 996 276-481

→ Compact dimensions, low weight and homogenous light distribution
→ Low energy consumption (13 W)

Close-range illumination
Page 66

Forklift: Cab, front

LED

Mega Beam LED
1GM 996 136-311

→ Excellent light distribution in the close range
→ Attractive design

Close-range illumination
Page 65

LED

Q90 LED
1GA 996 283-001

→ Depending on alignment, either the forklift arm or the rack can be illuminated
→ A combination of two worklights is recommended

Close-range illumination
Page 61

LED

Ultra Beam LED
1GA 995 506-001

→ With 2,200 lumen output, the Ultra Beam LED offers sufficient rear light and enables precise working

Close-range illumination
Page 55

Vehicles for commercial use

Wider than others, longer, taller, heavier and more powerful. Heavy and wide loads present drivers with a special challenge – and are often underestimated by other road users. For this reason, the same rule applies to those responsible for fitting out the vehicles with warning systems and worklights as to those responsible for the vehicle condition and load securing actions: only perfect will do! HELLA is delighted with this – after all, we work according to the very same rule.

Configure worklights recommended for your vehicle now with the FREE HELLA app for smartphones and tablets.

HELLA product recommendation

Commercial vehicles: Cab rear panel, top

LED

Flat Beam 1000
1GD 996 193-051

→ Thanks to a flat design and 45° downward illumination, ideal for installation on the rear panel. The entire coupling area of the trailer is evenly illuminated, allowing precise and safe work.

Close-range illumination
Page 64

LED

AP 1200 LED
1GA 011 720-041

→ Design allows for ideal installation on the cab rear panel
→ Excellent value for money

Close-range illumination
Page 62

LED

Flat Beam 500
1GA 995 193-021

→ The luminous efficiency of 550 lumen is sufficient for even coupling illumination
→ Extremely flat mounting depth

Close-range illumination
Page 68

Commercial vehicles: Cab rear panel, bottom

LED

Power Beam 1500
1GA 996 288-011

→ The entire coupling area is illuminated, hugely facilitating work in the dark
→ Wide, homogenous illumination

Close-range illumination
Page 60

LED

AP 1200 LED
1GA 011 720-041

→ Design allows for ideal installation on the cab rear panel
→ Excellent value for money

Close-range illumination
Page 62

LED

Q90 LED
1GA 996 283-001

→ Thanks to its flat design, also suitable for this mounting position

Close-range illumination
Page 56

HELLA product recommendation

Commercial vehicles: Vehicle rear/side

LED

Module 70 LED reversing spotlight
2ZR 996 376-091

→ Approved as a reversing spotlight
→ Compact dimensions and special corrosion resistant coating

Close-range illumination
Page 95

HALOGEN

Ultra Beam, H3 reversing spotlight
2ZR 997 506-691

→ Approved as a reversing spotlight
→ The sealed DT connector protects the light from water ingress and corrosion

Close-range illumination
Page 94

LED

LED reversing spotlight with 3 LEDs
2ZR 012 456-221

→ Approved as a reversing spotlight
→ Shallow mounting depth (48 mm)
→ The energy-saving LED technology (only 11 W) helps to save power and thus reduces the strain on the generator

Close-range illumination
Page 95

Commercial vehicles: Cab, front

LED

Module 70 LED Gen. IV
1G0 996 476-001

→ Outstanding light values
→ Rapid installation with associated mirror mount (8HG 990 263-111)

Close-range illumination
Page 58

LED

Module 70 LED Gen. III
1G0 996 276-481

→ Where less light is needed
→ Low weight and homogenous light distribution in the close range
→ Matching mirror mount (8HG 990 263-111)

Close-range illumination
Page 66

HALOGEN

Q90 LED
1GA 996 283-001

→ Ideal for this attachment position thanks to light synthetic material housing
→ Reduced vibration, sufficient luminous efficiency
→ A good LED upgrade choice together with the mount (8HG 990 263-131)

Close-range illumination
Page 61

HELLA product recommendation

Tow truck: Cab, top

LED

Flat Beam 1000
1GD 996 193-051

→ Thanks to a flat design and 45° downward illumination, ideal for installation on the rear panel. The entire coupling area of the trailer is evenly illuminated, allowing precise and safe work.

Close-range illumination
Page 64

LED

Q90 LED
1GA 996 283-001

→ Thanks to its flat design, also suitable for this mounting position

Close-range illumination
Page 61

LED

Power Beam 1500
1GA 996 288-011

→ The entire bed is illuminated, hugely facilitating work in the dark
→ Wide, homogenous illumination

Close-range illumination
Page 60

Tow truck: Cab, centre

LED

Power Beam 1500
1GA 996 288-011

→ Wide, homogenous illumination
→ The entire area around the vehicle is evenly illuminated

Close-range illumination
Page 60

LED

Ultra Beam LED
1GA 995 506-001

→ The Ultra Beam LED with 2,200 lumen is recommended if more light is required

Close-range illumination
Page 55

LED

Flat Beam 1000
1GD 996 193-051

→ Thanks to a flat design and 45° downward illumination, ideal for installation on tail board
→ The entire bed of the trailer is evenly illuminated, allowing precise and safe work

Close-range illumination
Page 64

HELLA product recommendation

Tow truck: Vehicle rear/side

LED

Module 70 LED reversing spotlight
2ZR 996 376-091

→ Approved as a reversing spotlight
→ Compact dimensions and special corrosion resistant coating

Close-range illumination
Page 95

HALOGEN

Ultra Beam, H3 reversing spotlight
2ZR 997 506-691

→ Approved as a reversing spotlight
→ The sealed DT connector protects the light from water ingress and corrosion

Close-range illumination
Page 94

LED

LED reversing spotlight with 3 LEDs
2ZR 012 456-221

→ Approved as a reversing spotlight
→ Shallow mounting depth (48 mm)
→ The energy-saving LED technology (only 11 W) helps to save power and thus reduces the strain on the generator

Close-range illumination
Page 95

Tow truck: loading platform, bottom

LED

Flat Beam 500
1GA 995 193-021

→ Extremely flat design enables installation on any vehicle rear panel
→ The luminous efficiency of 550 lumen is sufficient for even bed illumination

Close-range illumination
Page 68

LED

Q90 LED
1GA 996 283-001

→ 1,200 lumen of power with a flat design

Close-range illumination
Page 56

LED

Power Beam 1500
1GA 996 288-011

→ Wide, homogenous illumination of the entire bed
→ With 1,300 lumen, particularly powerful for this mounting position

Close-range illumination
Page 60


SO LP 5550

Municipal vehicles

Their range of applications is versatile. They are used for cleaning pavements, pedestrian zones, roads, runways or even industrial halls. They ensure inner cities are kept clean and sweep all sorts of road surfaces from narrow little alleyways to large public spaces or airports. HELLA worklights help to ensure that no piece of waste is missed and the drivers always have optimum visibility, regardless of where they are sweeping. Resistant to corrosion and reliable, HELLA worklights provide genuine support at work.

Configure worklights recommended for your vehicle now with the FREE HELLA app for smartphones and tablets.

HELLA product recommendation

Cleaning vehicle, 24 V: Mounting back/front

LED

Oval 100 LED
1GA 996 661-001

→ Special optics particularly scatter light to the sides. This makes it possible to illuminate the entire close range (up to 40 m) around the vehicle.

Close-range illumination
Page 59

LED

Ultra Beam LED
1GA 995 506-001

→ The Ultra Beam LED with 2,200 lumen is recommended if more light is required

Close-range illumination
Page 55

LED

Power Beam 3000
1GA 996 192-001

→ Particularly powerful with 3,000 lumen

Close-range illumination
Page 53

Cleaning vehicle, 24 V: Side of the vehicle, bottom

LED

Module 70 LED Gen. III
1G0 996 276-481

→ Ideal for illuminating objects such as curb cleaning brushes
→ The even light distribution hugely facilitates work and ensures excellent driver visibility

Close-range illumination
Page 66

LED

Q90 LED
1GA 996 283-001

→ With 1,200 lumen and a flat design
→ Particularly suitable for this mounting position

Close-range illumination
Page 61

LED

Flat Beam 500
1GA 995 193-001

→ The luminous efficiency of 550 lumen is sufficient for even ground illumination in the close range around the vehicle
→ Space-saving thanks to extremely flat design

Close-range illumination
Page 68

HELLA product recommendation

Cleaning vehicle, 24 V: Side of vehicle back/side

LED

Module 70 LED reversing spotlight
2ZR 996 376-091

→ Approved as a reversing spotlight
→ Compact dimensions and special corrosion resistant coating

Close-range illumination
Page 95

HALOGEN

Ultra Beam, H3 reversing spotlight
2ZR 997 506-691

→ Approved as a reversing spotlight
→ The sealed DT connector protects the light from water ingress and corrosion

Close-range illumination
Page 94

LED

LED reversing spotlight with 3 LEDs
2ZR 012 456-221

→ Approved as a reversing spotlight
→ Shallow mounting depth (48 mm)
→ The energy-saving LED technology (only 11 W) helps to save power and thus reduces the strain on the generator

Close-range illumination
Page 95

Cleaning vehicle, 12 V: Roof, top

LED

Flat Beam 1000
1GD 996 193-051

→ Thanks to a flat design and 45° downward illumination, ideal for installation on the rear panel. The entire coupling area of the trailer is evenly illuminated, allowing precise and safe work.

Close-range illumination
Page 64

LED

Q90 LED
1GA 996 283-001

→ Thanks to its flat design, also suitable for this mounting position

Close-range illumination
Page 61

LED

Power Beam 1500
1GA 996 288-011

→ The entire bed is illuminated, hugely facilitating work in the dark
→ Wide, homogenous illumination

Close-range illumination
Page 60


FEUERWEHR

Emergency vehicles

When the fire service is called, it's often a question of life and death. The reliability of the material plays a vital part.

HELLA worklights are subjected to extreme quality tests to ensure they always reliably deliver top performance.

Configure worklights recommended for your vehicle now with the FREE HELLA app for smartphones and tablets.

HELLA product recommendation

Emergency vehicle: Cab, front

LED

Power Beam 3000
1GA 996 192-011

→ The long-range illumination of the Power Beam 3000 makes it an ideal searchlight for distances of up to 200 metres

Close-range illumination
Page 53

LED

Ultra Beam LED
1GA 995 506-031

→ The Ultra Beam LED, too, is perfect for long-range illumination when installed on the cab of an emergency vehicle
→ Illumination of up to 150 metres in front of the vehicle is possible

Close-range illumination
Page 55

LED

Module 90 LED
1G0 996 263-051

→ The long-range variant of the Module 90 LED is ideal for intensive illumination up to 100 metres
→ The light is extremely focused and offers outstanding illumination in the work area

Long-range illumination
Page 54

Emergency vehicle: Vehicle roof or mast

LED

Power Beam 3000
1GA 996 192-001

→ Vehicle mast illumination has one aim: to provide as much light as possible around the entire vehicle. The Power Beam 3000 manages this with ease. Ideal for this application

Close-range illumination
Page 53

LED

Power Beam 5000
1GB 996 194-001

→ Brightest illumination up to 100 metres with close-range illumination and up to 300 metres in the long-range version can be achieved with the 4,500 lumen

Close-range illumination
Page 52

LED

Module 90 LED
1G0 996 263-031

→ The illumination is also ideal for vehicle masts
→ The Module 90 LED offers a more affordable alternative while still featuring excellent light values

Close-range illumination
Page 54

HELLA product recommendation

Emergency vehicle: Mounting on side top/vehicle rear

LED

Flat Beam 1000
1GD 996 193-051

- → The specially developed 45° lens focuses the light directly on the ground, so that, even with flat surface mounting of the light, the beams fall right around the vehicle
- → Flat design
- → 1,100 lumen output

Close-range illumination
Page 64

LED

Flat Beam 500
1GA 995 193-021

- → Also features the specially developed 45° lens, allowing precise and safe work directly at the vehicle
- → 550 lumen output with 7 watts energy consumption

Close-range illumination
Page 68

LED

Q90 LED
1GA 996 283-001

- → Space-saving thanks to flat design
- → Powerful 1,200 lumen ensure even illumination

Close-range illumination
Page 61

Emergency vehicle: Vehicle rear/side

LED

Module 70 LED reversing spotlight
2ZR 996 376-091

- → Approved as a reversing spotlight
- → Compact dimensions and special corrosion resistant coating

Close-range illumination
Page 95

HALOGEN

Ultra Beam, H3 reversing spotlight
2ZR 997 506-691

- → Approved as a reversing spotlight
- → The sealed DT connector protects the light from water ingress and corrosion

Close-range illumination
Page 94

LED

LED reversing spotlight with 3 LEDs
2ZR 012 456-221

- → Approved as a reversing spotlight
- → Shallow mounting depth (48 mm)
- → The energy-saving LED technology (only 11 W) helps to save power and thus reduces the strain on the generator

Close-range illumination
Page 95

Snow ploughs

They often start work in the early hours before dawn and often work until late in the evening or night. There is no question that snow ploughs play an important role in keeping the roads, footpaths and airports safe, as well as many other public and private spaces. Situations like this are not only stressful for the person involved, but also for the materials used.

For many years now, HELLA has been a partner of leading winter snow plough manufacturers and tries to support this work as effectively as possible with high quality and innovative products. Because there is hardly any other area where reliability, safety and durability play such an important role as they do for snow ploughs.

To this end, HELLA products are thoroughly inspected over the entire manufacturing process and subjected to exacting demands so that the drivers can be sure to rely on the HELLA lighting system.

Configure worklights recommended for your vehicle now with the FREE HELLA app for smartphones and tablets.

HELLA product recommendation

Snow ploughs: Roof, front

LED

Oval 100 LED
1GA 996 661-011

→ Special optics scatter light homogeneously in front of the vehicle
→ 1,700 lumen output

Close-range illumination
Page 59

LED

Ultra Beam LED
1GA 995 506-001

→ With 2,200 lumen, it offers even more light and thus an improvement in work quality

Close-range illumination
Page 55

LED

Module 70 LED blue
1G0 996 276-701

→ The Module 70 LED blue was specially developed for snow ploughs
→ Less dazzle when illuminating spray mist, road salt or snow

Close-range illumination
Page 66

Snow ploughs: Cab, side

LED

Module 70 LED blue
1G0 996 276-701

→ The Module 70 LED blue was specially developed for sprayers and snow ploughs. Less dazzle when illuminating spray mist, road salt or snow. In addition, the blue lens improves the nighttime perception of contrast.

Close-range illumination
Page 66

HALOGEN

Module 70, H9 blue
1G0 996 176-671

→ Less dazzle when lighting spray mist, more precise check of individual nozzle function possible

Close-range illumination
Page 80

LED

Power Beam 1500
1GA 996 288-041

→ Narrow, long-range illumination penetrates the spray mist and greatly facilitates work at night

Close-range illumination
Page 60

Worklights “quick finder”

LED product range 52
Power Beam 5000 52
Power Beam 3000 53
Module 90 LED 54
Ultra Beam LED 55
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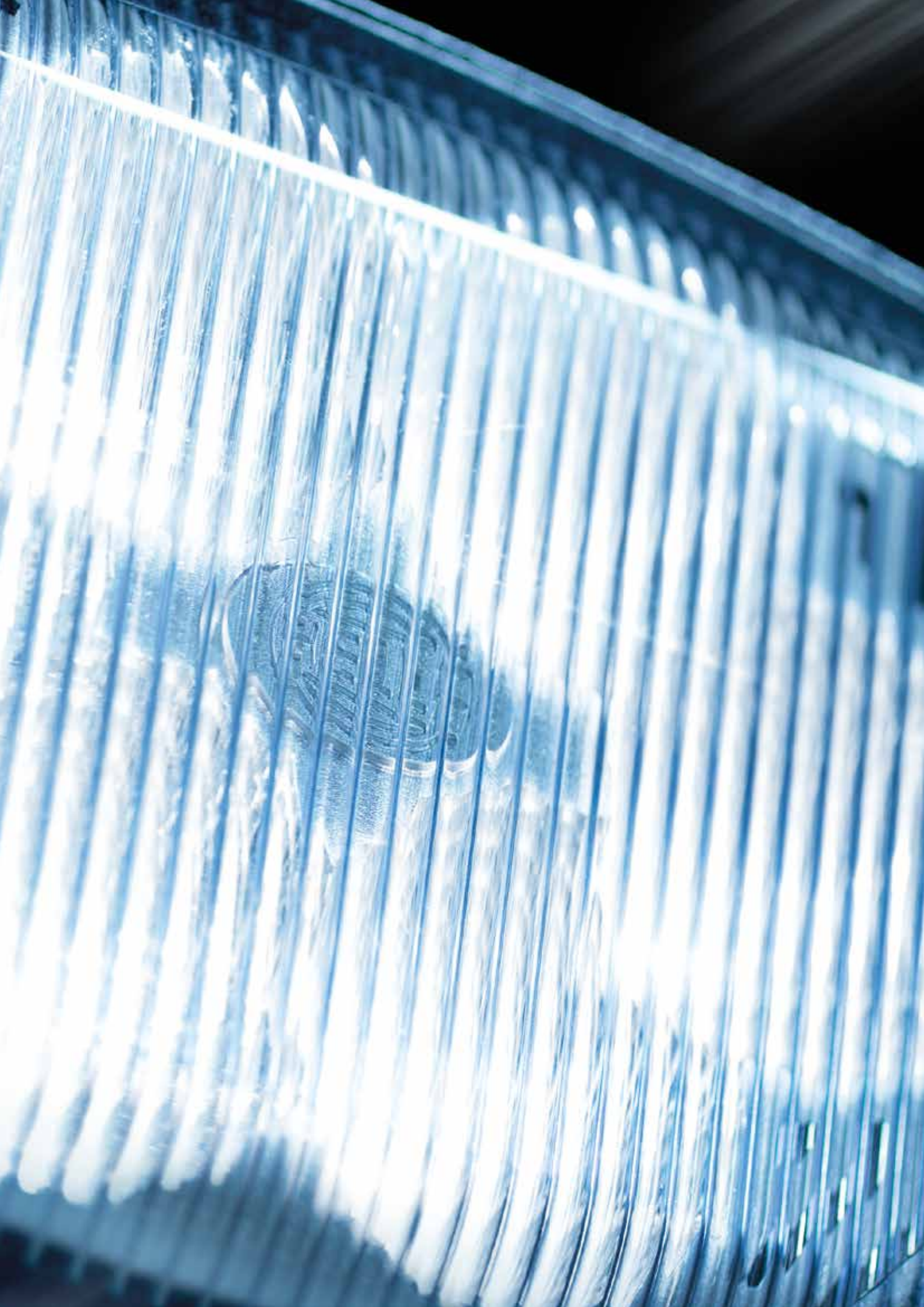
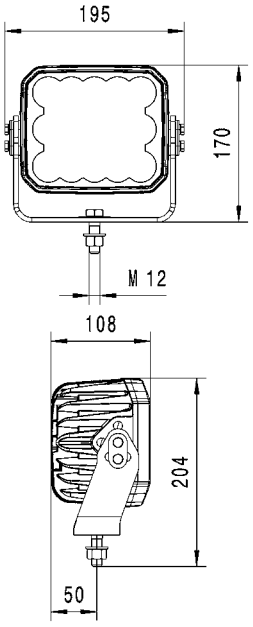


Power Beam 5000

Product features

- → The powerhouse: suitable for the toughest demands with heavy vibration and dirt
- → Heavy-duty bracket absorbs strong vibration
- → One of the highest luminous efficiencies of any worklights on the market



www.hella.com/eliver | Close-range illumination

Technical details

Light output (measured): 4,500 lumen, power requirement: 70 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, robust aluminum housing

Recommended tilt angle: 10°

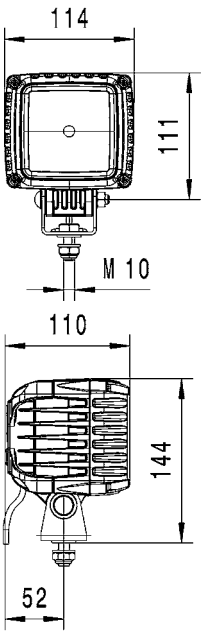
1GB 996 194-...	-001	-011	-031
Voltage	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	X	X	–
Long-range illumination	–	–	X
Energy consumption	70 W	70 W	70 W
Lumen (hot)	4,500 lm	4,500 lm	4,500 lm
Electrical connection	DT connector	2,000 mm cable	DT connector
Upright mounting	X	X	X
Suspended mounting	X	X	X
Bracket width	165 mm	165 mm	165 mm
Other features	Heavy-duty, surrounding bracket	Heavy-duty, surrounding bracket	Heavy-duty, surrounding bracket

Corresponding Isolux diagrams can be found on page 88

Power Beam 3000

Product features

→ The strongman: robust LED worklight with particularly high light output for high-performance use. Even outperforms comparable Xenon models
→ Homogenous illumination for optimum visibility



www.hella.com/eliver | Close-range illumination

Technical details

Light output (measured): 3,000 lumen, power requirement: 43 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, robust aluminum housing, ADR/GGVS tested

