



IL2 PLUS

Light is our passion. For more than 100 years.

Acting out of conviction – HELLA As a globally positioned, innovative and performance-oriented family-owned company, HELLA has successfully pursued the right values for more than 100 years. Right from the start we have aspired to achieving exceptional quality and optimum customer satisfaction – and, thanks to this aspiration combined with our day-to-day professionalism, spirit of cooperation and sustainable approach, we now have more than 29,000 employees at more than 100 sites in more than 35 countries. Furthermore, with sales of 5 billion

euros (fiscal year 2012/2013), Hella Group belongs to the top 50 automotive suppliers in the world and is one of the 100 largest German industrial companies. We take every opportunity today to use our know-how accumulated over many years to make the world a brighter place tomorrow. For us it is not just important for figures, but also the satisfaction of each individual customer, to reflect our company philosophy and success. Take a look for yourself!



The values

Light years ahead

Right from the outset, the family-owned company HELLA has been the contact partner with the necessary expertise in light, lighting and electronics. Today, we develop, produce and market components and lighting technology systems and electronics in more than 35 countries. In doing so, we aspire to increasing the scope of our performance-oriented professionalism and potential, thus promoting further innovation and quality in new areas.

The future matters to us

As a company that operates worldwide, we remind ourselves every day of our social responsibility. We not only assess our products, technologies and processes continuously with a view to improving their environmental compatibility, we are also committed to promoting education and science. In addition, by finding clear win-win solutions we are in the process of creating a network that promises enduring success – for us, our partners and our customers. After all, customer satisfaction is our overriding priority and the criterion by which we measure all our actions.



HELLA Industries –
light from passion



The subject ›light‹ is as closely associated with the HELLA brand as are its products wide-ranging and innovative. We are committed to adapting our outstanding knowledge of technology, processes and quality acquired in the automotive sector systematically for use in other areas. For industrial applications in particular, our high-quality LED systems offer a long design life, noticeably high energy efficiency and ever-decreasing maintenance costs.

The values

HELLA Industries stands for innovation

What drives us forward with every new development is the quality of idea, plausibility of implementation and outstanding efficiency for the customer. Our innovative LED products fulfil exactly these requirements.



HELLA Industries stands for simplicity

Less is more! This coherent and functional solution characterizes our thought processes and actions. This concentrated efficiency is reflected in the straightforward handling and effective result of the new IL2 PLUS light line system, among other products.

HELLA Industries stands for sustainability

Today, the name HELLA is associated worldwide with the benefits of modular LED lighting technology. This impressive technology has made it possible for us to exceed high expectations from the outset. And what's more, the assurance of spare parts availability lasting 20 years also ensures the success of this indoor and outdoor lighting system and conforms with the universal objective of sustainable technology.



IL2 PLUS Click & Play

Light, as it is used Rising energy costs and increasing pollution levels have made sustainability and energy efficiency the main focus of attention, especially where lighting is concerned. Conventional large-area illumination systems must be gradually replaced and an energy-saving and economical alternative found.

In industrial and commercial applications, lighting systems contribute to approx. 10 - 20% of all energy costs. This means finding more efficient lighting systems is just as necessary due to constantly rising electricity costs. The IL2 PLUS LED light line system from HELLA guarantees this and much more.



A light line leaves everything else in the dark

The modular IL2 PLUS LED system is precisely tailored to the needs of industry, logistics, production and supermarkets. Due to its simple and flexible installation, this innovative light line system shows its strengths exactly where homogeneous illumination and targeted light distribution is of vital importance. IL2 PLUS outclasses conventional lighting solutions for halls and markets with superior quality. It provides brilliant efficiency and sparkles with integrated electronics and a 5-year module warranty. In addition to an average design life of 50,000 hours, it also features guaranteed spare part availability for 20 years and, last but not least, provides a noticeable drop in energy and maintenance costs.



Variable uses, perfectly lit

Seeing and being seen are the most important aspects when it comes to lighting. This principle also plays an important role in the conceptual design of IL2 PLUS. For example, the LED light line system ensures the best possible illumination of a room and optimal lighting tailored to individual workstations. It also sets the appeal of merchandise in just the right light.