Recommended tilt angle: 12°, far: 3°

1GA 996 192-...	-001	-011	-021	-051	-061
Voltage	9 – 33 V	9 – 33 V	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	X	–	X	X	X
Long-range illumination	–	X	–	–	–
Energy consumption	43 W	43 W	43 W	43 W	43 W
Lumen (hot)	3,000 lm	3,000 lm	3,000 lm	3,000 lm	3,000 lm
Electrical connection	2,000 mm cable	2,000 mm cable	2,000 mm cable	Mounting plate according to DIN EN ISO 4165	DT connector
Upright mounting	X	X	X	X	X
Suspended mounting	X	X	X	X	X
Bracket width	42 mm	42 mm	119 mm	119 mm	42 mm
Other features	–	–	Heavy-duty, Surrounding bracket	With handle, pipe socket fixing	–

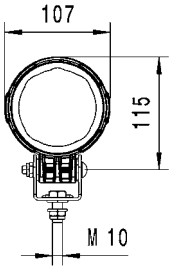
Corresponding Isolux diagrams can be found on page 88

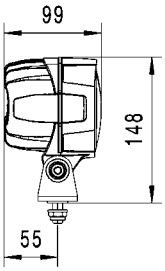
Module 90 LED

Product features

→ Greater light output than comparable Xenon worklights
→ Extremely wide, homogenous illumination
→ Excellent value for money

→ Module 90 LED flush-mount version with external ballast and DT connection also available:
1G0 996 263-001 (close range) or
1G0 996 263-011 (long-range illumination)





LED

www.hella.com/eliver | Close-range illumination

Technical details

Light output (measured): 3,400 lumen, power requirement: 36 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, premium aluminum housing

Recommended tilt angle: 12°, far: 5°

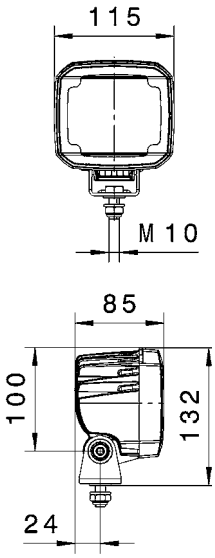
1G0 996 263-...	-031	-051
Voltage	9 – 33 V	9 – 33 V
Close-range illumination	X	–
Long-range illumination	–	X
Energy consumption	36 W	36 W
Lumen (hot)	3,400 lm	3,400 lm
Electrical connection	DT connector	DT connector
Upright mounting	X	X
Suspended mounting	X	X
Bracket width	42 mm	42 mm
Other features	–	–

Corresponding Isolux diagrams can be found on page 88

Ultra Beam LED

Product features

→ Xenon-quality light output
→ Simple retrofit for universal use
→ Particularly homogeneous illumination of the work area



Technical details

Light output (measured): 2,200 lumen, power requirement: 30 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, premium aluminum housing, ADR/GGVS tested

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°, far: 5°

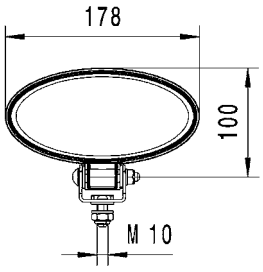
1GA 995 506-...	-001	-002	-011	-031
Voltage	9 – 33 V	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	X	X	X	–
Long-range illumination	–	–	–	X
Energy consumption	30 W	30 W	30 W	30 W
Lumen (hot)	2,200 lm	2,200 lm	2,200 lm	2,200 lm
Electrical connection	DT connector	DT connector	DT connector	DT connector
Upright mounting	X	X	–	X
Suspended mounting	–	–	X	X
Bracket width	42 mm	42 mm	42 mm	42 mm
Other features	–	Blister packaging and adapter cable	–	–

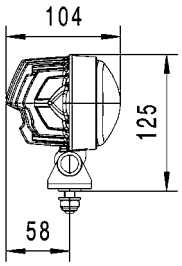
Corresponding Isolux diagrams can be found on page 88

Oval 90 LED

Product features

→ The sporty genius: LED worklight in a modern, appealing design with xenon-quality light output at only 28 watts
→ Extremely wide, homogenous illumination





LED

Ideal for battery-operated vehicles or heavily stressed generators!

www.hella.com/eliver | Close-range illumination

Technical details

Light output (measured): 2,000 lumen, power requirement: 28 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, premium aluminum housing, ADR/GGVS tested

Recommended tilt angle: 12°, far: 5°

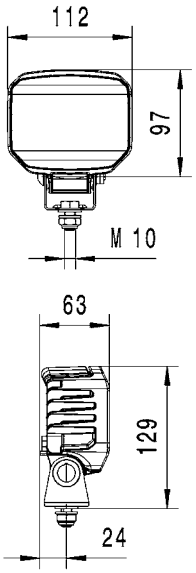
1GB 996 386-...	-001	-002	-021
Voltage	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	X	X	–
Long-range illumination	–	–	X
Energy consumption	28 W	28 W	28 W
Lumen (hot)	2,000 lm	2,000 lm	2,000 lm
Electrical connection	DT connector	DT connector	DT connector
Upright mounting	X	X	X
Suspended mounting	X	X	X
Bracket width	36 mm	36 mm	36 mm
Other features	–	Blister packaging and adapter cable	–

Corresponding Isolux diagrams can be found on page 88

Power Beam 1800

Product features

- → Compact dimensions enable versatile use
- → 40% more luminous efficiency than the former Power Beam 1500
- → SPECIAL: This light can be dimmed using the adjustable duty cycle of the pulse width modulated signal (PWM). This can be facilitated by interconnecting a conventional LED PWM dimmer in the supply line. (max. light input voltage 1.5 A ; frequency 100 – 1,000 Hz)



LED

www.hella.com/eliver | Close-range illumination

Technical details

Light output (measured): 1,850 lumen, power requirement: 36 watts, colour temperature: 6,500° Kelvin, single voltage (12 or 24 volts), reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, premium aluminum housing

Recommended tilt angle: 12°, far: 5°

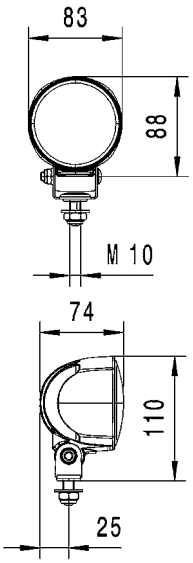
1GA 996 388-...	-001	-011	-021	-031
Voltage	12 V	24 V	12 V	24 V
Close-range illumination	X	X	–	–
Long-range illumination	–	–	X	X
Energy consumption	36 W	36 W	36 W	36 W
Lumen (hot)	1,850 lm	1,850 lm	1,850 lm	1,850 lm
Electrical connection	DT connector	DT connector	DT connector	DT connector
Upright mounting	X	X	X	X
Suspended mounting	X	X	X	X
Bracket width	42 mm	42 mm	42 mm	42 mm
Other features	Dimming function	Dimming function	Dimming function	Dimming function

Corresponding Isolux diagrams can be found on page 88

Module 70 LED Gen. IV

Product features

- → Compact design enables attachment in mounting positions where space is tight
- → Modular design
- → Simple retrofit
- → Powerful light output despite low mounting depth



LED

www.hella.com/eliver | Close-range illumination

Technical details

Light output (measured): 2,500 lumen, power requirement: 30 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, premium aluminum housing

Recommended tilt angle: 12°, far: 5°

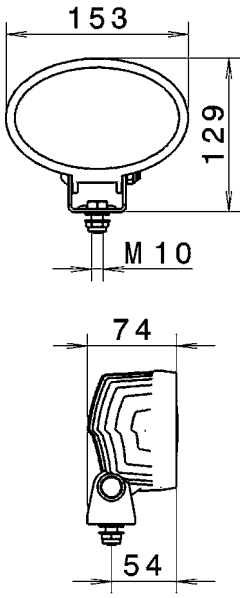
1G0 996 476-...	-001	-011
Voltage	9 – 33 V	9 – 33 V
Close-range illumination	X	–
Long-range illumination	–	X
Energy consumption	30 W	30 W
Lumen (hot)	2,500 lm	2,500 lm
Electrical connection	2,000 mm cable	2,000 mm cable
Upright mounting	X	X
Suspended mounting	X	X
Bracket width	36 mm	36 mm
Other features	–	–

Corresponding Isolux diagrams can be found on page 89

Oval 100 LED

Product features

- → The robust character: versatile LED worklight with impressively robust design
- → Wide, homogenous illumination with multifaceted reflector
- → Simple fitting



Technical details

Light output (measured): 1,700 lumen, power requirement: 25 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, premium aluminum housing, ADR/GGVS tested

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°, far: 5°

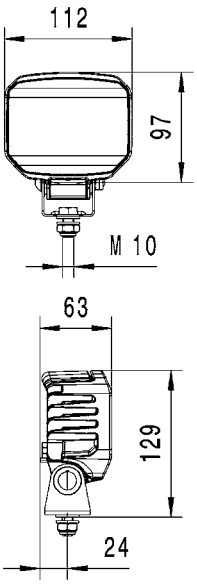
1GA 996 661-...	-001	-002	-011
Voltage	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	X	X	–
Long-range illumination	–	–	X
Energy consumption	25 W	25 W	25 W
Lumen (hot)	1,700 lm	1,700 lm	1,700 lm
Electrical connection	DT connector	DT connector	DT connector
Upright mounting	X	X	X
Suspended mounting	X	X	X
Bracket width	42 mm	42 mm	42 mm
Other features	–	Blister packaging and adapter cable	–

Corresponding Isolux diagrams can be found on page 89

Power Beam 1500

Product features

- → The all-rounder: combines excellent LED light output with a compact design
- → With heavy-duty bracket for tough uses and extreme vibration



Technical details

Light output (measured): 1,300 lumen, power requirement: 22 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, premium aluminum housing, ADR/GGVS tested

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 10°, far: 5°

1GA 996 288-...	-001	-011	-012	-021	-031	-041
Voltage	9 – 33 V	9 – 33 V	9 – 33 V	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	–	X	X	–	X	–
Long-range illumination	X	–	–	X	–	X
Energy consumption	22 W	22 W	22 W	22 W	22 W	22 W
Lumen (hot)	1,300 lm	1,300 lm	1,300 lm	1,300 lm	1,300 lm	1,300 lm
Electrical connection	DT connector	DT connector	DT connector	DT connector	DT connector	DT connector
Upright mounting	X	X	X	X	X	X
Suspended mounting	X	X	X	X	X	X
Bracket width	42 mm	42 mm	42 mm	116 mm	116 mm	42 mm
Other features	–	–	Blister packaging and adapter cable	Heavy-duty, Surrounding bracket	Heavy-duty, Surrounding bracket	Orange lens

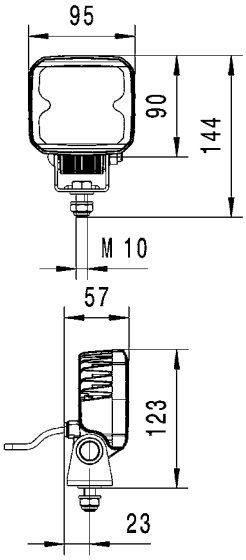
Corresponding Isolux diagrams can be found on page 89

Q90 LED

THERMO PRO series

Product features

- → Glass fibre-reinforced thermally conductive synthetic material housing and extremely robust plastic bracket offer excellent corrosion resistance
- → Light weight
- → Compact design



Technical details

Light output (measured): 1,200 lumen, power requirement: 25 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°, far: 5°

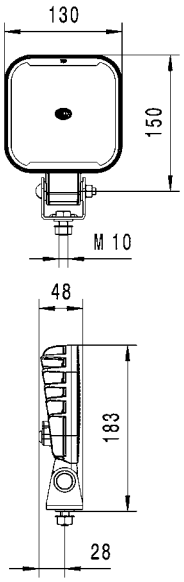
1GA 996 283-...	-001	-002	-011
Voltage	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	X	X	–
Long-range illumination	–	–	X
Energy consumption	25 W	25 W	25 W
Lumen (hot)	1,200 lm	1,200 lm	1,200 lm
Electrical connection	500 mm cable	500 mm cable	500 mm cable
Upright mounting	X	X	X
Suspended mounting	X	X	X
Bracket width	42 mm	42 mm	42 mm
Other features	–	Blister packaging	–

Corresponding Isolux diagrams can be found on page 89

AP 1200 LED

Product features

- → Good value for money
- → The flat design makes installation in tight mounting positions possible
- → For the price-conscious pro



Technical details

Light output (measured): 1,200 lumen, power requirement: 22 watts, colour temperature: 5,700° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K7 (pressure cleaner-proof/ immersible), ECE-R10 approved

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°

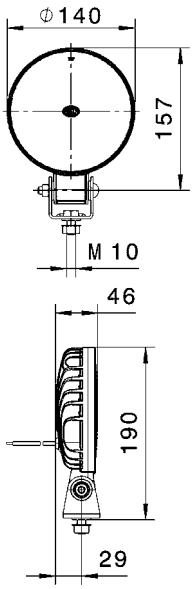
1GA 011 720-...	-041
Voltage	9 – 33 V
Close-range illumination	X
Long-range illumination	–
Energy consumption	22 W
Lumen (hot)	1,200 lm
Electrical connection	300 mm cable
Upright mounting	X
Suspended mounting	X
Bracket width	42 mm
Other features	Angular design

Corresponding Isolux diagrams can be found on page 89

AP 700 / 1200 / 1800 LED

Product features

- → Good value for money
- → The flat design makes installation in tight mounting positions possible
- → For the price-conscious pro



Technical details

Light output (measured): 700/1,200/1,800 lumen, power requirement: 16/22/30 watts, colour temperature: 5,700° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K7 (pressure cleaner-proof/ immersible), ECE-R10 approved

www.hella.com/eliver | Close-range illumination AP 1200 LED

Recommended tilt angle: 12°

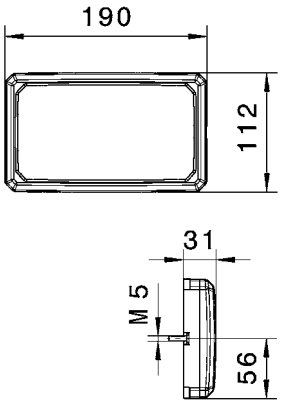
1G4 ...	... 012 722-001	... 011 722-001	... 013 722-001
Voltage	10 – 16 V	9 – 33 V	9 – 33 V
Close-range illumination	X	X	X
Long-range illumination	–	–	–
Energy consumption	16 W	22 W	30 W
Lumen (hot)	700 lm	1,200 lm	1,800 lm
Electrical connection	300 mm cable	300 mm cable	300 mm cable
Upright mounting	X	X	X
Suspended mounting	X	X	X
Bracket width	42 mm	42 mm	42 mm
Other features	Round design	Round design	Round design

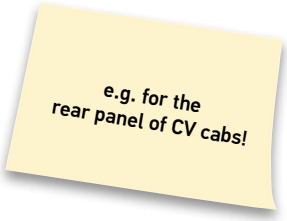
Corresponding Isolux diagrams can be found on pages 89 and 90

Flat Beam 1000

Product features

- → Extremely flat design
- → Excellent corrosion resistance with synthetic material housing
- → Highly efficient worklight (only 11 watts)
- → The 45° illumination pours light onto the nearby work area with no need to tilt





Technical details

Light output (measured): 1,100 lumen, power requirement: 11 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, impact-resistant plastic housing

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: standard version: 12° and 1GD 996 193-051: 0° (45° illumination with special lens)

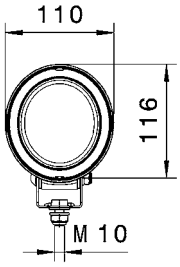
1GD 996 193-...	-001	-011	-051
Voltage	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	X	X	X
Long-range illumination	–	–	–
Energy consumption	11 W	11 W	11 W
Lumen (hot)	1,100 lm	1,100 lm	1,100 lm
Electrical connection	2,000 mm cable	2,000 mm cable	2,000 mm cable
Upright mounting	X	X	X
Suspended mounting	–	–	–
Bracket width	–	–	–
Other features	Wall-mounted	Surrounding bracket	45° illumination

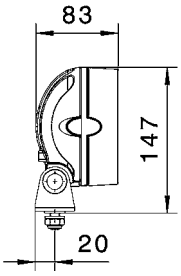
Corresponding Isolux diagrams can be found on page 89

Mega Beam LED Gen. III

Product features

- → Low power requirement (only 13 watts) for excellent light output
- → Compact design
- → Simple conversion





Technical details

Light output (measured): 800 lumen, power requirement: 13 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, premium aluminum housing

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°, far: 5°

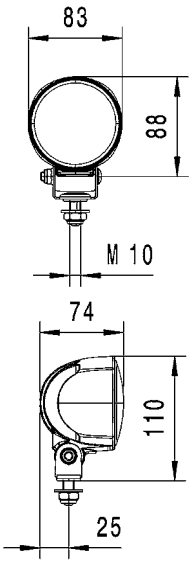
1GM 996 136-...	-311	-312	-361
Voltage	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	X	X	X
Long-range illumination	–	–	–
Energy consumption	13 W	13 W	13 W
Lumen (hot)	800 lm	800 lm	800 lm
Electrical connection	2,000 mm cable	2,000 mm cable	2,000 mm cable
Upright mounting	X	X	–
Suspended mounting	–	–	X
Bracket width	42 mm	42 mm	42 mm
Other features	–	Blister packaging and adapter cable	–

Corresponding Isolux diagrams can be found on page 90

Module 70 LED Gen. III

Product features

- → Compact design enables a variety of different mounting positions
- → Modular design
- → Ideal for battery-powered vehicles or already heavily stressed generators



Technical details

Light output (measured): 800 lumen, power requirement: 13 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, premium aluminum housing

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 10°, far: 5°

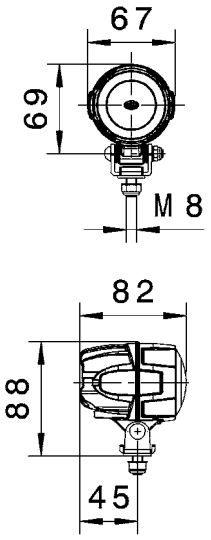
1G0 996 276-...	-451	-453	-481	-701	1G0 996 376-001
Voltage	9 – 33 V	9 – 33 V	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	X	X	X	–	–
Long-range illumination	–	–	–	X	X
Energy consumption	13 W	13 W	13 W	13 W	13 W
Lumen (hot)	800 lm	800 lm	800 lm	800 lm	800 lm
Electrical connection	2,000 mm cable	2,000 mm cable	200 mm cable and DT connector	2,000 mm cable	2,000 mm cable
Upright mounting	X	X	X	X	X
Suspended mounting	X	X	X	X	X
Bracket width	36 mm	36 mm	36 mm	36 mm	36 mm
Other features	–	Blister packaging	Extra-wide illumination	Spot illumination, blue lens	Spot illumination

Corresponding Isolux diagrams can be found on page 90

Module 50 LED

Product features

- → Ultra-compact worklight
- → Sturdy housing
- → Limited installation space required



Technical details

Light output (measured): 800 lumen, power requirement: 15 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, premium aluminum housing, ADR/GGVS tested

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°, far: 5°

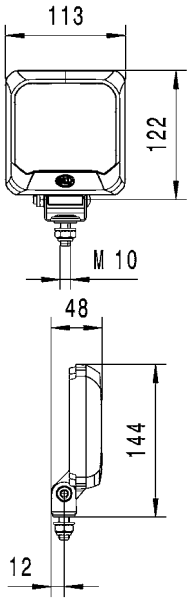
1G0 995 050-...	-001	-011	-021
Voltage	9 – 48 V	9 – 48 V	9 – 48 V
Close-range illumination	X	X	–
Long-range illumination	–	–	X
Energy consumption	15 W	15 W	15 W
Lumen (hot)	800 lm	800 lm	800 lm
Electrical connection	DT connector	DT connector	DT connector
Upright mounting	X	–	X
Suspended mounting	–	X	X
Bracket width	27 mm	27 mm	27 mm
Other features	–	–	–

Corresponding Isolux diagrams can be found on page 90

Flat Beam 500

Product features

- Highly efficient worklight (only 7 watts)
- Excellent corrosion resistance with synthetic material housing
- Extremely flat design
- The 45° illumination pours light onto the nearby work area with no need to tilt



Technical details

Light output (measured): 550 lumen, power requirement: 7 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 6K8 (pressure cleaner-proof/ immersible), ECE-R10 approved, impact-resistant plastic housing, standard 45° illumination

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 0°

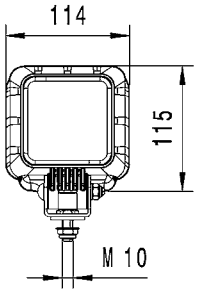
1GA 995 193-...	-001	-011	-021	-031	-041
Voltage	9 – 33 V	9 – 33 V	9 – 33 V	9 – 33 V	9 – 33 V
Close-range illumination	X	X	X	X	X
Long-range illumination	–	–	–	–	–
Energy consumption	7 W	7 W	7 W	7 W	7 W
Lumen (hot)	550 lm	550 lm	550 lm	550 lm	550 lm
Electrical connection	2,000 mm cable	2,000 mm cable	2,000 mm cable	2,000 mm cable	2,000 mm cable
Upright mounting	X	–	X	X	X
Suspended mounting	–	X	–	–	–
Bracket width	36 mm	36 mm	36 mm	36 mm	36 mm
Other features	Standard holder	Standard holder	Wall-mounted	Lug mounting	Surrounding bracket

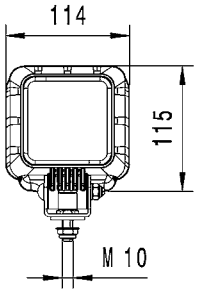
Corresponding Isolux diagrams can be found on page 90

PowerXen

Product features

→ All-rounder with integrated ballast
→ Particularly light worklight





XENON

www.hella.com/eliver | Close-range illumination

Technical details

Light output: 2,400 lumen, power requirement: 42 watts, colour temperature: 4,150° Kelvin, reverse polarity protection, overvoltage protection, IP 6K9K/IP 67 (pressure cleaner-proof/immersible), ECE-R10 approved

Recommended tilt angle: 15°, far: 5°

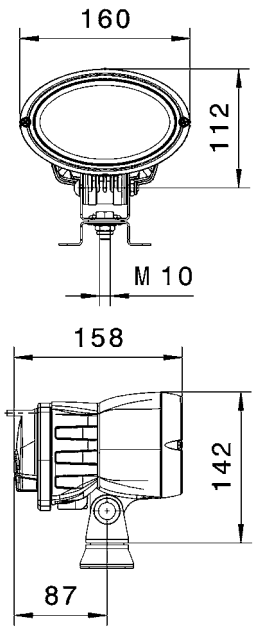
1GA 996 196-...	-001	-011	-021	-031
Voltage	12 V	24 V	12 V	24 V
Close-range illumination	X	X	X	X
Long-range illumination	–	–	–	–
Energy consumption	42 W	42 W	42 W	42 W
Lumen (hot)	2,400 lm	2,400 lm	2,400 lm	2,400 lm
Electrical connection	DT connector	DT connector	500 mm cable	500 mm cable
Upright mounting	X	X	X	X
Suspended mounting	X	X	X	X
Bracket width	36 mm	36 mm	36 mm	36 mm
Other features	D1S	D1S	D1S	D1S

Corresponding Isolux diagrams can be found on page 91

Oval 100 X-PowerPack

Product features

- → Daylight illumination of the work area
- → Modular design
- → Simple retrofit
- → Integrated ballast (easy installation)



XENON

Technical details

Light output: 2,800 lumen, power requirement: 42 watts, colour temperature: 4,150° Kelvin, reverse polarity protection, overvoltage protection, IP 6K9K (pressure cleaner-proof), ECE-R10 approved

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°

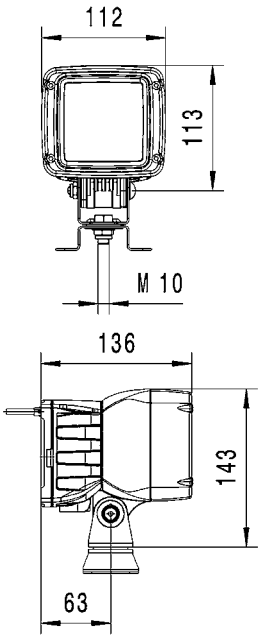
1GA 996 461-...	-311	-321	-331	-341
Voltage	12 V	12 V	24 V	24 V
Close-range illumination	X	X	X	X
Long-range illumination	–	–	–	–
Energy consumption	42 W	42 W	42 W	42 W
Lumen (hot)	2,800 lm	2,800 lm	2,800 lm	2,800 lm
Electrical connection	AMP connector	AMP connector	AMP connector	AMP connector
Upright mounting	X	–	X	–
Suspended mounting	–	X	–	X
Bracket width	42 mm	42 mm	42 mm	42 mm
Other features	D1S	D1S	D1S	D1S

Corresponding Isolux diagrams can be found on page 91

Ultra Beam X-PowerPack

Product features

- → Extremely powerful light output
- → Modular design
- → Simple retrofit
- → Integrated ballast (easy installation)



XENON

Technical details

Light output: 2,800 lumen, power requirement: 42 watts, colour temperature: 4,150° Kelvin, reverse polarity protection, overvoltage protection, IP 6K9K (pressure cleaner-proof), ECE-R10 approved

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°

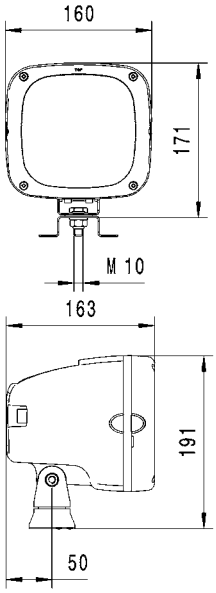
1GA 998 534-...	-431	-451
Voltage	12 V	24 V
Close-range illumination	X	X
Long-range illumination	–	–
Energy consumption	42 W	42 W
Lumen (hot)	2,800 lm	2,800 lm
Electrical connection	AMP connector	AMP connector
Upright mounting	X	X
Suspended mounting	–	–
Bracket width	42 mm	42 mm
Other features	D1S	D1S

Corresponding Isolux diagrams can be found on page 91

AS 200

Product features

→ Large-scale, homogenous illumination of the work area
→ Extremely high light output
→ Integrated ballast (easy installation)



XENON

Technical details

Light output: 2,800 lumen, power requirement: 42 watts, colour temperature: 4,150° Kelvin, reverse polarity protection, overvoltage protection, IP 5K9K (pressure cleaner-proof), ECE-R10 approved, integrated ballast

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 10°, far: 5°

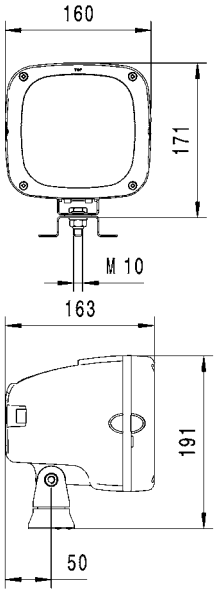
1GA 996 142-...	-001	-011
Voltage	12 V	24 V
Close-range illumination	X	X
Long-range illumination	–	–
Energy consumption	42 W	42 W
Lumen (hot)	2,800 lm	2,800 lm
Electrical connection	AMP connector	AMP connector
Upright mounting	X	X
Suspended mounting	–	–
Bracket width	42 mm	42 mm
Other features	D1S	D1S

Corresponding Isolux diagrams can be found on page 91

AS 200

Product features

- → Large-scale, homogenous illumination of the work area
- → Extremely high light output
- → Integrated ballast (easy installation)



XENON

Technical details

Light output: 2,800 lumen, power requirement: 42 watts, colour temperature: 4,150° Kelvin, reverse polarity protection, overvoltage protection, IP 5K9K (pressure cleaner-proof), ECE-R10 approved, integrated ballast

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 10°, far: 5°

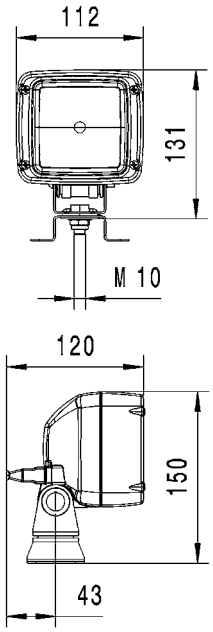
1GA 996 142-...	-071	-081
Voltage	24 V	12 V
Close-range illumination	–	–
Long-range illumination	X	X
Energy consumption	42 W	42 W
Lumen (hot)	2,800 lm	2,800 lm
Electrical connection	AMP connector	AMP connector
Upright mounting	X	X
Suspended mounting	–	–
Bracket width	42 mm	42 mm
Other features	D1S	D1S On/off switch

Corresponding Isolux diagrams can be found on page 91

Ultra Beam

Product features

- → The mark of tradition: despite its compact dimensions, the reflector ensures excellent light output
- → Low space requirements for universal use
- → Housing resistant to acid and corrosion



HALOGEN

Technical details

Light output: 1,150/1,400 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K9K (pressure cleaner-proof), GGVSEB/ADR tested

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 15°, far: 5°

1GA 007 506-...	-001*	-011*	-081*	-391*	1GA 996 150-081
Voltage	12 / 24 V	12 / 24 V	12 / 24 V	12 / 24 V	12 V
Close-range illumination	X	X	X	X	–
Long-range illumination	–	–	–	–	X
Energy consumption	55 / 70 W	55 / 70 W	55 / 70 W	55 / 70 W	65 W
Lumen (hot)	1,150 / 1,400 lm	1,150 / 1,400 lm	1,150 / 1,400 lm	1,150 / 1,400 lm	1,700 lm
Electrical connection	AMP connector	AMP connector	Cable inlet with grommet	DT connector	AMP connector
Upright mounting	X	X	X	X	X
Suspended mounting	X	X	X	X	X
Bracket width	42 mm	42 mm	42 mm	42 mm	42 mm
Other features	–	Heavy-duty	–	–	incl. H9 bulb

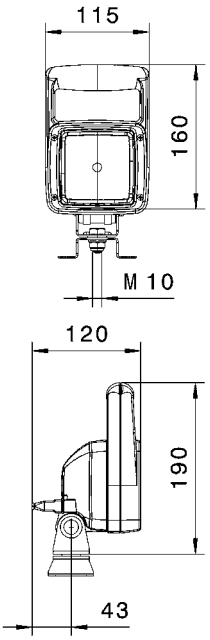
* Without bulb

Corresponding Isolux diagrams can be found on page 92

Ultra Beam with handle

Product features

- → The mark of tradition: despite its compact dimensions, the reflector ensures excellent light output
- → Fitted with a handle for better adjustment
- → Optionally also available with ON/OFF switch



HALOGEN

Technical details

Light output: 1,150/1,400 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K9K (pressure cleaner-proof)

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 15°, far: 5°

1GA 007 506-...	-021*	-681	1GA 997 506-631*
Voltage	12 / 24 V	24 V	12 / 24 V
Close-range illumination	X	X	X
Long-range illumination	–	–	–
Energy consumption	55 / 70 W	70 W	55 / 70 W
Lumen (hot)	1,150 / 1,400 lm	1,400 lm	1,150 / 1,400 lm
Electrical connection	AMP connector	Mounting plate according to DIN EN ISO 4165	AMP connector
Upright mounting	X	X	X
Suspended mounting	X	–	X
Bracket width	42 mm	Tube diameter 24 mm	42 mm
Other features	Heavy-duty	Pipe-socket fixing	Heavy-duty On/off switch

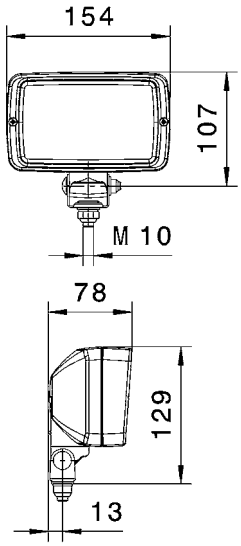
* Without bulb

Corresponding Isolux diagrams can be found on page 92

Picador

Product features

- → Timeless, classic worklight
- → Wide close-range illumination
- → Pivot joint for ideal light adjustment



HALOGEN

Technical details

Light output: 1,150/1,400 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K9K (pressure cleaner-proof)

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 10°

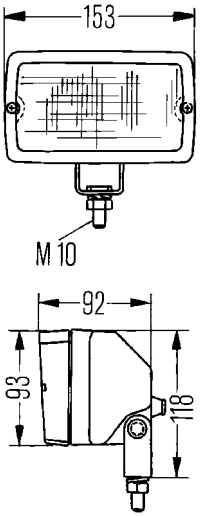
1GA ...	... 006 876-001*	... 998 522-011*	... 006 875-001*
Voltage	12 / 24 V	12 / 24 V	12 / 24 V
Close-range illumination	X	X	X
Long-range illumination	–	–	–
Energy consumption	55 / 70 W	55 / 70 W	55 / 70 W
Lumen (hot)	1,150 / 1,400 lm	1,150 / 1,400 lm	1,150 / 1,400 lm
Electrical connection	Cable inlet with grommet	Cable inlet with grommet	Cable inlet with grommet
Upright mounting	X	X	_
Suspended mounting	X	X	_
Bracket width	36 mm	36 mm	36 mm
Other features	Swivel joint	–	Mounting on the side

* Without bulb
Corresponding Isolux diagrams can be found on page 92

Master

Product features

- → Timeless, classic worklight
- → Homogeneous close-range illumination
- → For universal use



HALOGEN

Technical details

Light output: 1,150/1,400 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K4K (splash-proof)

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 10°, far: 5°

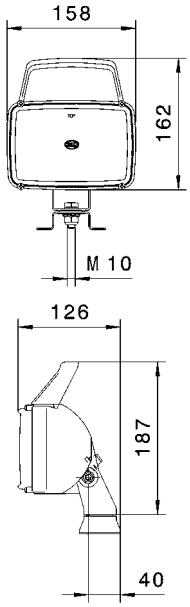
1GA 005 060-...	-001*	-041*
Voltage	12 / 24 V	12 / 24 V
Close-range illumination	–	X
Long-range illumination	X	–
Energy consumption	55 / 70 W	55 / 70 W
Lumen (hot)	1,150 / 1,400 lm	1,150 / 1,400 lm
Electrical connection	Cable inlet with grommet	Cable inlet with grommet
Upright mounting	X	X
Suspended mounting	X	X
Bracket width	33 mm	33 mm
Other features	–	–

* Without bulb
Corresponding Isolux diagrams can be found on page 92

Double Beam

Product features

→ Intensive light thanks to double reflector
→ For universal use
→ For the price-conscious pro



HALOGEN

Technical details

Light output: 2,300/2,800 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K4K (splash-proof), GGVSEB/ADR tested

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°, far: 5°

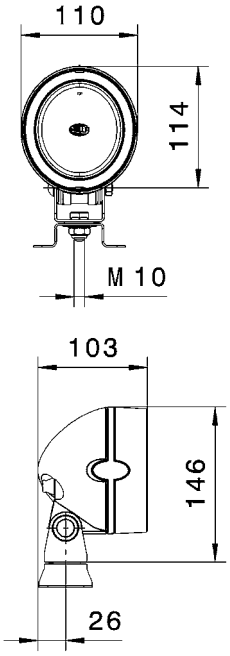
1GA 006 991-...	-031*	-041*	-051*	-091*
Voltage	12 / 24 V	12 / 24 V	12 / 24 V	12 / 24 V
Close-range illumination	X	X	–	X
Long-range illumination	–	–	X	–
Energy consumption	110 / 140 W	110 / 140 W	110 / 140 W	110 / 140 W
Lumen (hot)	2,300 / 2,800 lm	2,300 / 2,800 lm	2,300 / 2,800 lm	2,300 / 2,800 lm
Electrical connection	250 mm cable	250 mm cable	250 mm cable	250 mm cable
Upright mounting	X	X	X	X
Suspended mounting	X	X	X	X
Bracket width	42 mm	42 mm	42 mm	42 mm
Other features	Extra-wide illumination, with handle	Extra-wide illumination	–	–

Corresponding Isolux diagrams can be found on page 92

Mega Beam

Product features

→ Modern design
→ For universal use
→ Excellent illumination into the distance



HALOGEN

Technical details

Light output: 1,150/1,400 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K9K (pressure cleaner-proof; except variant -091), GGVSEB/ADR tested

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 13°, far: 5°

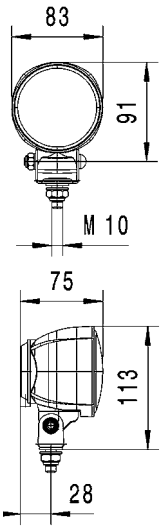
1GM 996 134-...	-051*	-081*	-171*	-321*	-091*
Voltage	12 / 24 V	12 / 24 V	12 / 24 V	12 / 24 V	12 / 24 V
Close-range illumination	–	–	X	X	–
Long-range illumination	X	X	–	–	X
Energy consumption	55 / 70 W	55 / 70 W	55 / 70 W	55 / 70 W	55 / 70 W
Lumen (hot)	1,150 / 1,400 lm	1,150 / 1,400 lm	1,150 / 1,400 lm	1,150 / 1,400 lm	1,150 / 1,400 lm
Electrical connection	Cable inlet with grommet	AMP connector	AMP connector	Cable inlet with grommet	Cable inlet with grommet
Upright mounting	X	X	X	X	–
Suspended mounting	X	X	X	X	–
Bracket width	42 mm	42 mm	42 mm	42 mm	–
Other features	Heavy-duty	Heavy-duty	Heavy-duty	–	Installation

* Without bulb
Corresponding Isolux diagrams can be found on page 92

Module 70, H9

Product features

- Compact worklight
- For universal use
- Blue lens ensures high-contrast light which penetrates dust, water and fog



HALOGEN

www.hella.com/eliver | Close-range illumination

Technical details

Light output: 1,700 lumen, colour temperature: 3,200° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K9K (pressure cleaner-proof)

Recommended tilt angle: 12°, far: 5°

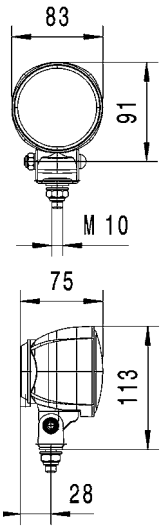
1G0 996 176-...	-171	-181	-671
Voltage	12 V	12 V	12 V
Close-range illumination	X	X	–
Long-range illumination	–	–	X
Energy consumption	65 W	65 W	65 W
Lumen (hot)	1,700 lm	1,700 lm	1,700 lm
Electrical connection	2,000 mm cable	2,000 mm cable	H9 connector
Upright mounting	X	–	X
Suspended mounting	–	X	–
Bracket width	36 mm	36 mm	36 mm
Other features	–	–	Blue lens

Corresponding Isolux diagrams can be found on page 92

Module 70, H3

Product features

→ Compact worklight
→ For universal use



HALOGEN

Technical details

Light output: 1,150/1,400 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K9K (pressure cleaner-proof)

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°, far: 5°

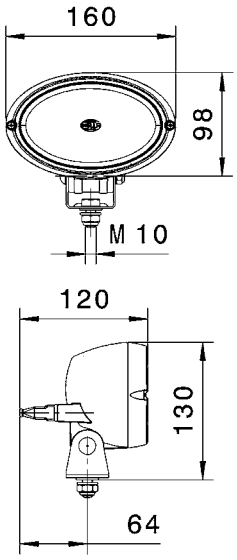
1G0 996 176-...	-001*	-011*	-111*
Voltage	12 / 24 V	12 / 24 V	12 / 24 V
Close-range illumination	X	–	X
Long-range illumination	–	X	–
Energy consumption	55 / 70 W	55 / 70 W	55 / 70 W
Lumen (hot)	1,150 / 1,400 lm	1,150 / 1,400 lm	1,150 / 1,400 lm
Electrical connection	Cable inlet with grommet	Cable inlet with grommet	Cable inlet with grommet
Upright mounting	X	X	–
Suspended mounting	–	–	X
Bracket width	36 mm	36 mm	36 mm
Other features	–	–	–

* Without bulb
Corresponding Isolux diagrams can be found on page 93

Oval 100 Double Beam

Product features

→ Wide, homogenous illumination of the work area
→ For universal use



HALOGEN

Technical details

Light output: 2,300 lumen, colour temperature: 2,500 Kelvin, extremely powerful light output with double chamber reflector. IP 5K9K (pressure cleaner-proof), impact-proof, glass fibre-reinforced synthetic material housing

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 12°, far: 5°

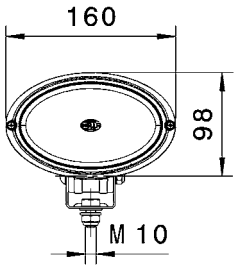
1GA 996 161-...	-131	-291	1GA 996 361-011
Voltage	12 V	12 V	24 V
Close-range illumination	–	X	–
Long-range illumination	X	–	X
Energy consumption	110 W	110 W	140 W
Lumen (hot)	2,300 lm	2,300 lm	2,800 lm
Electrical connection	AMP connector	AMP connector	AMP connector
Upright mounting	X	X	X
Suspended mounting	X	X	X
Bracket width	42 mm	42 mm	42 mm
Other features	Double Beam	Double Beam	Double Beam