Individual light distribution that can be adapted to a variety of uses and changing applications is important, especially in industrial applications. The definitive advantage of IL2 PLUS is its ability to combine system modules completely based on need – regardless which kind of modules are needed and when. The support rails and LED modules can be assembled individually every 60 cm, thus making the assembly extremely versatile. This is accompanied by various sizes and optics that ensure efficient, timeless illumination of the entire operation.

›Spotlight on‹ for productivity, the environment and efficiency

The new modular IL2 PLUS LED light line system provides industrial and retail applications with their first opportunity to take advantage of our decades of experience in LED technology. Preamsembled support rails ensure simple, time-saving installation and maintenance without tools by in-house personnel, which reduces expenses regarding installation and storage to a minimum. IL2 PLUS achieves superior values in every relevant performance category. Our LED light line system is also far ahead of conventional lights in terms of energy savings.

Significant increase in performance

IL2 PLUS achieves superior values in all relevant categories. A luminous flux of 3,300 lm is achieved at 31 W of power consumption, while 37 W achieves a luminous flux of 4,000 lm. Moreover, the patented optics from HELLA increase performance even more. The emitted light can be controlled with high accuracy, thereby reducing light losses to a minimum. This allows you to use far fewer light spots compared to conventional lighting.

A shining plus for energy efficiency

IL2 PLUS reaches new dimensions in the price-to-performance ratio. In terms of energy savings and TCO*, the LED light line system is clearly well ahead of conventional lights. HELLA has achieved this thanks to years of experience in the automotive sector, which ensures optimal thermal management, long-lasting electronics and perfect light control. (*Total Cost of Ownership)

Top values when it comes to efficiency

The benefits of the system pay off regarding cost-effectiveness and return on investment. Low power consumption, long design life, intelligent light control, as well as time and cost-saving installation make the LED light line system especially profitable. The preassembled support rails, variable assembly with light modules, and tool-free maintenance also contribute to this aspect.



Illuminating the most important aspects

The IL2 PLUS LED system features:

- Intelligent illumination
- Low production downtimes thanks to quick and easy module replacement
- Time and cost savings thanks to simple installation and tool-free maintenance
- Customized light distribution
- Optimal illumination thanks to flexible light management and lighting effects
- Glare-free and pleasant working atmosphere
- Excellent energy and eco-efficiency
- 20-year availability guarantee on modular components and spare parts

No doubt about it: As a light source, IL2 PLUS is the best lighting solution around.

The system at a glance

Flexibility through modularity

Perfect adjustment to the demands situation thanks to its modular design.

- Preassembled support rails
- Flexible LED module assembly
- 3-phase allocation possible
- Storage space for additional lines