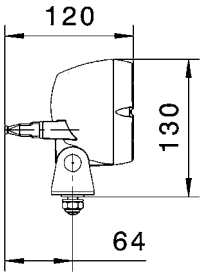
Corresponding Isolux diagrams can be found on page 93

Oval 100

Product features

→ For universal use
→ Wide, homogenous illumination





HALOGEN

www.hella.com/eliver | Close-range illumination

Technical details

Light output: 1,150 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K9K (pressure cleaner-proof)

Recommended tilt angle: 12°, far: 5°

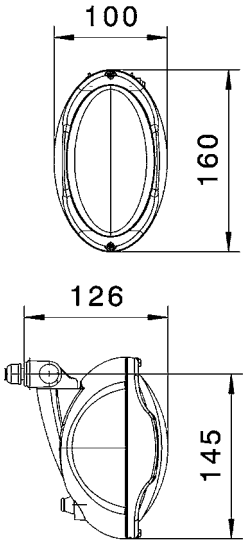
1GA 996 161-...	-121	-281	-581	-391
Voltage	12 V	12 V	24 V	12 V
Close-range illumination	X	–	X	X
Long-range illumination	–	X	–	
Energy consumption	55 W	55 W	70 W	65 W
Lumen (hot)	1,150 lm	1,150 lm	1,400 lm	1,700 lm
Electrical connection	AMP connector	AMP connector	AMP connector	2,000 mm cable
Upright mounting	X	X	X	X
Suspended mounting	X	X	X	–
Bracket width	42 mm	42 mm	42 mm	42 mm
Other features	–	–	Heavy-duty	H9, heavy-duty

Corresponding Isolux diagrams can be found on page 93

Oval 100 FL

Product features

- → Ideal for forklifts
- → Easily adjustable: illumination of the entire forklift range from the ground to the high-bay racking



HALOGEN

Technical details

Light output: 1,150/1,400 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fiber-reinforced synthetic material housing, IP 5K9K (pressure cleaner-proof)

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 0°

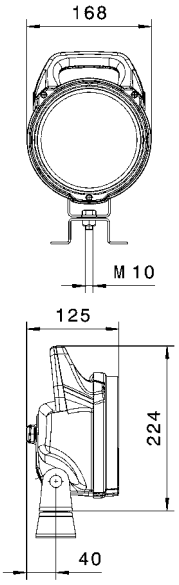
1GN 996 361-...	-461	-651
Voltage	12 V	24 V
Close-range illumination	X	X
Long-range illumination	–	–
Energy consumption	110 W	140 W
Lumen (hot)	2,300 lm	2,800 lm
Electrical connection	420 mm cable	420 mm cable
Upright mounting	–	–
Suspended mounting	X	X
Bracket width	36 mm	36 mm
Other features	–	–

Corresponding Isolux diagrams can be found on page 93

Matador

Product features

→ Worklight with cover mesh and handle
→ Wide close-range illumination



HALOGEN

Technical details

Light output: 1,150/1,400 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K4K (splash-proof)

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 10°

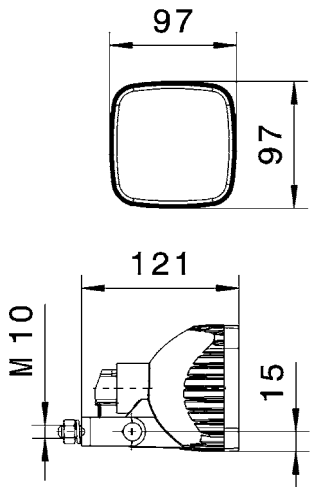
1G4 003 470-...	-001*	-031*	-051*	-141
Voltage	12 / 24 V	12 / 24 V	12 / 24 V	24 V
Close-range illumination	X	X	X	X
Long-range illumination	–	–	–	–
Energy consumption	55 / 70 W	55 / 70 W	55 / 70 W	70 W
Lumen (hot)	1,150 / 1,400 lm	1,150 / 1,400 lm	1,150 / 1,400 lm	1,400 lm
Electrical connection	Cable inlet with grommet	Cable inlet with grommet	Cable inlet with grommet	DIN EN ISO 4165
Upright mounting	X	X	X	X
Suspended mounting	X	X	X	X
Bracket width	52 mm	52 mm	52 mm	Tube diameter 24 mm
Other features	On/off switch	On/off switch, cover mesh	Cover mesh	Pipe socket fixing, cover mesh

* Without bulb
Corresponding Isolux diagrams can be found on page 93

Eco 21

Product features

- → Toolless bulb replacement (bayonet)
- → Also suitable for use as a reversing spotlight
- → Efficient worklight



HALOGEN

Technical details

Light output: 400 lumen, colour temperature: 2,500° Kelvin, impact-resistant glass fibre-reinforced synthetic material housing, IP 5K9K (pressure cleaner-proof)

www.hella.com/eliver | Close-range illumination

Recommended tilt angle: 10°

1GA 996 179-...	-001	-021
Voltage	24 V	12 V
Close-range illumination	X	X
Long-range illumination	–	–
Energy consumption	21 W	21 W
Lumen (hot)	400 lm	400 lm
Electrical connection	500 mm cable	500 mm cable
Upright mounting	X	X
Suspended mounting	–	–
Bracket width	33 mm	33 mm
Other features	–	–

Corresponding Isolux diagrams can be found on page 93

THERMO PRO series

Q90 LED

Doing without aluminum for high-power LED worklights is unthinkable. Nevertheless, HELLA continues to set standards and launch new, thermally conductive synthetic material housings in the form of the THERMO PRO plastic series.

The innovative, new material has thermal-conduction properties comparable to aluminum, although the LEDs can be operated at full performance in ambient temperatures of up to 50°C. In addition, the THERMO PRO series impresses with its considerably reduced weight and improved vibration characteristics. Even in the toughest conditions, the omission of vulnerable aluminum and the use of synthetic material housings ensures a long design life and prevents corrosion.

Service light

Flat Beam 500

If machinery fails at night, the only way to perform repairs is often by using a portable lamp. However, having both hands free is a key advantage when it comes to getting the vehicle operational again as quickly as possible. The Flat Beam 500 is perfect in this situation. Installation on the inside of the side combine harvester flap offers good visibility of the entire engine compartment and guarantees safe work on the vehicle.

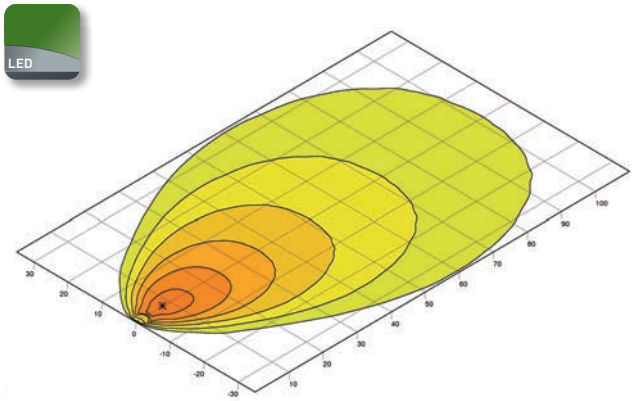
A spray of illumination

Module 70 LED blue

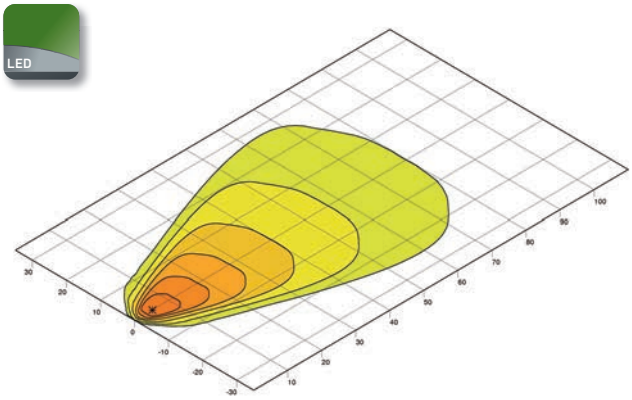
The blue lens is ideal for use on sprayers, road salt vehicles or snow ploughs. The blue light produces a colour temperature of around 5,000 Kelvin, reducing dazzle and considerably improving perception of contrast in the dark.

The focused light beams penetrate the spray mist and all nozzles are evenly illuminated. Clear visibility is a key factor when it comes to precise and safe work at night.

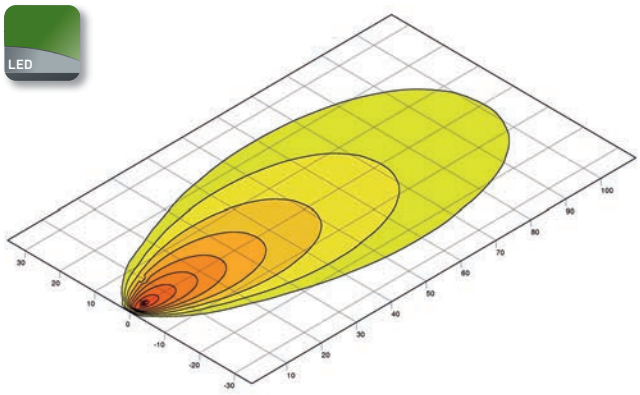
LED Worklights



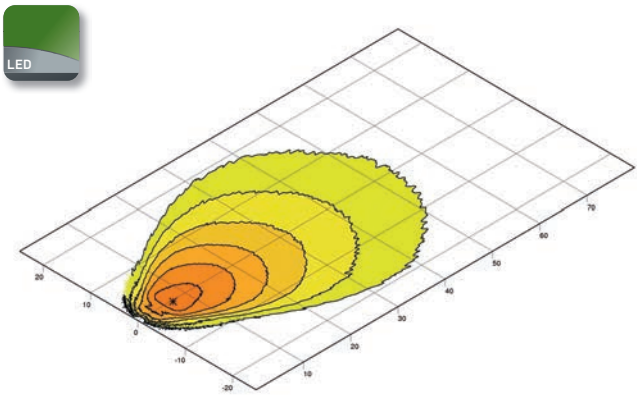
Power Beam 5000 | Close-range illumination
Page 52



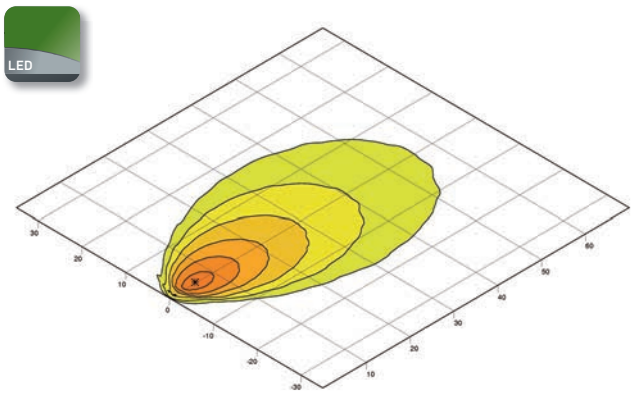
Power Beam 3000 | Close-range illumination
Page 53



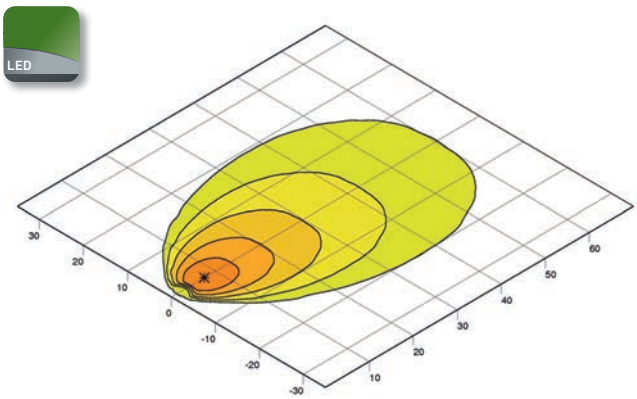
Module 90 LED | Close-range illumination
Page 54



Ultra Beam LED | Close-range illumination
Page 55

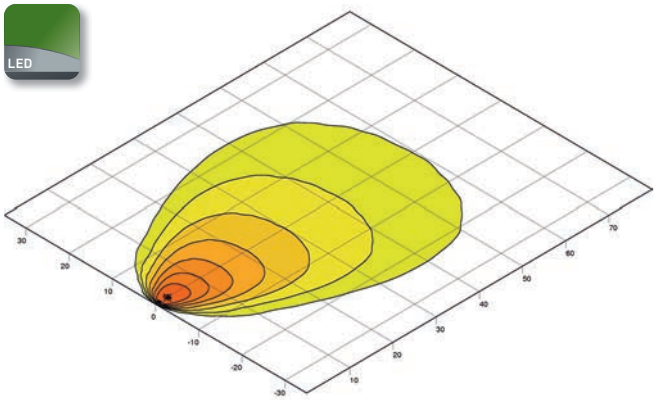


Oval 90 LED | Close-range illumination
Page 56

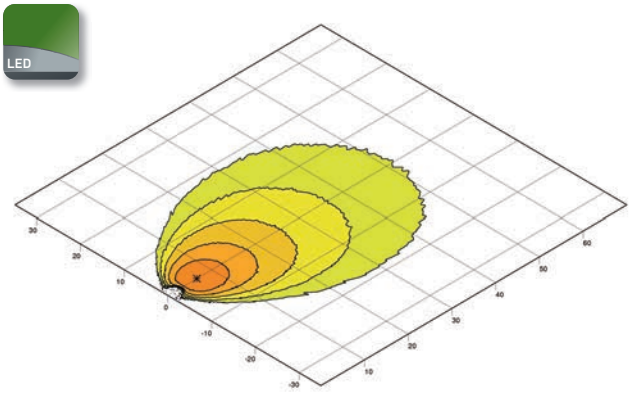


Power Beam 1800 | Close-range illumination
Page 57

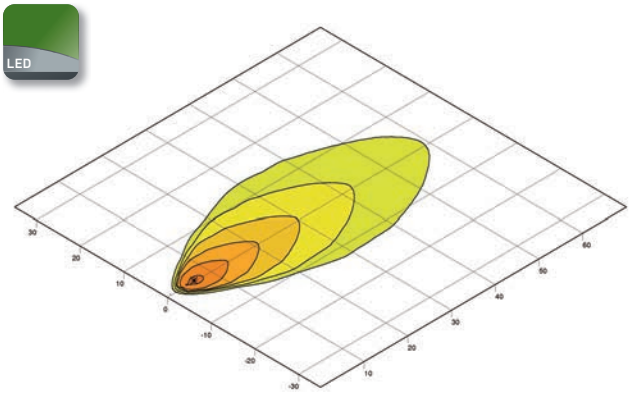
LED Worklights



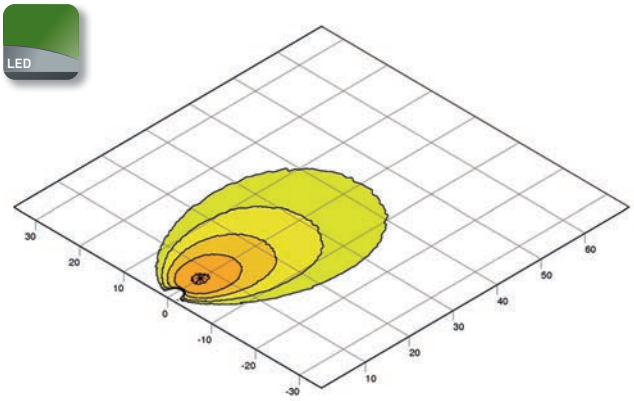
Modul 70 LED Gen. IV | Close-range illumination
Page 58



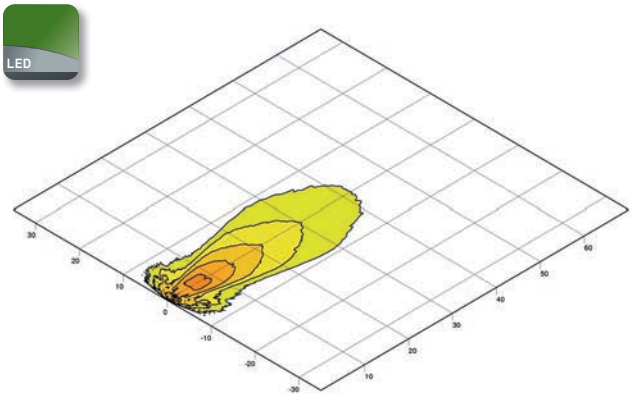
Oval 100 LED | Close-range illumination
Page 59



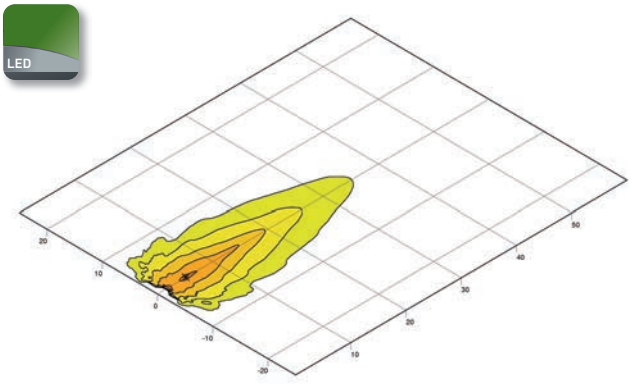
Power Beam 1500 | Close-range illumination
Page 60



Q90 LED | Close-range illumination
Page 61



AP 1200 LED | Close-range illumination
Page 62



AP 700 LED | Close-range illumination
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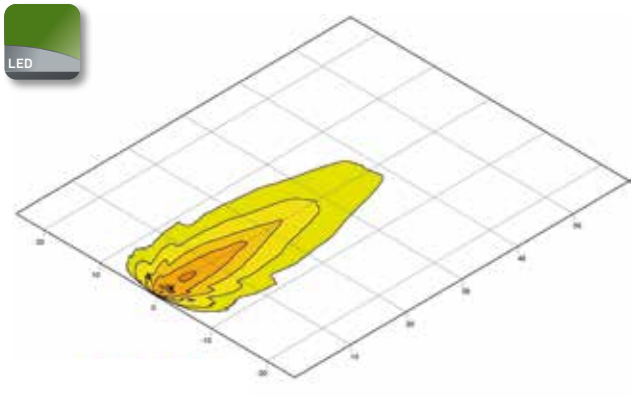
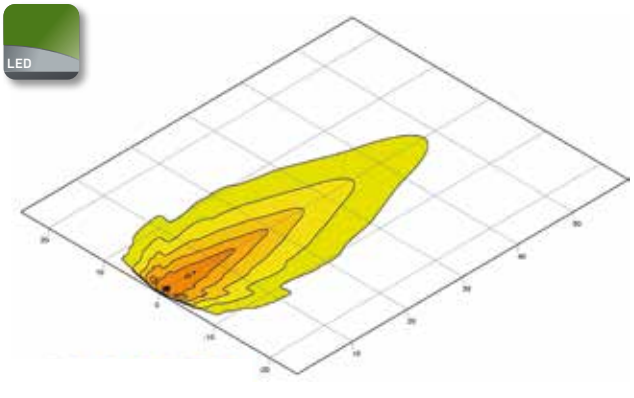
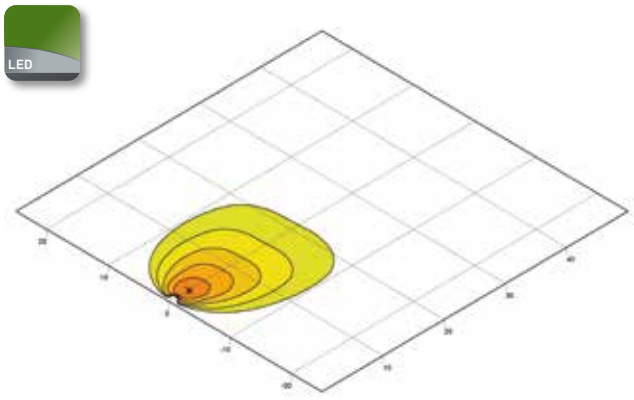
LED Worklights



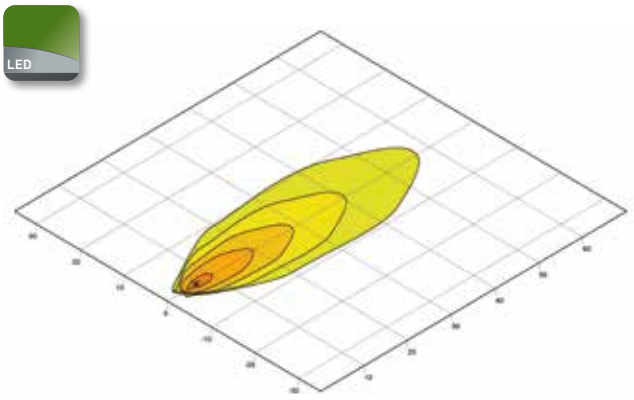
AP 1200 LED | Close-range illumination
Page 63



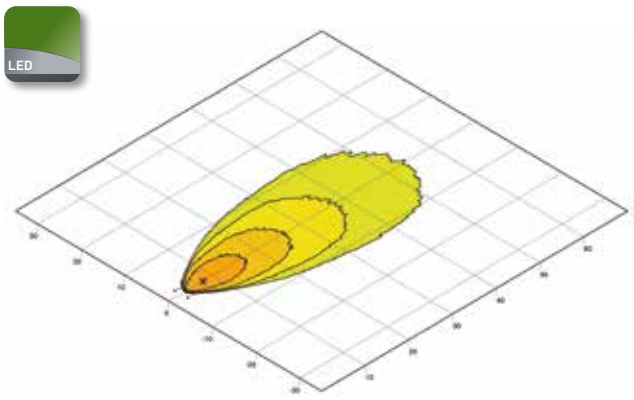
AP 1800 LED | Close-range illumination
Page 63



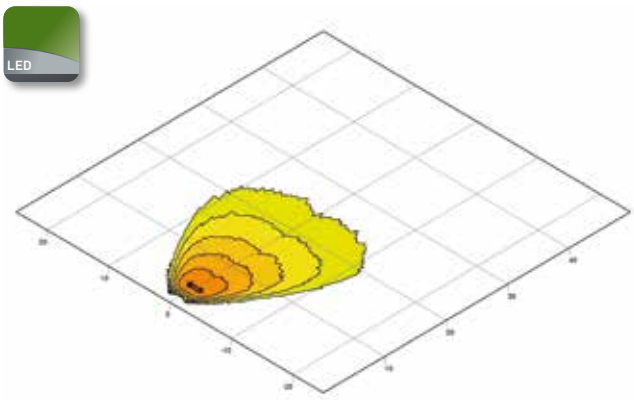
Flat Beam 1000 | Close-range illumination
Page 64



Mega Beam LED Gen. III | Close-range illumination
Page 65

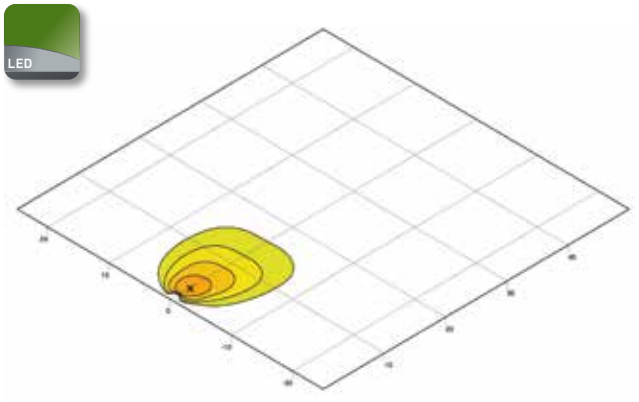


Module 70 LED Gen. III | Close-range illumination
Page 66

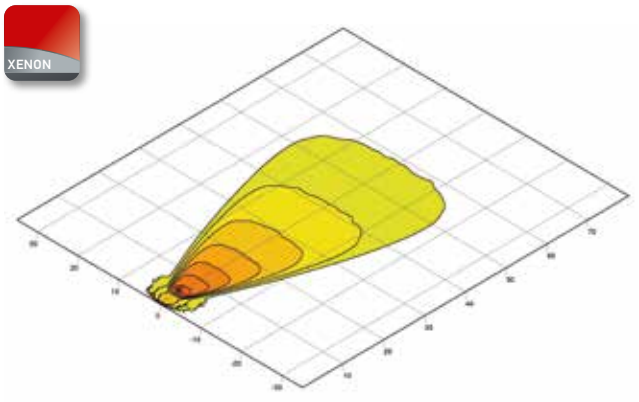


Module 50 LED | Close-range illumination
Page 67

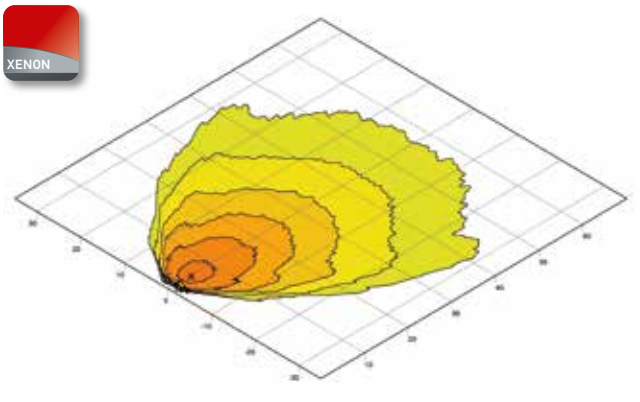
LED and XENON worklights



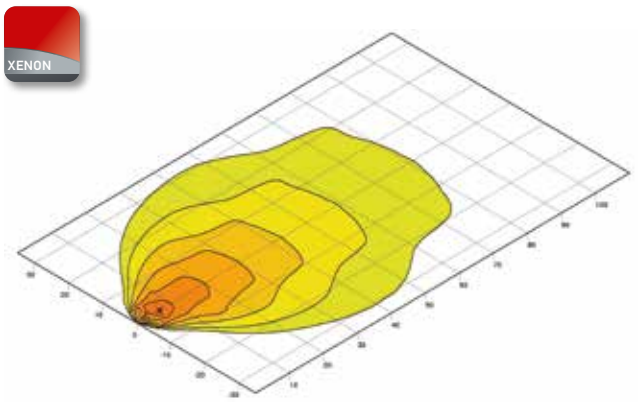
Flat Beam 500 | Close-range illumination
Page 68



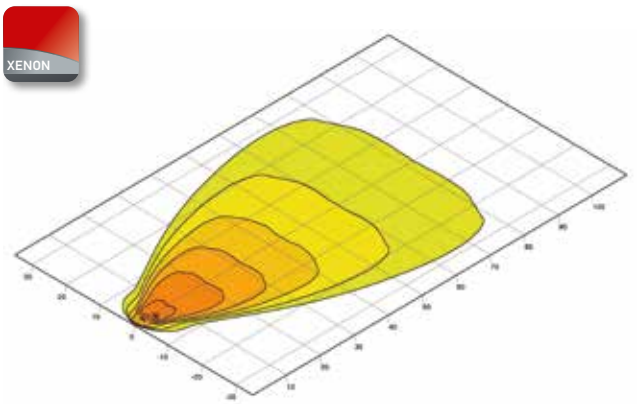
PowerXen | Close-range illumination
Page 69



Oval 100 X-PowerPack| Close-range illumination
Page 70

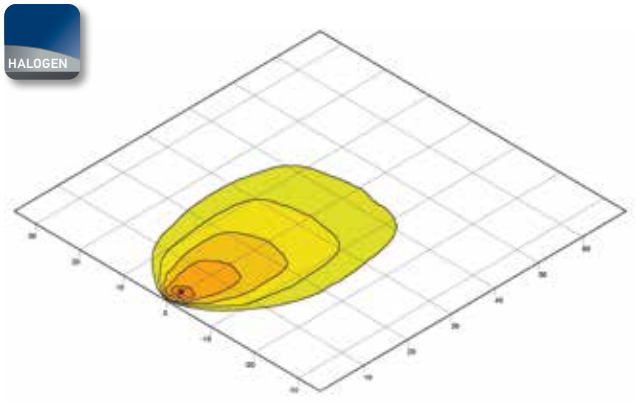


Ultra Beam X-PowerPack | Close-range illumination
Page 71

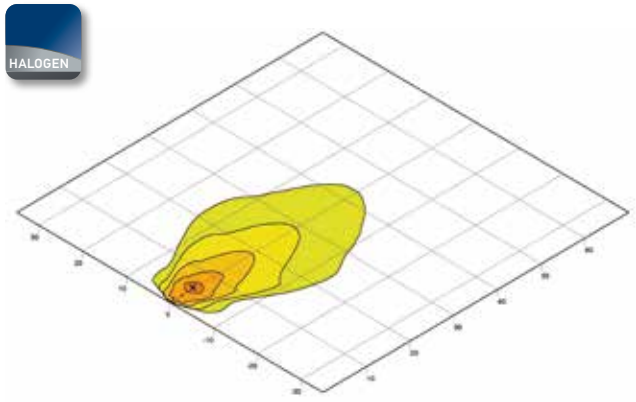


AS 200 | Close-range illumination
Page 72

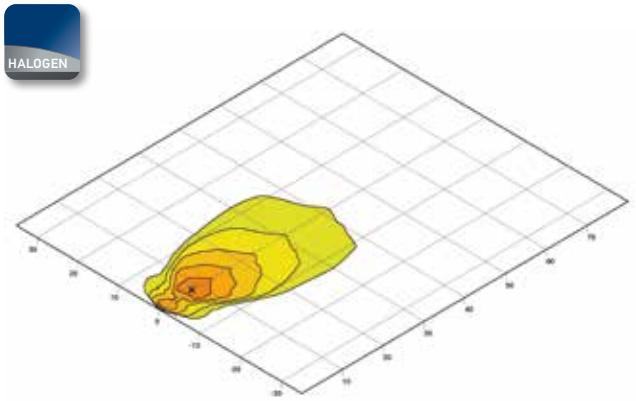
HALOGEN worklights



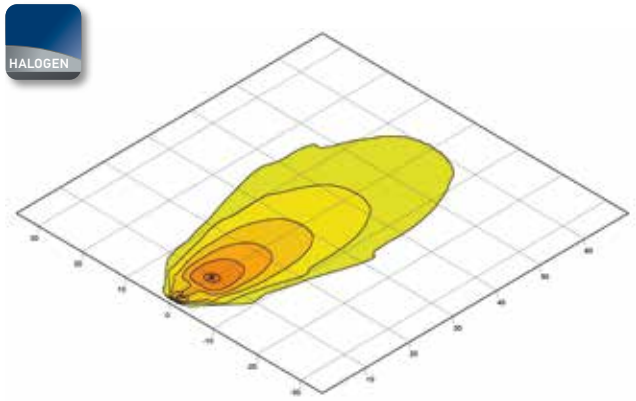
Ultra Beam | Close-range illumination
Page 74



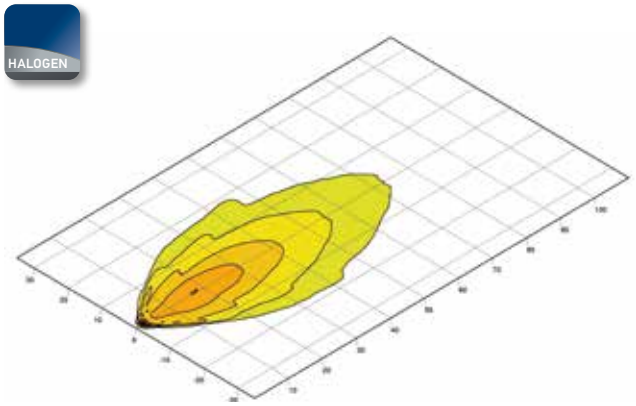
Picador | Close-range illumination
Page 76



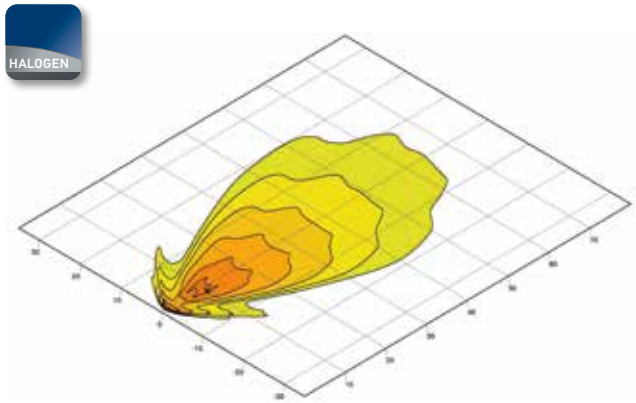
Master | Close-range illumination
Page 77



Double Beam | Close-range illumination
Page 78

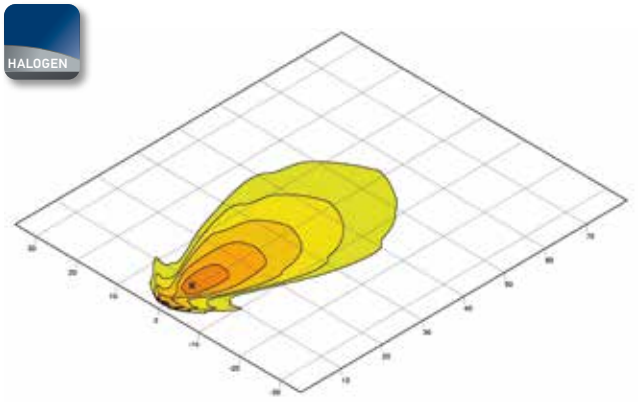


Mega Beam | Close-range illumination
Page 79

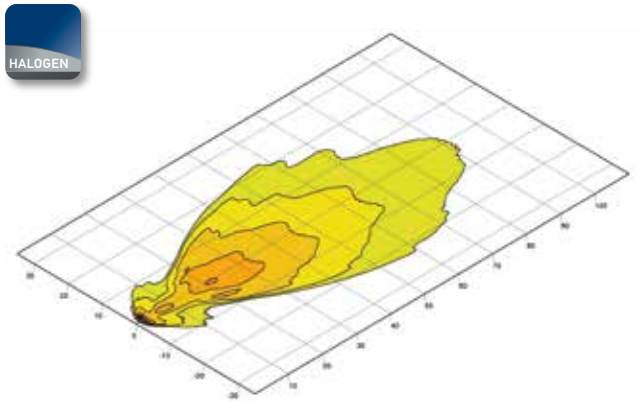


Modul 70, H9 | Close-range illumination
Page 80

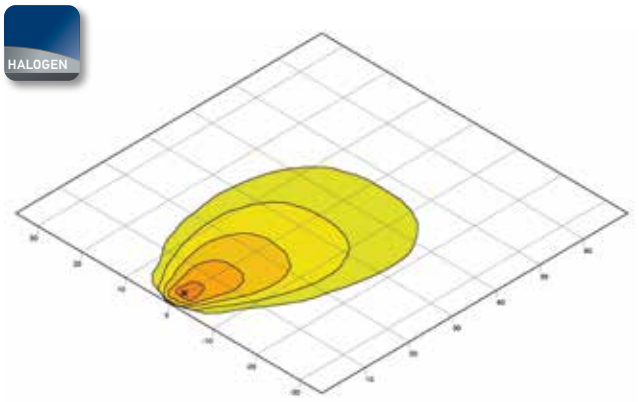
HALOGEN worklights



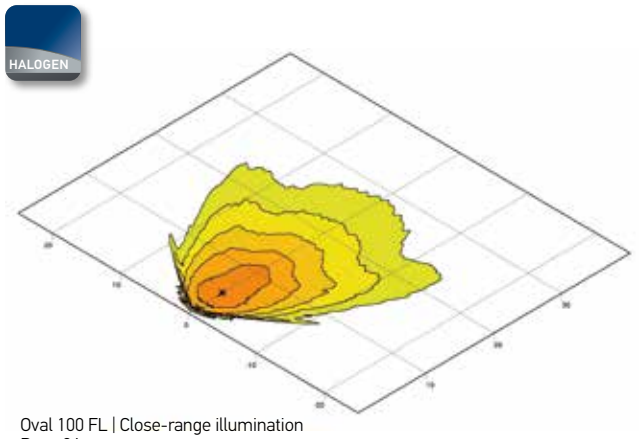
Module 70, H3 | Close-range illumination
Page 81



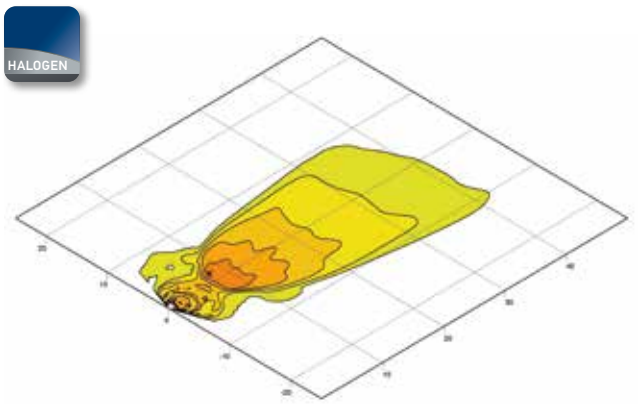
Oval 100 Double Beam | Close-range illumination
Page 82



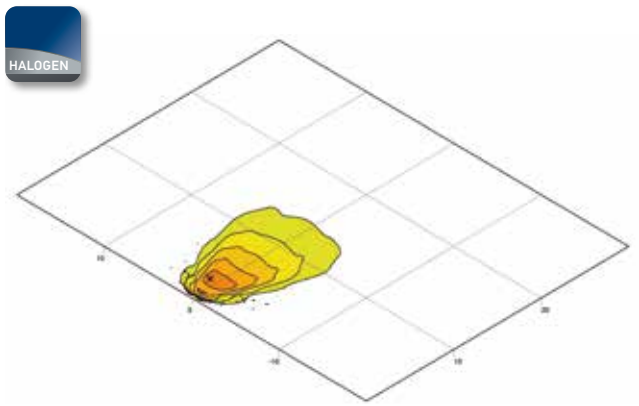
Oval 100, H3 | Close-range illumination
Page 83



Oval 100 FL | Close-range illumination
Page 84

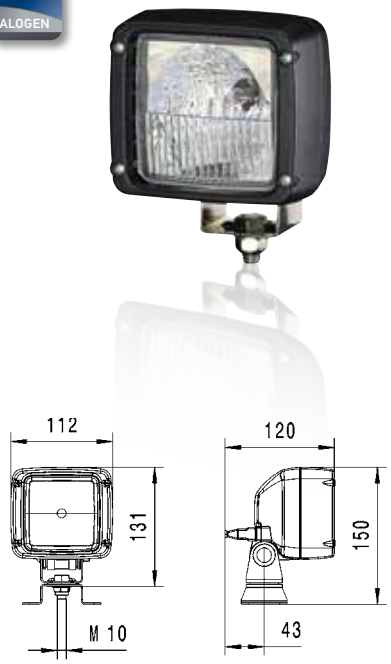


Matador | Close-range illumination
Page 85



Eco 21 | Close-range illumination
Page 86

HALOGEN



Ultra Beam reversing spotlight

Reversing spotlight, IP 5K9K (pressure cleaner-proof), impact-proof, glass fibre-reinforced synthetic material housing, approved special illumination as a reversing spotlight, GGVSEB/ADR, colour temperature: 2,300° Kelvin.

Approved special lighting as reversing spotlight ECE-R23.