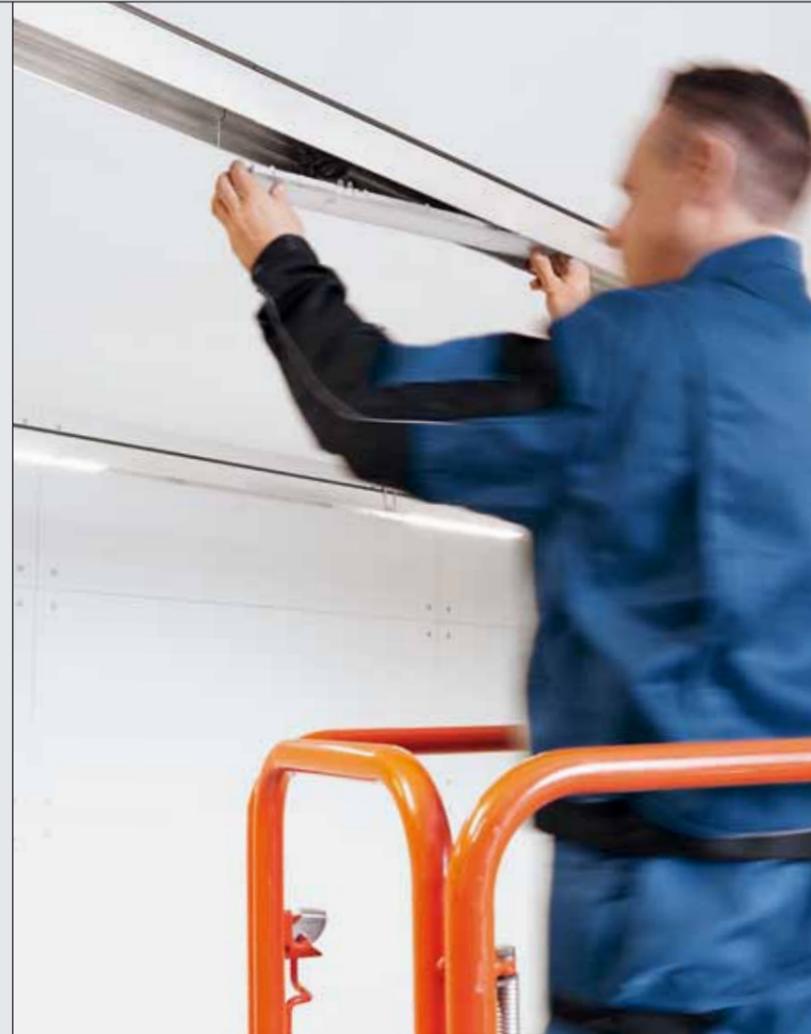
Simply save time and costs

- Minimal maintenance work thanks to LED technology
- Simple tool-free installation for light modules and ballasts
- No specialized personnel required for installation or maintenance
- Minimal power consumption thanks to LED technology

Efficient and environmentally friendly

Savings potential of up to 70% compared to conventional lighting

- Optimized energy and environmental management
- Always using state-of-the-art technology thanks to module replacement
- Excellent lighting quality, less light smog
- Profitable thanks to efficient power consumption
- Various optics guarantee customized light distribution



The IL2 PLUS LED light line system is in a class of its own. The modular design also stands for a wide range of applications, simple installation and convenient maintenance. Flexible adaptation, continuous, innovative, timeless ongoing development on the basis of the modular system is guaranteed thanks to long-term spare part availability, allowing modules to be replaced at any time.

Installation, as easy as flipping a switch

The flexible and modular light line system is easy to install and needs no tools to maintain. You can easily replace the modules yourself after installation. The phase allocations in the light line can be selected individually per light spot. There is also plenty of space for other cables in the upper area of the cable duct.

Clear structure

The system's defining features also include variable adjustment to the requirements of different application areas and workspaces. This is accompanied by an amazingly simple design with a modular system consisting of:

- Aluminum support rails
- LED module measuring 592 × 72 mm
- Lens made of PMMA
- Cover made of PP
- Fastener for each mount



Straightforward installation and assembly

Unlike other systems, assembling and installing the IL2 PLUS light line system takes minimal time and effort. After you have laid any necessary lines and installed the connections, only a few connecting and fastening tasks are needed. All of the power supply and control functions have been integrated into the system. No additional personnel is needed for assembly and maintenance after installation.

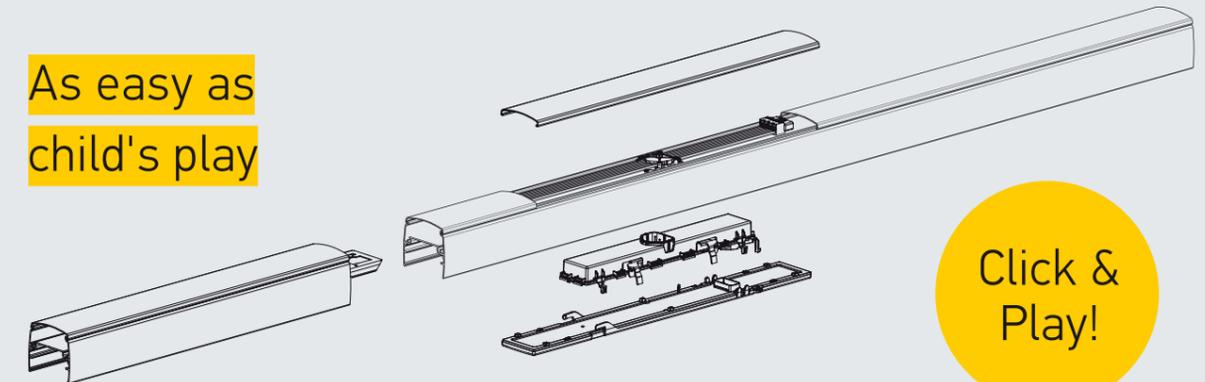


Significantly more economical power supply

Thanks to its LED technology, the IL2 PLUS light line system is extraordinarily profitable and environmentally friendly. With a power consumption of 31 watts, the LED module provides a system luminous flux of 3,300 lumen.