→ Classic design
→ Compact design
→ Corrosion-resistant

Tilt angle: according to the installation instructions

2ZR 997 506-...	-391	-621	-691
Voltage	24 V	24 V	24 V
Close-range illumination	X	–	X
Long-range illumination	–	X	–
Energy consumption	70 W	70 W	70 W
Lumen (hot)	1,400 lm	1,400 lm	1,400 lm
Electrical connection	190 mm cable and AMP connector	190 mm cable and AMP connector	DT connector
Upright mounting	X	X	X
Suspended mounting	–	–	–
Bracket width	42 mm	42 mm	42 mm
Other features	Heavy-duty	Heavy-duty	Heavy-duty

LED

Power Beam 1000 Reversing Spotlight

Light output (measured): 850 lumen, power requirement: 18 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, for heavy-duty use, IP 6K9K / IP 67 (pressure cleaner-proof/ immersible), ECE-R10 approved, ECE-R23 approved, premium aluminum housing

→ Innovative LED technology
→ Homogenous light distribution
→ High vibration resistance

Tilt angle: according to the installation instructions

2ZR 996 188-...	-061
Voltage	9 – 33 V
Close-range illumination	X
Long-range illumination	–
Energy consumption	18 W
Lumen (hot)	850 lm
Electrical connection	DT connector
Upright mounting	X
Suspended mounting	X
Bracket width	116 mm
Other features	Surrounding bracket

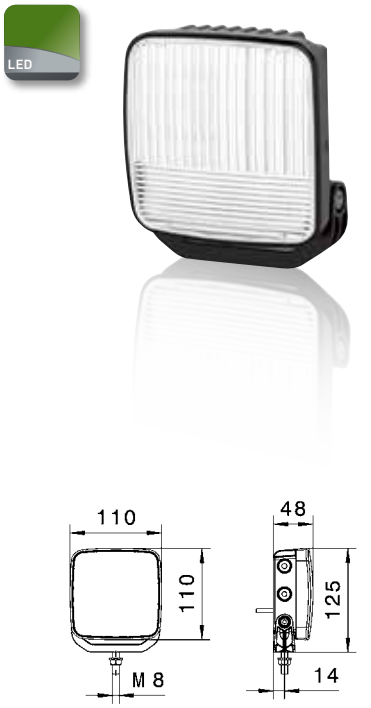
Module 70 LED reversing spotlight

Light output (measured): 800 lumen, power requirement: 13 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 67 (pressure cleaner-proof/ immersible), ECE-R10 approved, ECE-R23 approved, premium aluminum housing

→ Compact design
→ Special coating with excellent corrosion resistance
→ Extra-wide illumination

Tilt angle: according to the installation instructions

2ZR 996 376-...	-091
Voltage	9 – 33 V
Close-range illumination	X
Long-range illumination	–
Energy consumption	13 W
Lumen (hot)	800 lm
Electrical connection	2,000 mm cable
Upright mounting	X
Suspended mounting	X
Bracket width	36 mm
Other features	–



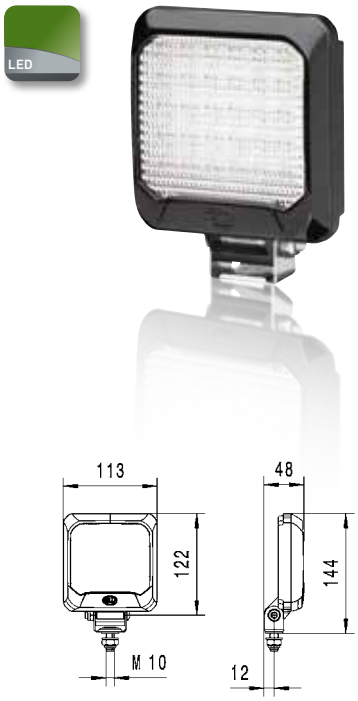
LED reversing spotlight with 3 LEDs

Light output (measured): 700 lumen, power requirement: 11 watts, colour temperature: 5,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 67 (pressure cleaner-proof/ immersible), ECE-R10 approved, ECE-R23 approved

→ Several mounting options
→ Highly efficient (only 11 watts)

Tilt angle: according to the installation instructions

2ZR 012 456-...	-201	-211	-221
Voltage	10 – 30 V	10 – 30 V	10 – 30 V
Close-range illumination	X	X	X
Long-range illumination	–	–	–
Energy consumption	11 W	11 W	11 W
Lumen (hot)	700 lm	700 lm	700 lm
Electrical connection	AMP Superseal connector (2-pole) with 2,000 mm cable	EasyConn connector (2-pole) with 1,000 mm cable	6.3 mm blade terminal sleeves with 3,000 mm cable
Upright mounting	X	X	X
Suspended mounting	X	X	X
Bracket width	86 mm	86 mm	86 mm
Other features	Surrounding bracket for upright, suspended and rear mounting	Surrounding bracket for upright, suspended and rear mounting	Surrounding bracket for upright, suspended and rear mounting



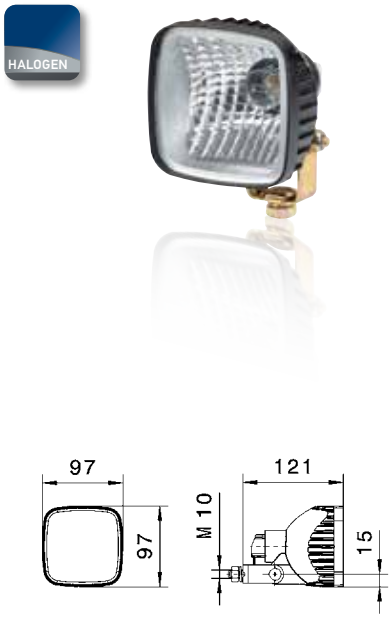
Flat Beam 500

Light output (measured): 550 lumen, power requirement: 7 watts, colour temperature: 6,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 67 (pressure cleaner-proof/ immersible), ECE-R10 approved, ECE-R23 approved, impact-resistant synthetic material housing

- → Extremely flat design
- → Synthetic material housing
- → Excellent corrosion resistance
- → Highly efficient reversing spotlight (7 watts)

Tilt angle: according to the installation instructions

2ZR 995 193-...	-051
Voltage	9 – 33 V
Close-range illumination	X
Long-range illumination	–
Energy consumption	7 W
Lumen (hot)	550 lm
Electrical connection	2,000 mm cable
Upright mounting	X
Suspended mounting	–
Bracket width	36 mm
Other features	Standard holder



Eco 21 Reversing Spotlight

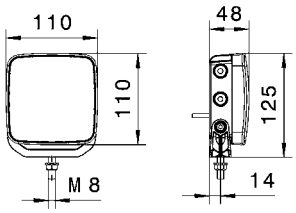
Low power consumption and reduced light output, toolless bulb replacement (bayonet socket), IP5K9K (pressure cleaner-proof), impact-resistant synthetic material housing.

Approved special illumination as reversing spotlight ECE-R23.

- → High energy efficiency
- → Compact and space-saving design
- → Corrosion-resistant

Tilt angle: according to the installation instructions

2ZR 996 179-...	-701
Voltage	24 V
Close-range illumination	X
Long-range illumination	–
Energy consumption	21 W
Lumen (hot)	400 lm
Electrical connection	500 mm cable
Upright mounting	X
Suspended mounting	–
Bracket width	33 mm
Other features	–



LED reversing spotlight with 1 LED

Light output (measured): 300 lumen, power requirement: 5 watts, colour temperature: 5,500° Kelvin, multivolt, reverse polarity protection, overvoltage protection, thermal management, IP 6K9K / IP 67 (pressure cleaner-proof/ immersible), ECE-R10 approved, ECE-R23 approved

→ Several mounting options
→ Highly efficient (5 watts)

Tilt angle: according to the installation instructions

2ZR 012 456-...	-001	-011	-021
Voltage	10 – 30 V	10 – 30 V	10 – 30 V
Close-range illumination	X	X	X
Long-range illumination	–	–	–
Energy consumption	5 W	5 W	5 W
Lumen (hot)	300 lm	300 lm	300 lm
Electrical connection	AMP Superseal connector (2-pole) with 2,000 mm cable	EasyConn connector (2-pole) with 1,000 mm cable	6.3 mm blade terminal sleeves with 3,000 mm cable
Upright mounting	X	X	X
Suspended mounting	X	X	X
Bracket width	86 mm	86 mm	86 mm
Other features	Surrounding bracket for upright, suspended and rear mounting	Surrounding bracket for upright, suspended and rear mounting	Surrounding bracket for upright, suspended and rear mounting

Did you know ...

... that not every worklight may be used as a reversing spotlight. The devices must meet specific criteria to pass ECE-R23 homologation of the reversing spotlight.

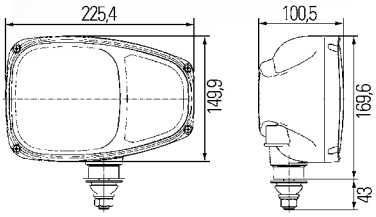
Compliance with exact light values on the ground, strict LED failure criteria and a light value with an upper limit are crucial to obtaining approval. Reversing spotlights from HELLA meet these criteria and are thus TÜV approved.

Our special lenses direct the light beams to the sides to enable optimum visibility next to the vehicle when reversing. This makes safe manoeuvering of the vehicle child's play, even at night!

When purchasing, check that the device features a type approval number. Only with a type approval number (e.g. R23-003902), may the device be mounted as a reversing spotlight.

IMPORTANT: In the event of an accident, an incorrectly mounted headlight will void any insurance claim, meaning that the vehicle owner is responsible for paying for the damage in its entirety.

HALOGEN



C220 headlight

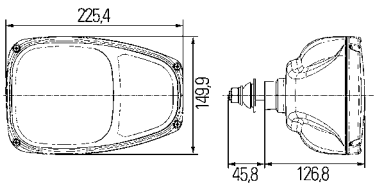
Combination headlight with ECE approval IP 5K9K (pressure cleaner-proof), impact-proof, glass fibre-reinforced synthetic material housing.

Horizontal attachment
Installation below
H3 / H7 / P21W / T4W

→ Compact dimensions
→ Illumination without dazzle
→ All light functions united in one light

12 V, mounting left with DT connector (6-pole)	**1EE 996 174-251**
12 V, mounting right with DT connector (6-pole)	**1EE 996 174-261**

HALOGEN



C220 headlight

Combination headlight with ECE approval IP 5K9K (pressure cleaner-proof), impact-proof, glass fibre-reinforced synthetic material housing.

Horizontal attachment
Mounting rear
H3 / H7 / P21W / T4W

→ Compact dimensions
→ Illumination without dazzle
→ All light functions united in one light

12 V, mounting left with DT connector (6-pole)	**1EE 996 174-211**
12 V, mounting right with DT connector (6-pole)	**1EE 996 174-221**

LED

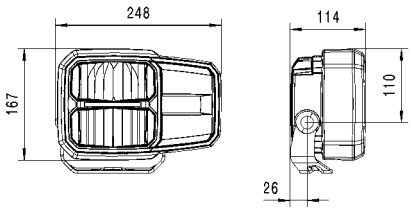
C140 LED

Combination headlamp with all functions in LED technology. For horizontal or vertical mounting, with die-cast aluminum housing, lens made of scratch-resistant polycarbonate, with 6-pin DEUTSCH connector, light functions: low and high beam, position light and indicator

9 – 32 V, DT connector (6-pole)

→ All light functions in LED
→ Outstanding luminous efficiency
→ High energy efficiency
→ ECE and SAE approval

Vertical attachment, right-hand traffic	**1EE 996 374-001**
Horizontal attachment left, right-hand traffic	**1EE 996 374-011**
Horizontal attachment right, right-hand traffic	**1EE 996 374-021**
Horizontal attachment left, left-hand traffic	**1LE 996 374-031**
Horizontal attachment right, left-hand traffic	**1LE 996 374-041**



Bracket

Pipe socket fixing bracket
For combination with socket tubes 8HG 002 365-001. Suitable for mounting with 42 mm bracket width. Electrical contacting within the pipe socket via socket according to DIN 7 2 591.

With AMP connector or grommet **Model series:** Halogen: Ultra Beam, Mega Beam, Oval 100 and Double Beam Xenon: AS 200, Oval 100, Ultra Beam	**8HG 990 320-001**
With DEUTSCH or grommet connector **Model series:** LED: Ultra Beam, Oval 100, Power Beam, and Module 90 Halogen: Ultra Beam	**8HG 990 320-011**

Mirror bracket attachment
Rotatable universal holder for mounting on tubes/pipes (diameter: 15-25 mm). For replacement on worklights with 36 mm or 42 mm bracket width.

36 mm bracket width **Model series:** Oval 90, Module 70, PowerXen and Flat Beam 500	**8HG 990 263-111**
42 mm bracket width Model series: Ultra Beam, Mega Beam, Oval 100, Double Beam, AS 200, Power Beam, Module 90, Q90 LED and AP 1200 LED	**8HG 990 263-131**

Magnetic mounting bracket
For worklights with U-bracket. Contains 2 magnets and fastening materials.

Model series: all worklights with standard bracket

8HG 004 806-001

Four-point mounting
Made of yellow chromed steel

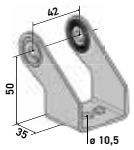
Model series: all worklights with standard bracket

9XD 990 298-001

Four-point mounting
Made of stainless steel with oblong holes

Model series: all worklights with standard bracket

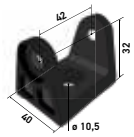
9XD 130 261-001



Angle bracket
Angle attachment for worklights with 42 mm bracket width.

Model series: Ultra Beam, Mega Beam, Oval 100, Double Beam, AS 200, Power Beam, Module 90, Q90 LED and AP 1200 LED

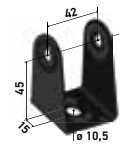
9XD 990 298-031



Plastic bracket
Glass fibre-reinforced standard bracket for worklights.

Model series: Ultra Beam, Mega Beam, Oval 100, Double Beam, AS 200, Power Beam, Module 90, Q90 LED and AP 1200 LED

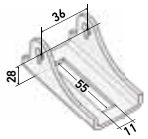
42 mm bracket width — **8HG 332 912-002**



Standard bracket
With extra space to the rear.

Model series: Ultra Beam, Mega Beam, Oval 100, Double Beam, AS 200, Power Beam, Module 90, Q90 LED and AP 1200 LED

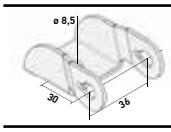
42 mm bracket width — **8HG 992 377-042**



Oblong hole bracket
Special bracket with oblong hole for mounting.

Model series: Oval 90, Module 70, PowerXen and Flat Beam 500

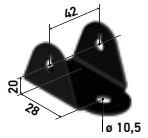
36 mm bracket width — **8HG 331 414-372**



Forked bracket
Special bracket for flat mounting

Model series: Oval 90, Module 70, PowerXen and Flat Beam 500

36 mm bracket width — **8HG 994 412-372**



Standard bracket with eye
Standard bracket for attachments with little space to the rear.

Model series: Ultra Beam, Mega Beam, Oval 100, Double Beam, AS 200, Power Beam, Module 90, Q90 LED and AP 1200 LED

42 mm bracket width — **8HG 994 974-002**

Connector

The extensive range of accessories for plug connections from HELLA offers solutions for almost any usage scenario. Undesired failures are often caused not by the products but by defective cabling or wiring. The HELLA SUPERSEAL product range helps to achieve a water-tight and dust-resistant connection of the cable heads, thereby offering ideal work conditions whatever the weather.

DEUTSCH connector, 2-pole (10x)	**8JA 990 295-127**
AMP connector set (consists of AMP connector and flush-mount grommet)	**8JD 990 295-037**
HB3 connector (10x)	**8JA 990 295-217**
H9 connector (20x)	**8JD 158 175-807**
SUPERSEAL, case containing an assortment of various SUPERSEAL connectors, male/female contacts, individual cable seals and sealing plugs (780 parts).	**8JA 009 256-801**

Cables

HELLA supplies various adapter cables as accessories for easy installation of headlights.

2,000 mm cable with AMP connector and bare cable heads	**8KB 990 299-001**
2,000 mm cable with DEUTSCH connector and bare cable heads	**8KB 990 299-011**
2,000 mm cable with H9 connector, bare cable heads and rubber cap	**8KB 990 299-311**
2,000 mm cable with HB3 connector and bare cable heads	**8KB 990 299-331**
200 mm adapter cable from DEUTSCH to AMP connector	**8KB 990 299-361**
230 volt power supply	**8EN 332 584-001**

Bulbs

HELLA's bulb assortment offers a range of bulb types specially developed for different purposes, e.g. Light Power with extremely powerful light output or Lifetime with a very long design life.

Even more can be found at www.hella.com/bulbs

H3 12 V / 55 W	**8GH 002 090-133**
H3 24 V / 70 W	**8GH 002 090-251**
HB3 LL 12 V / 60 W	**8GH 005 635-181**
H9 12 V / 65 W	**8GH 008 357-001**
D1S xenon bulb	**8GS 009 028-001**

A diverse range of accessories

Away from the roads, the demands made on man and machinery are highly exacting. HELLA offer branded top quality accessories and a huge selection of diverse spare parts and add-ons – for any situation.

Rocker switches

Many rocker switches are specially designed for use in cars, commercial vehicles, agriculture and construction machinery and special vehicles. There are more than 500 different switch symbols available for all switch series.

The new waterproof 3100 series for electrical systems is the latest addition to the HELLA rocker switch series. It meets the requirements of protection class IP 68. The lasered symbols are lit by integrated LEDs.

For more information:
www.hella.com/switch

Horns and backup alarms

Horns and trumpet horns also have a long tradition at HELLA. The company has been developing and producing acoustic signal units for almost 100 years. The product range includes signal horns, super-tone horns, electronic dual-tone trumpet horns and supercharger and air trumpet horns.

For more information:
www.hella.com/horns

Ignition and starter switches

Nothing works without it. The ignition switch is chiefly responsible for reliably starting the engine. Reliability and durability are its key properties.

Battery isolator switch

Offer effective security from theft and fire in the event of accidents in the agricultural machinery industry. They are resistant to dust and waterproof according to IP 69. Switching is also partially possible under a load of 250 A.

Wiper blades

In the course of their lives, the small technical wonders wipe several thousand litres of water off the windshield and have to contend with snow, ice, insects and much more. A good reason to choose quality wiper blades from HELLA.

For more information:
www.hella.com/wiperblades

K-LED 2.0 beacon

The new HELLA K-LED 2.0 ensures the best possible warning effect and thus optimum safety, as it illuminates automatically during the day 2.3 times brighter than it does at night. It is also the first HELLA beacon where you can choose by switch or programming between rotating or flashing warning signals. This offers you the right warning signal for any application.

- → Two levels (ECE R-65): beacon with light sensor for automatic switch between day and night mode, for ultimate warning effectiveness
- → Functional safety: the first HELLA beacon to meet the requirements of IP 67
- → Extremely robust and highly compact

Multivolt 10-32 V, fixed attachment	**2XD 011 557-101**
Multivolt 10-32 V, airport fixed attachment	**2XD 011 557-701**
Multivolt 10-32 V, pipe socket fixing	**2XD 011 557-201**
Multivolt 10-32 V, magnetic mounting bracket	**2XD 011 557-301**

Rota LED beacon

The Rota LED with rotating LED light function impresses with its high level of efficiency, its flat and compact design and rotating LED light function. Due to the shock absorbing rubber foot, it is highly resilient to vibration and thus perfectly suited to challenging applications.

- → ECE-R65 approved LED beacon with rotating warning signal
- → High resistance to vibration and extremely robust
- → Extremely efficient

Multivolt 10-32 V, fixed attachment	**2RL 010 979-001**
Multivolt 10-32 V, flexible pipe socket fixing	**2RL 010 979-011**
Multivolt 10-32 V, magnetic mounting bracket	**2RL 010 979-021**

XENON

KLX JuniorPlus beacon

Xenon beacon with high warning effectiveness and good value for money. With stable mounting. Elastic, impact-absorbing base absorbs even heavy impacts and minimizes the danger of damage; the light always returns to the optimum position (maximum inclination: 90°)

→ ECE-R65 xenon flash beacon
→ Sturdy, easy-to-clean dome
→ Flash tubes can be separately replaced

12 V, fixed attachment	**2XD 009 051-001**
24 V, fixed attachment	**2XD 009 051-011**
12 V, pipe socket fixing	**2XD 009 052-001**
24 V, pipe socket fixing	**2XD 009 052-011**
12 V, magnetic mounting bracket	**2XD 009 053-001**
24 V, magnetic mounting bracket	**2XD 009 053-011**

HALOGEN

Rotaflex / Rotafix beacon

The Rotaflex / Rotafix beacon is a compact and resilient rotating beacon. It is characterised by excellent lighting output, an impact-proof light dome, and extremely high resilience to vibration.

→ ECE-R65 approved halogen all-round light
→ Particularly impact-resistant polycarbonate dome
→ Available with elastic, shock-absorbing base – minimises the risk of damage

12 V, fixed attachment	**2RL 007 337-001**
24 V, fixed attachment	**2RL 007 337-011**
12 V, pipe socket fixing	**2RL 006 846-001**
24 V, pipe socket fixing	**2RL 006 846-011**
12 V, magnetic mounting bracket	**2RL 007 337-021**
24 V, magnetic mounting bracket	**2RL 007 337-031**

HALOGEN

Rota Compact beacon

The Rota Compact beacon impresses with premium quality engineering, excellent robustness and light values. Its elastic, impact-absorbing base minimises the danger of damage.

→ Especially impact-resistant
→ Different attachment versions for every application
→ ECE-R65 approved halogen all-round light

12 V, fixed attachment	**2RL 009 506-201**
24 V, fixed attachment	**2RL 009 506-211**
12 V, flexible pipe-socket mounting	**2RL 009 506-001**
24 V, flexible pipe-socket mounting	**2RL 009 506-011**
12 V, pipe socket fixing	**2RL 009 506-101**
24 V, pipe socket fixing	**2RL 009 506-111**

Lighting technology – what you need to know!

LED technology

The latest LED developments in the worklight field are already so advanced that they even outperform xenon light. Additionally, LEDs offer high colour temperatures of around 6,500 Kelvin, thus guaranteeing illumination just like daylight. Working under these kinds of lighting conditions is gentle on your eyes, and it helps you to stay on task for longer.

Advantages of LED worklights:

- → High light output
- → Low power consumption
- → Maintenance-free
- → Extremely long service life
- → Multivolt capable
- → 100% dust and waterproof
- → High vibration resistance
- → Low temperature on the lens

All the advantages of modern LED lighting technology are optimally employed in HELLA worklights.

The choice of LEDs, their current supply and the headlight's thermal management are important factors for achieving optimum light output (lumen). The quality of the components used by HELLA ensures, for example, that the light output is constantly bright even at higher ambient temperatures.

Good thermal management is crucial to guaranteeing a long design life and the cost-effectiveness of an LED headlight. The reason: as soon as an LED starts to emit light, heat is generated. The more power you feed to the system, the more heat is generated in the LED. Lighting performance and design life drop, the higher the LED temperature becomes. In other words, it is important to dissipate the heat into the environment. HELLA uses the latest simulation programs during product development to ensure optimal heat dissipation through the housing.

Beyond this, LED worklights from HELLA are equipped with thermal sensors that reliably protect LEDs against overheating. This is the only way to achieve an extremely long design life of up to 60,000 hours with constant lighting performance.

Do you know the actual light output of your worklight?

LED vendors typically state the light output without considering the temperature influence in their product catalogues. But these illumination values do not reflect the effective light output of a ready-for-use worklight. If these light values are applied to a complete device, they often suggest an unrealistically high lighting performance. These values are known as "calculated lumen" (clm) or as "cold lumen".

The lumen specifications of all HELLA worklights are always based on values determined during photometric measurements. Which means they correspond to the light that effectively leaves the headlight. HELLA LED worklights achieve their full lighting performance at up to 50°C ambient temperature.

At HELLA, electronic devices cannot cause interference.

Due to the increasing use of electronics on vehicles, electromagnetic compatibility (EMC) is playing an increasingly important role. Devices with electronics must be designed so as to avoid interference (radiation) of other electrical devices, installations or systems, and that they are not affected by interference themselves (insolation). In Europe, products can only be distributed if they comply with the EMC directive 2004/108/EC. Manufacturers of worklights must declare a product's conformity by means of a CE mark on the product. HELLA takes this one step further and additionally demonstrates the fulfillment of EMC criteria by means of "E" approval in line with ECE regulation 10. This approval certifies that the device does not interfere with the on-board electronics. HELLA worklights are thus ideal for use in all vehicle categories.

Xenon technology

With light outputs up to 2,800 lumen, xenon headlights are ideal for applications with heavy lighting demands.

Xenon also offers other benefits in addition to its high luminous efficiency:

- → Brighter and greater illumination of the work area in comparison to Halogen filament bulbs
- → Light colour similar to daylight (4150° Kelvin)
- → No sudden lighting failure – shock-proof arc instead of a fragile filament
- → Up to five times longer design life in comparison to a halogen bulb
- → Consistent brightness even when on-board voltage decreases
- → Lower load for the vehicle electric system, thanks to low power consumption

Information on the new series: X-Powerpack

The X-Powerpack series xenon worklights are perfectly shielded from internal radiated interference of the electronics. The highest EMC requirement level is met throughout. This means that interference by the worklight with radios and other electronic devices is conclusively ruled out. The units are dust- and waterproof (IP 6K9K) and extremely resistant to vibration.

Notes on the installation of xenon worklights

To allow the ballast on the xenon lamp to ignite safely, the line resistance between the vehicle's battery and the xenon ballast must be no more than 150 mΩ at 12 V, and no more than 300 mΩ at 24 V. To ensure the optimum service life of the xenon bulb, the inclination of the headlight must not be greater than ± 35°.

Halogen technology

Well-known but still up-to-date. You can't go wrong with Halogen worklights from HELLA. An affordable solution to improving the light output of a vehicle and thus increase working convenience in the dark.

- → H3 bulbs are largely used in HELLA worklights.
- → The light colour of H3 bulbs is 2,500 Kelvin.
- → In addition, there are Halogen versions with HB3 and H9 bulbs, featuring greater luminous efficiency and higher color temperatures
- → IMPORTANT: HB3 and H9 worklights are only available in 12 volt versions.

Advantages of H9/HB3 compared to H3

- → 1.5-times greater light output thanks to increased luminous flux
- → Direct access thanks to an externally accessible bulb
- → Straightforward bulb replacement
  – without opening the headlight housing
  – bayonet connection
- → 3,200° Kelvin light colour

Simple answers to technical questions...

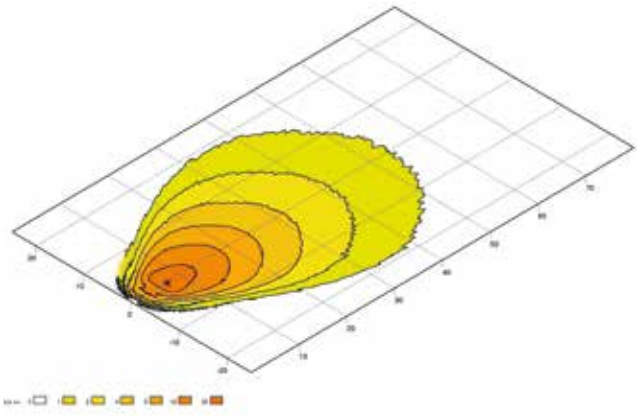
What do watt, Kelvin, lumen and lux mean?

Watt (W): unit of measure for the power requirement of a headlight

Kelvin (°K): unit of colour temperature; the higher the value, the "whiter"/more similar to daylight the light is.
IMPORTANT: anything above 7,000° Kelvin is too glaring for the human eye and causes dazzle

Lumen (lm): The amount of light emitted by the light source, but in all directions.
IMPORTANT: difference between measured and theoretical lumen. HELLA states only actual measured light values.

Lux (lx): this value is important for the illumination of the work area. The aim is to illuminate the ground as strongly as possible. Computer-generated reflector surfaces which focus the light and thus produce homogenous illumination are used here.



Isolux diagrams are used to compare illumination. The intensity of illumination is measured with an incident light meter to determine if a work area is sufficiently lit up.

How can you compare the illumination of different lights?
In the course of the LED revolution, the term "lumen" for the unit of strength of a worklight was strained to the extent that a kind of "battle of the lumens" took place. In order to come out on top, a number of manufacturers started quoting only calculated light values. These values are often far off reality and result in disappointment when switching on the headlight. The best situation is a direct comparison of the headlights at night – this makes the purchasing decision much easier.

Why are different inclination angles specified?
The reflector is designed to provide optimum light output that is as uniform as possible at the specified inclination angle.

Why is the tilt angle of the worklight so decisive?
The tilt angle is measured at the mounting point of the worklight, below the horizontal. The larger the tilt angle, the more intense the light is in the core area. A small tilt angle generates a large light beam in the distance. Several worklights (even different worklights) can be combined to achieve custom illumination of the surroundings.

Are there any legal regulations which apply to worklights?
There are no specific regulations for type approval, as worklights can only be used while driving off public roads.

Who is allowed to install worklights on their vehicles?
Worklights can be installed on any vehicle.

Can I use worklights in road traffic as well?
Yes, if the vehicle is stationary (e.g. loading and unloading). Exception: vehicles used for building, maintaining, street cleaning or refuse collection, if the trip is part of the working process. Worklights may then only be switched on if they do not dazzle other road-users.

Can other headlights be used as worklights?
For vehicle lighting, special headlight types were developed depending on their area of application: low beam, spotlights, fog lights and worklights. Only worklights can provide sufficient illumination to illuminate the field of work. A good worklight is characterised by even illumination, as large a surface as possible and a gentle transition in the edge area. (see fig. 1)

Can I switch on worklights in public traffic when it is foggy?
No. Worklights must not be used while driving on public roads.

When can I use a worklight as a reversing spotlight?
When an approved reversing spotlight is involved – only with the ECE-R23 approval mark. HELLA also offers a reversing spotlight variant from several ranges: Ultra Beam, Power Beam 1000 (LED), Module 70 LED.

Does the light yield of headlights double with two bulbs?
The more light sources are used, the more luminous efficiency in the work area. The light output, however, depends on the light source and the reflector lens system. Two bulbs therefore signify a plus in light performance.

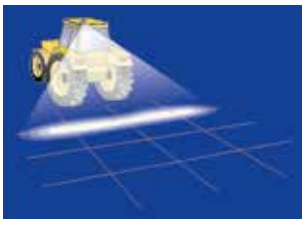
What is the difference between the two different types of illumination?
1) Close-range illumination: intensive light for the area near the vehicle, range approx. 20 m to 40 m, wide diffusion.

2) Long-range illumination: rather narrow diffusion (approx. 12-15° to the left and right), range between > 40 m - 150 m (depending on installation height and tilt angle).

Can I combine worklights which use different technologies?
Yes, there is nothing to stop you attaching xenon or LED worklights to a vehicle with Halogen lighting. Many end users retrofit their vehicle step by step, so as to split the capital outlay over several stages.


Low beam


High beam


Fog light

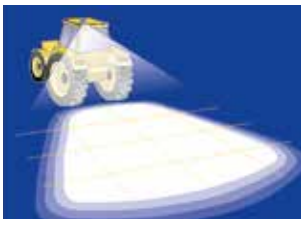

Working light

Fig. 1

Why is the installation height of a worklight important?
The light appearance changes depending on the different installation heights. A uniform installation of 2.5 m was taken for the light diagrams in the catalogue. (Figs. 2 and 3)

When are upright and suspended versions of a worklight available?
If the light distribution is not symmetrical, there are different varieties for suspended installation. Please refer to the HELLA product text or to the installation instructions to check whether a headlight is suitable for suspended installation.

How long is the service life of a HELLA LED worklight?
The service life of the entire worklight system is dependent on environmental influences such as vibration, exposure to salt, temperature, etc. The service life of the LED itself is usually very long, but decreases under the influence of temperature.

The light unit of HELLA's high-power LED worklights is designed in such a way that 70% of the original light power is still available after 60,000 hours. (In the case of "Mid-Power LED Worklights", for example the Flat Beam LED, this value is reached after 10,000 hours).

Do I need an additional relay to install a LED worklight?
Protection is required particularly for LED devices with higher power. More detailed information is listed in the installation instructions for the respective HELLA LED worklight.

Can I activate worklights at the same time as other headlights (e.g. high beam and worklights)?
No. It must be possible to switch on worklights independently of all other headlights and lights.

Do I need an additional relay to install a xenon worklight?
Yes, because the current required to ignite the burner briefly reaches 20 A (at 12 V) or 10 A (at 24 V), so a fuse is required (15 A for 12 V systems, 7.5 A for 24 V systems).

What cable diameter is required for a xenon worklight?
Please observe that cables with sufficient cross-section are used. The recommendation is to used a 2.5 mm^2 cable with a max. length of 5 m.

What types of connectors are there?
HELLA offers different connector systems for electrical contact. Either the connector is integrated into the casing or mounted on to a cable (AMP/German), or it depends on the bulb (e.g. H9/HB3). The DEUTSCH connectors and mating connectors used most in the automotive industry for H9/HB3 bulbs are not widely available on the aftermarket. HELLA offers adapter cables for this purpose to enable simple electrical contact.

Why are there LED worklights with coloured lenses?
There are areas of application in which white LED light can dazzle the driver. That's why HELLA has developed special versions with coloured worklights. The coloured cover lens produces a more pleasant colour temperature and thereby reduces dazzle.
Blue: snow ploughs, sprayers, fog, ...
Orange: mining and construction

Low installation position
Fig. 2

High installation position
Fig. 3

Which IP protection classes are there? And what do they mean?

IP stands for International Protection. The standard exists to specify the precise protection of electrical devices from ingress of solid or liquid foreign objects, e.g. dust or water, on a standardised basis. The exact degree of protection is calculated using a series of standardised tests.

Can I clean the HELLA worklight with a high-pressure cleaner?

This information can be inferred from the IP protection class in the product information. All headlights with a protection class of IP 5K9K or IP 6K9K cannot be damaged by water from a high-pressure/steam jet cleaner directed against the housing at a water pressure of approx. 80 to 100 bar.

Degrees of protection against solid foreign objects (dust)

First digit	Brief Description	Definition
0	Not protected	No requirements
1	Protected against solid foreign objects > 50 mm	The object probe, a sphere 50 mm in diameter, must not be able to penetrate completely
2	Protected against solid foreign objects with diameter > 12.5 mm	The object probe, 12.5 mm in diameter, must not penetrate at all
3	Protected against solid foreign objects with diameter > 2.5 mm	The object probe, 2.5 mm in diameter, must not penetrate at all
4	Protected against solid foreign objects with diameter > 1.0 mm	The object probe, 1.0 mm in diameter, must not penetrate at all
5K	Dust protected	The penetration of dust is not prevented completely, but dust must not penetrate to such an extent that the satisfactory operation of the device or its safety are affected
6K	Dustproof	No ingress of dust

Degrees of protection against water

Second digit	Brief Description	Definition
0	Not protected	No requirements
1	Protected against drops of water	Vertically falling drops shall have no harmful effect
2	Protected against drops of water when the housing is tilted by up to 15°	Vertically falling drops must have no harmful effect if the enclosure is tilted to an angle of up to 15° to both sides from its normal position
3	Protected against spray water	Water that falls as a spray at an angle of up to 60° on both sides of the perpendicular shall have no harmful effect
4	Protected against spray water	Water that is sprayed from one direction against the housing shall have no harmful effect
4K	Protected against splashwater at increased pressure	Water that is sprayed from every direction at increased pressure against the housing must not have any damaging effect
5	Protected against sprayed water	Water projected in jets against the housing from any direction shall have no harmful effect
6	Protected against powerful water jets	Water that is sprayed from every direction against the housing at considerable pressure must not have any damaging effect
6K	Protected against powerful sprayed water with increased pressure	Water projected in powerful jets at increased pressure against the housing from any direction shall have no harmful effect
7	Protected against the effects of temporary immersion in water	Ingress of water in harmful quantity shall not be possible when the housing is temporarily immersed in water under defined conditions of pressure and time
8	Continuous immersion in water	Ingress of water in harmful quantity shall not be possible when the housing is continuously immersed under water under defined conditions
9	Protected against the effects of continuous immersion in water	Water must not seep in to the extent that it causes damage if the housing is permanently immersed under water under pressure and time conditions
9K	Protected against water during high pressure/ steam jet cleaning	Water projected in jets at increased pressure against the housing from any direction shall have no harmful effect

What does ‘heavy-duty’ mean?
Heavy-duty indicates that the product can withstand extreme stress. Heavy-duty worklights go beyond the already very high standard and are equipped with additionally reinforced brackets or vibration dampers that withstand even tougher conditions.

How are HELLA LED worklights shake-proof?
LEDs are semiconductor components, which means they do not have a fragile filament. That is why they are absolutely shock and vibration resistant, which guarantees optimal lighting even under extreme conditions.

What does electromagnetic compatibility (EMC) mean?
LED and xenon headlights can emit radiated interference and thus adversely affect the on-board electronic system. HELLA is deeply committed to developing premium, interference-free headlights. That’s why, alongside the statutory ECE-R 10 and C-TICK test, other tests are performed according to the CISPR25 standard. The requirements tested there are far higher and ensure that radio and GPS signal reception are not affected. HELLA meets the highest automotive standards in the main frequency ranges. (CISPR25 class 5)

Hazardous goods ordinance
GGVSEB (previously GGVS) means the hazardous goods ordinance for roads, railways and inland waterways. This ordinance implements the European Parliament and Council Directive 2008 / 68 / EC of September 24, 2008 on the inland transport of hazardous goods. Worklights with this mark are approved for installation on conveyances that must comply with the provisions of GGVSEB / ADR.

HELLA worklights with ADR/GGVS approval
Power Beam 1000 (also RFSW)
Power Beam 1500
Power Beam 3000 (connector variant only)
Oval 90 LED
Oval 100 LED
And certain Halogen variants

Quality comes first at HELLA

HELLA has set itself the ambitious standard of guaranteeing consistently high product quality in every respect.
This is achieved by defining quality criteria and checking every detail using carefully-selected methods throughout the entire manufacturing process. Production quality is ensured by parallel quality monitoring and testing. Quality products from HELLA are subject to different test procedures in accordance with HELLA Norm 67101. These test procedures are conducted by the certified HELLA test laboratory in Lippstadt.

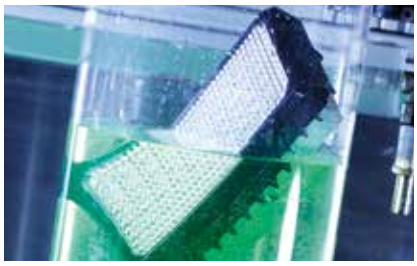
First-class quality by conviction
HELLA guarantees the perfect, long-term functioning of its products and stands for satisfied customers in the spare parts, accessories and light sources areas.

HELLA products are subject to the following tests:

Splash water test
In universal splash water cabins, HELLA products are tested under realistic environmental conditions. The booths are equipped with devices for rain, splash water, water jets and water mist. Here, the test products are tested for tightness by undergoing the intermittent and splash water test at a pressure of up to 5 bar, and the sprayed water test at a pressure of up to 10 bar. (IP XK4K)

Pressure washer test
In one test system, the products are exposed to a water pressure of up to 120 bar and a water temperature of 85°C. This test simulates cleaning in a carwash or with a pressure cleaner (IP 6K9K).

Dust test
The purpose of the dust-protection test is to test to what extent a worklight is protected from the penetration of foreign solid bodies, including dust. For this, the device is exposed to an air/dust mixture for a period of 5 hours. This is the only way that HELLA can ensure that dust will not penetrate the product and can guarantee the long design life of the product.



Immersion and pressure tightness test
Depending on requirements, this test is carried out for all lighting technology products. An immersion pipe can be submerged to a depth of 1 m in water. Another test system can reach a depth of 6 m. Also, an overpressure test up to 1.6 bar is conducted in an immersion pool. All tests are carried out in accordance with HELLA Norm 67101 and statutory requirements (IP 67).

Heat, moisture and cold test
In temperature cycle tests, HELLA products are exposed to temperature fluctuations from -40°C to +100°C in climatic chambers which have a volume of 600 to 1,000 litres. In addition, condensation and defogging tests are carried out up to max. 95% air humidity and up to 80°C. In the "shock chamber", the temperatures change within seconds (intervals of max. 6 seconds) between -40°C and +100°C. These tests signify the utmost stress for any material, both for lighting as well as for the individual electronics components. The heat and cold tests last up to 48 hours.

Salt spray test
The tough environmental conditions of life on the road are simulated in the salt spray test. A salt spray swirls around the worklights for up to 720 hours to test their corrosion resistance. Where others rapidly give up, HELLA impresses with quality and excellent robustness. High salt spray resistance is particularly important for reversing spotlights. The low attachment height on the rear of the vehicle means that the lights are exposed to the toughest conditions (e.g. water, salt, stone chippings, ...).

Vibration test
HELLA worklights survive the harshest conditions every day. This test simulates the behavior of the products over a "poor stretch of road" and shows, for example, reactions to potholes, gravel tracks, gravel, stones, fields and dirt roads. The wideband random vibration test is used to test the mechanical endurance strength in the vertical and horizontal axes. Here, the frequency range extends from 10 to 1000 Hertz. Alongside the vibration test, the products are subjected to a temperature overload of -40°C to +80°C. Among others, this checks the ageing process of the plastic. All products are tested for function for up to 24 hours. Furthermore, a mechanical shock test is conducted during this procedure. This simulates the behavior in the event of jolts (products in packaging during shipping) with an acceleration of between 300 and 500 m per second.

More information on HELLA quality criteria
can be found at: www.hella.com/agriculture

HELLA quality: a comparison

Where others are cutting back, HELLA is investing in top quality. Find out in detail why supposedly cheap products from discount suppliers can turn out to be very expensive.

Surface coating

⊕ High quality coatings protect the aluminum components of HELLA worklights from salt and chemicals and therefore from corrosion.

⊖ Corrosion can ruin the seal on lights. In the worst case, water can penetrate and destroy the electronics.

Thermal management

⊕ The thermal management of HELLA worklights is thoroughly calculated: The heat of the LEDs is evenly distributed and deflected via the housing. If there is a risk of overheating, individual LEDs are automatically dimmed.

⊖ Without thermal management, LEDs can very quickly overheat. This makes their service life drop dramatically. Hot spots can deform the entire electronics board, soldering connections can break, causing the complete light to fail.

Electromagnetic compatibility (EMC)

⊕ The LED arrangement in HELLA's worklights and the construction of the reflector ensure that no interference occurs from magnetic fields.

⊖ LED lights that are not correctly shielded, produce strong electro-magnetic fields which interfere with the electronic system, radio and GPS.

Electro-static discharge (ESD)

⊕ Before HELLA employees are allowed to enter the LED production, they have to be statically discharged to ensure that no components can be damaged by charging.

⊖ Static discharge caused by damaged electronic components can make entire lights unusable. There is a threat of expensive downtime.

Reverse polarity

⊕ HELLA worklights are protected against reverse polarity. If they are wrongly connected, they will not be damaged.

⊖ If a wrongly connected light is not protected against reverse polarity, the electronics will be completed destroyed when it is switched on.

⊕ HELLA quality advantages

⊖ Where others save

Attempting to save in the wrong place, costs more in the end, as inferior lights provide less power and often fail.

Quality of the LEDs

⊕ Only LEDs that have undergone strict tests are used in HELLA worklights. The selection guarantees the extremely long design life of the LEDs of up to 60,000 hours.

⊖ Resorting to untested, cheap LEDs brings the risk of a shortened service life and malfunction. Then LED technology cannot be used to its full advantage.

Adhesion

⊕ The worklights at HELLA are hermetically sealed by high-accuracy glue-dispensing robots. This guarantees that the lens is glued at an optimal angle for the optimum light yield which has been precisely calculated.