- Luminaire type: each LED module contains 200 LEDs
- Ballast: 1 – 10 V dimming
- Mains connection: 220 – 240 V / 50 – 60 Hz
- Protection class: SK I
- Surge protection: 4 kV
- Power factor: ≥ 0.95

As easy as child's play



Click & Play!

- The light line system is fastened directly below the ceiling or to support rails using a chain or cable.
- The hook on the lens is inserted into the latch on the electronic ballast.
- The light unit is then simply snapped into the holder provided on the left side.
- **Done!**

Technical Data

IL2 PLUS LED light line system

Electronics

Luminaire type	LED module with 200 LEDs each
Driver	Optionally 1 - 10 V dimming or DALI
Mains connection	220 - 240 V / 50 - 60 Hz
Sensors	Optionally daylight sensors and/or presence detectors
Protection class	SK I
Power consumption	3,300 lm: 31 W (4 K), 34 W (3 K) 4,000 lm: 37 W (4 K), 44 W (3 K)
Power factor	≥ 0.95c
Surge protection	4 kV

Additional Data

Ambient temperature range	3,300 lm: -25°C to +40°C 4,000 lm: -25°C to +25°C
Dimensions (L x W x H)	LED module: 592 x 72 mm Support rail: 600 / 1,200 / 3,000 / 4,200 x 90 x 85 mm
Weight per 0.6 m	2.2 kg / complete module assembly 1.3 kg / without module
Materials	Support rail made of aluminum, lens made of PMMA, covering made of PP
Mounting	Mounting by suspension on support rails
Colors	Support rail aluminum colored, glossy white similar to RAL 9016, gray similar to RAL 9007 or matt black similar to RAL 9017
IP certification	IP 20 / IP 40
Certification	CE    
Efficiency class	 

Light Technologies

System luminous flux	3,300 lm or 4,000 lm
Luminous flux over lifetime	70% after 50,000 operating hours (acc. to IES LM80 and TM21)
Color temperature	3,000 / 4,000 K optionally 6,500 K
Color rendering index (CRI)	> 80
Optics	N-Optics: Narrow light distribution W-Optics: Wide light distribution D-Optics: Double-asymmetrical light distribution XN-Optics: Very narrow light distribution

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IL2 PLUS – Ideal for the market

Better things always shine through! The IL2 PLUS LED lighting system is a shining example of this: simple, innovative and durable. This lighting system offers a light for inside and outside which is compelling and thrilling, due to perfect adaptation, modular design and variations in

equipment owing to the different optical systems available. Systematic light guidance and homogeneous illumination also enhance the customer-friendly atmosphere and boost the appeal of the merchandise on display.



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HELLA LED technology – an obvious asset

The superiority of LED lights as economical energy consumers and long-life products compared to conventional lighting solutions is undeniable. LEDs reduce CO2 emissions, do not contain harmful mercury and fragile parts, do not overheat and above all, have a greater luminous intensity than conventional lights.

They also score points with a long design life and energy savings of up to 70 percent. IL2 PLUS offers all this. The benefits of IL2 PLUS are particularly appealing in situations where a market is looking to establish a name for itself in the form of a first-class sustainable retail outlet and wants to showcase its products in the right light.

Highlight on the key aspects

The IL2 PLUS LED system convinces due to:

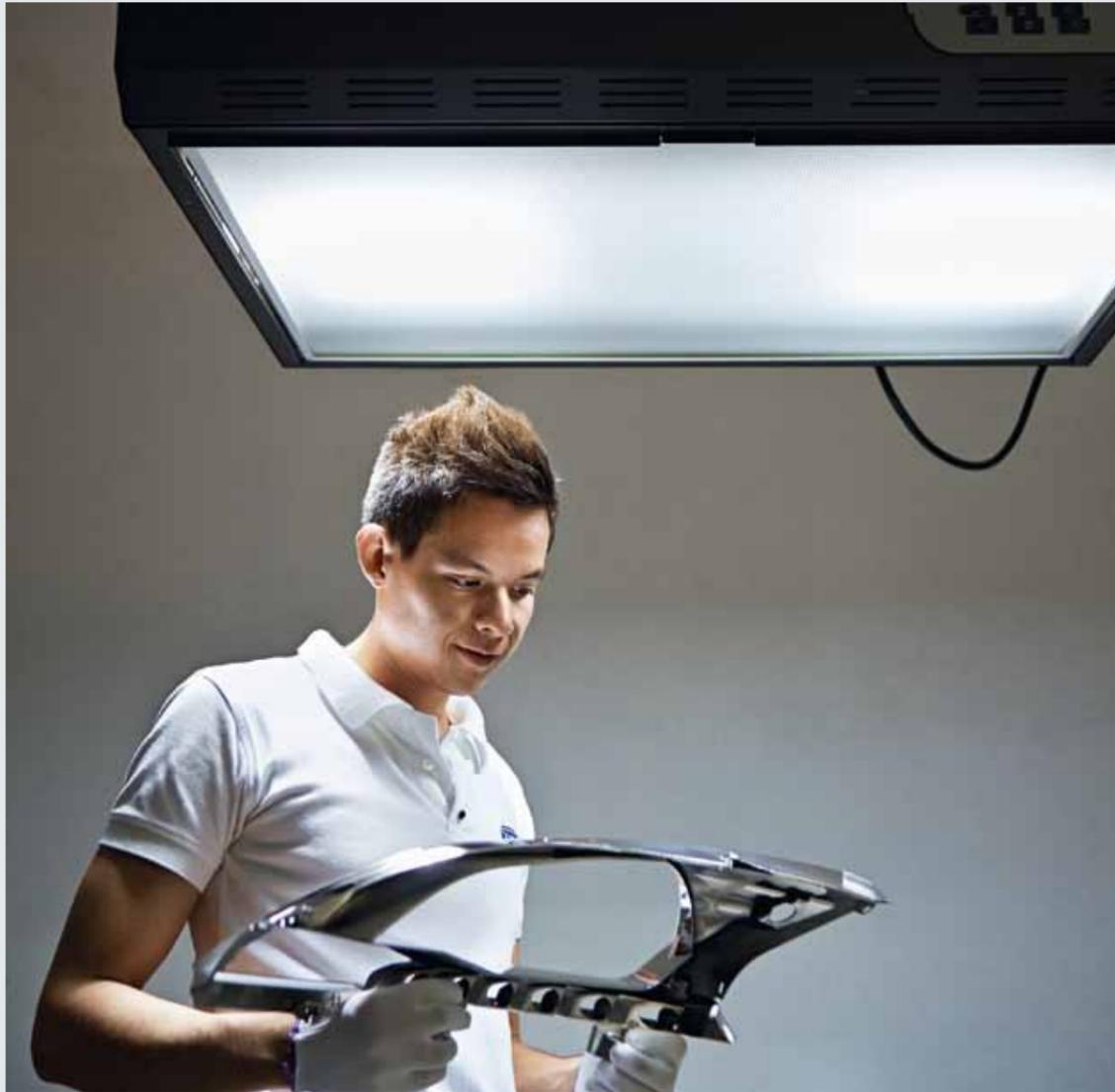
- Optimum presentation of merchandise thanks to flexible light guidance and light effect
- Requirements-optimized light distribution
- Customer-friendly atmosphere
- Time and cost savings due to straightforward installation and maintenance
- Outstanding energy and ecological efficiency
- availability of modular components and spare parts guaranteed for 20 years

This much is beyond dispute: as a light source for the supermarket, IL2 PLUS is the best solution.



A powerful partner

HELLA is your reliable lighting partner. Our comprehensive product portfolios and optimum framework conditions enable us to quickly respond to new demands in a results-oriented way. We also plan and efficiently implement new projects in a rapid and costconscious manner. As a successful lighting pioneer, we have significantly influenced and accelerated the rise of LED lighting. You, too, can benefit from our success.