⊖ Inferior lights are often glued manually. An irregular adhesive bed can lead to the lens angle, and thus the light yield, not being ideal. If the lens is no longer tight or becomes detached, water can penetrate and make the light unusable.

Light distribution via the reflector system

⊕ The reflectors of HELLA worklights are calculated in such a way to ensure that the working area is evenly illuminated and the light optimally used.

⊖ Worklights with an unsuitable light control system illuminate the working area unevenly and waste a large part of the light. Brighter spots distract your eyes, making others details difficult to see.

Lens material

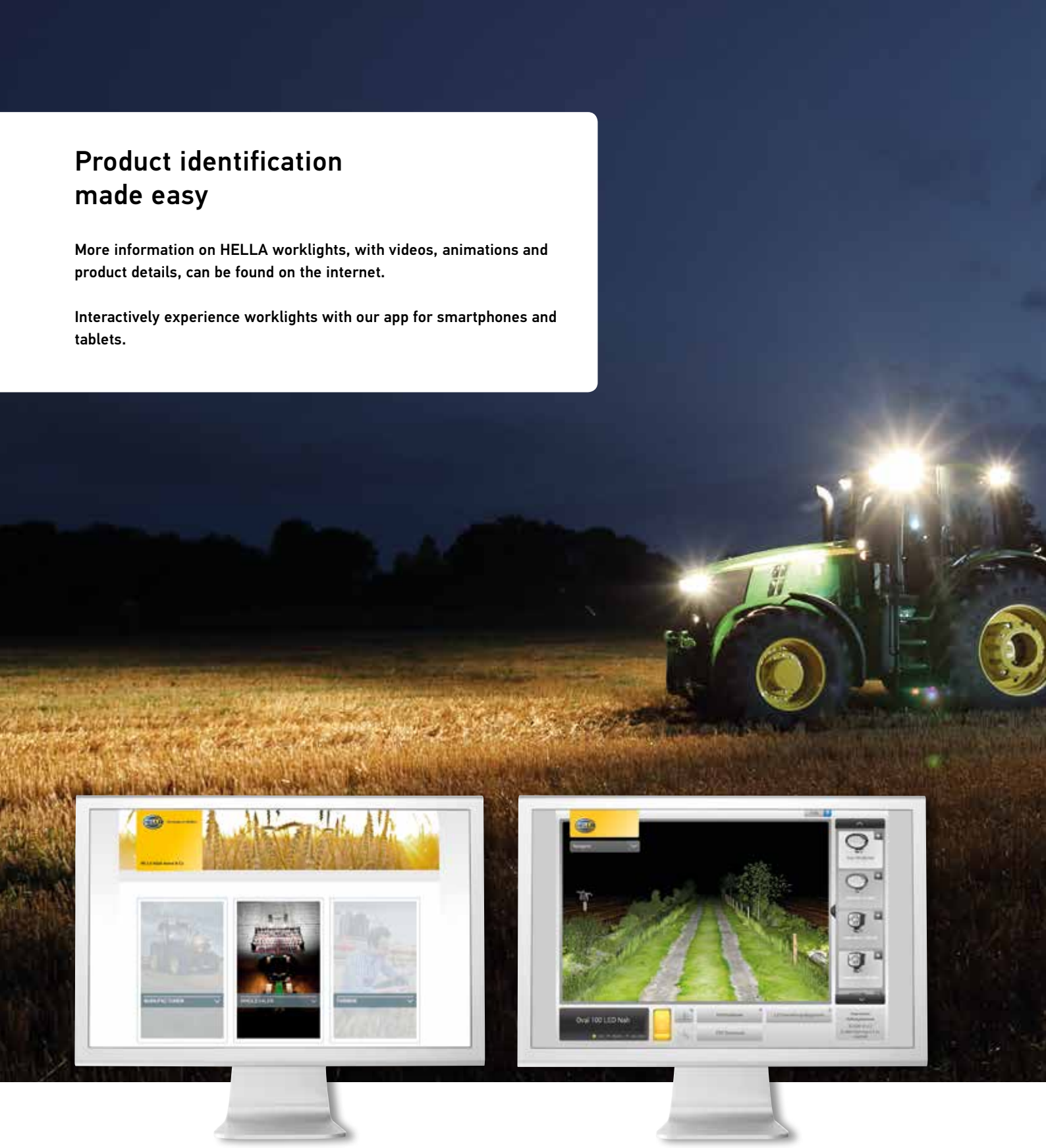
⊕ The lens in HELLA worklights, which is 100% suitable for daily use, consists of a high quality, impact and scratch-proof plastic. The light emitted remains homogeneous, even after colliding with a branch or anything similar.

⊖ Lenses made of inferior plastic can break and scratch easily. Each scratch leads to undesired light refraction – the more there is, the more irregular the illumination.

Product identification made easy

More information on HELLA worklights, with videos, animations and product details, can be found on the internet.

Interactively experience worklights with our app for smartphones and tablets.

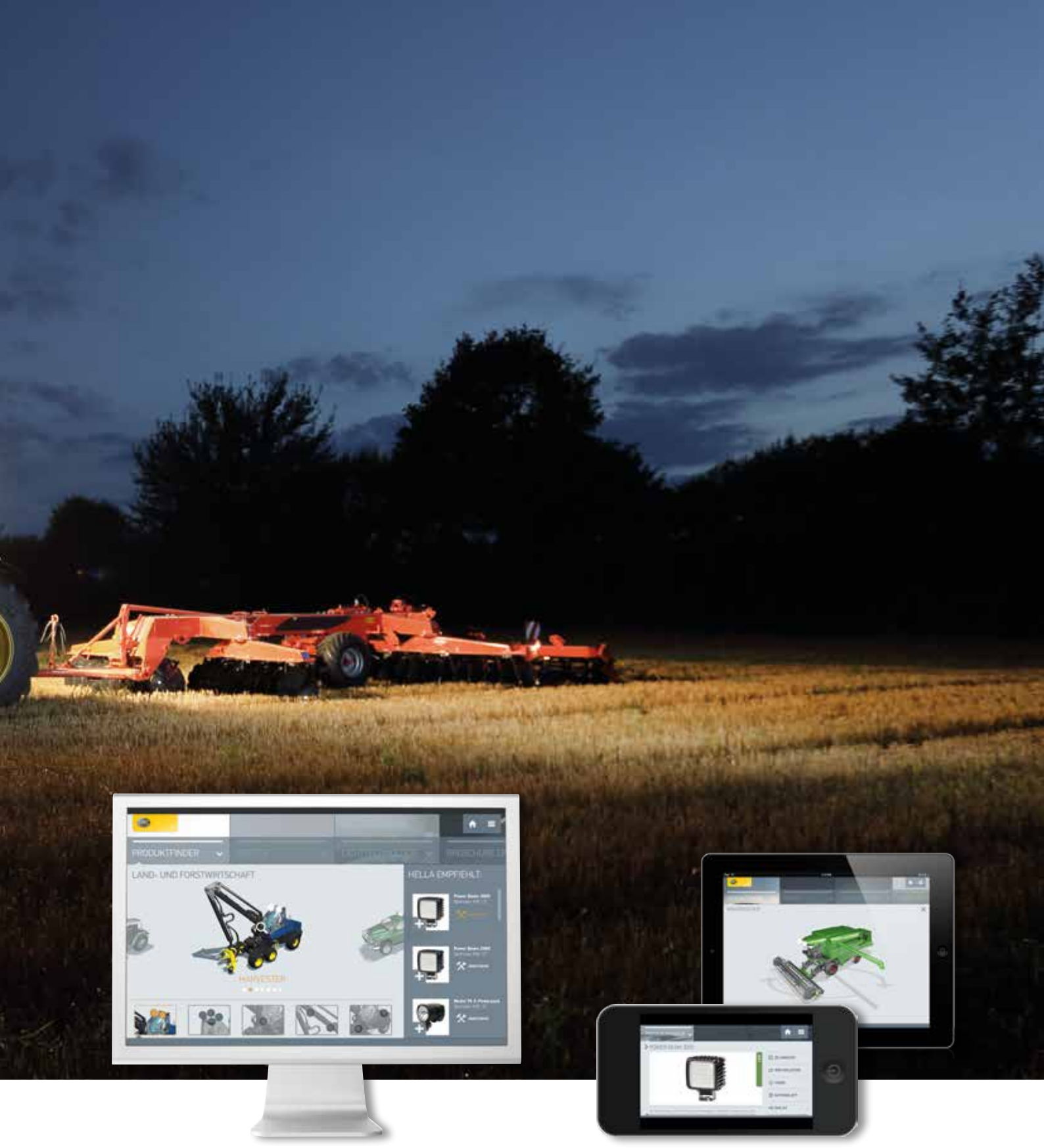


Agriculture website
Informative, compact, interactive. Here you will find all you need to know about the products and technologies for agricultural application.

www.hella.com/agriculture

ELIVER – the light comparison tool
This online tool enables you to compare many HELLA worklights and beacons on the basis of their illumination in a realistic environment.

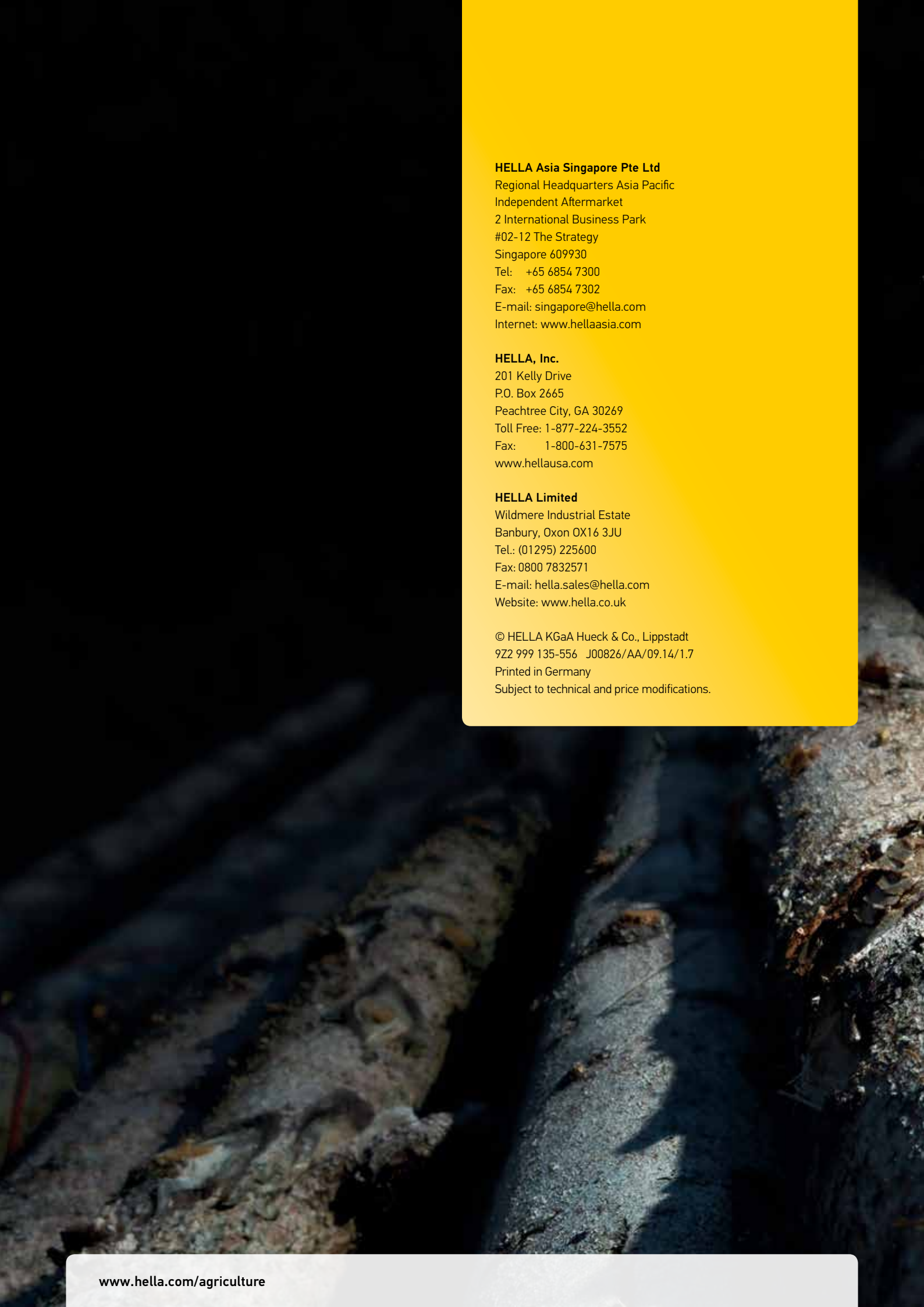
www.hella.com/eliver



Worklight configuration tool
Which worklight is the correct one for your application? The HELLA online configurator will provide you with suitable product suggestions including all the relevant information about the product.

www.hella.com/worklight-configurator

Worklights mobile app
Let yourself be drawn into the interactive world of worklights and experience the variety of lighting technologies, explosion animations and much more. Simply download the app from iTunes or Google Play!



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9Z2 999 135-556 J00826/AA/09.14/1.7
Printed in Germany
Subject to technical and price modifications.

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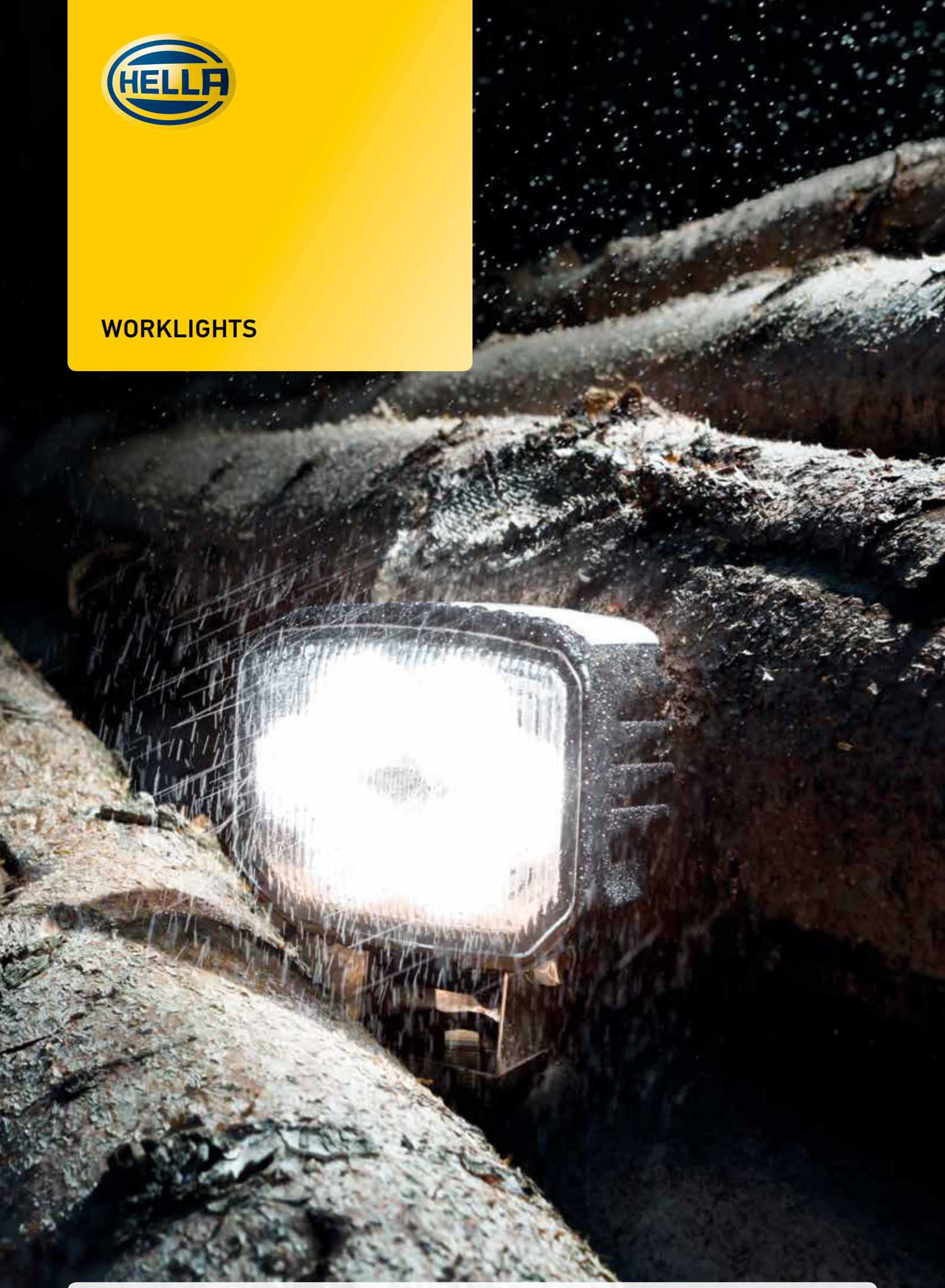

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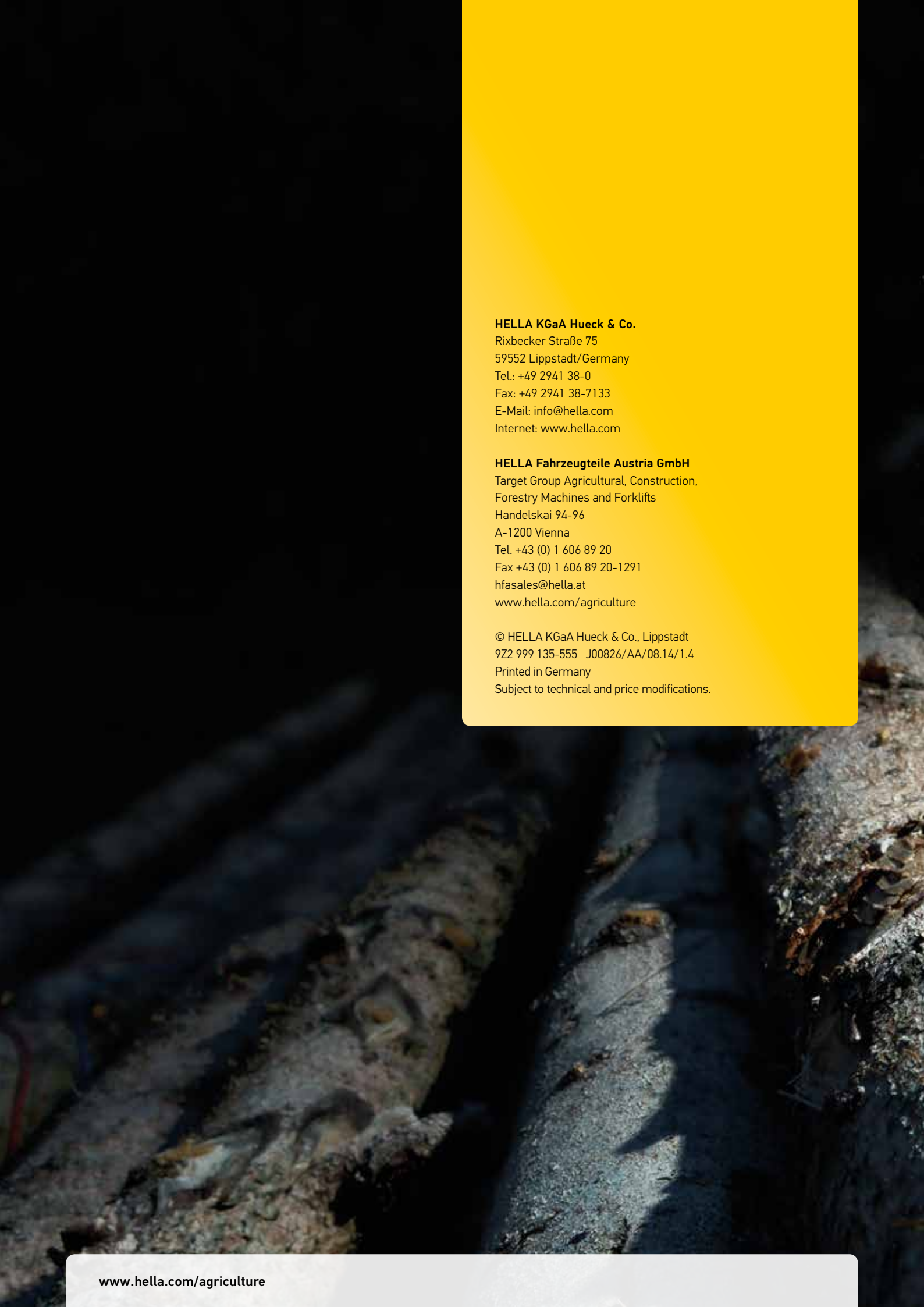

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9Z2 999 135-555 J00826/AA/08.14/1.4
Printed in Germany
Subject to technical and price modifications.