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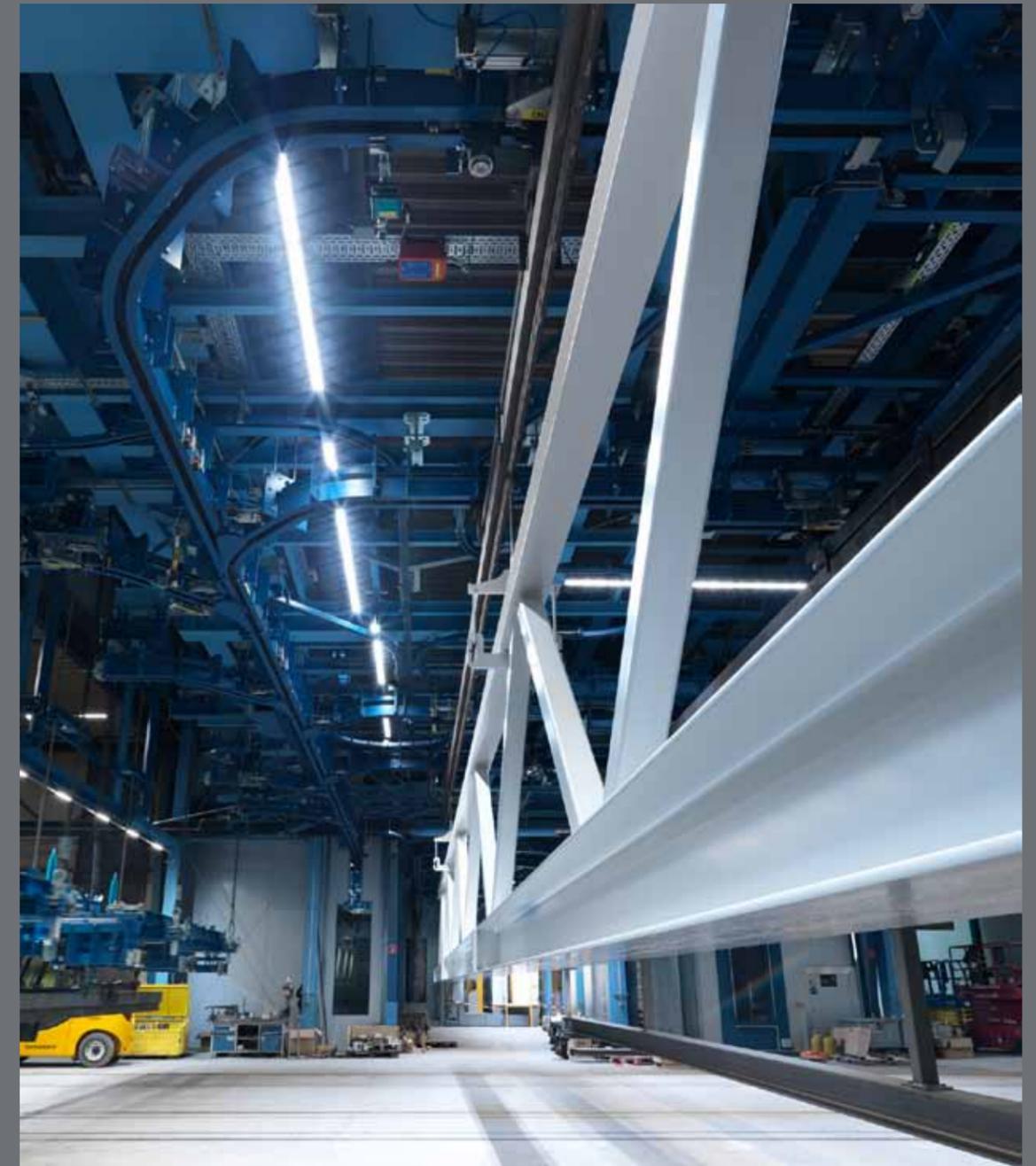
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IL2 PLUS

The ray of light in the industry

Quality that is more than impressive! With its perfect adjustment, modular setup and variable equipment with a range of optics, the LED light line system IL2 PLUS offers you lighting that puts every corner in the right light. Whether for retail or industrial purposes, the light gets to where it

is needed – and noticeably longer than with conventional light sources. Selective lighting control and homogenous illumination with bright but glare-free light enhances your entire working environment – simple, innovative and sustainable.



HELLA LED technology – A brilliant asset

Particularly for the industry - lighting is only truly perfect if light distribution can be customized to a range of different and changing applications. The decisive advantage of the IL2 PLUS light line system is that the modules can be assembled entirely to suit your needs. The modules can be replaced tool-free within minutes without disrupting production. Now expensive and time-consuming setup times are a thing of the past.

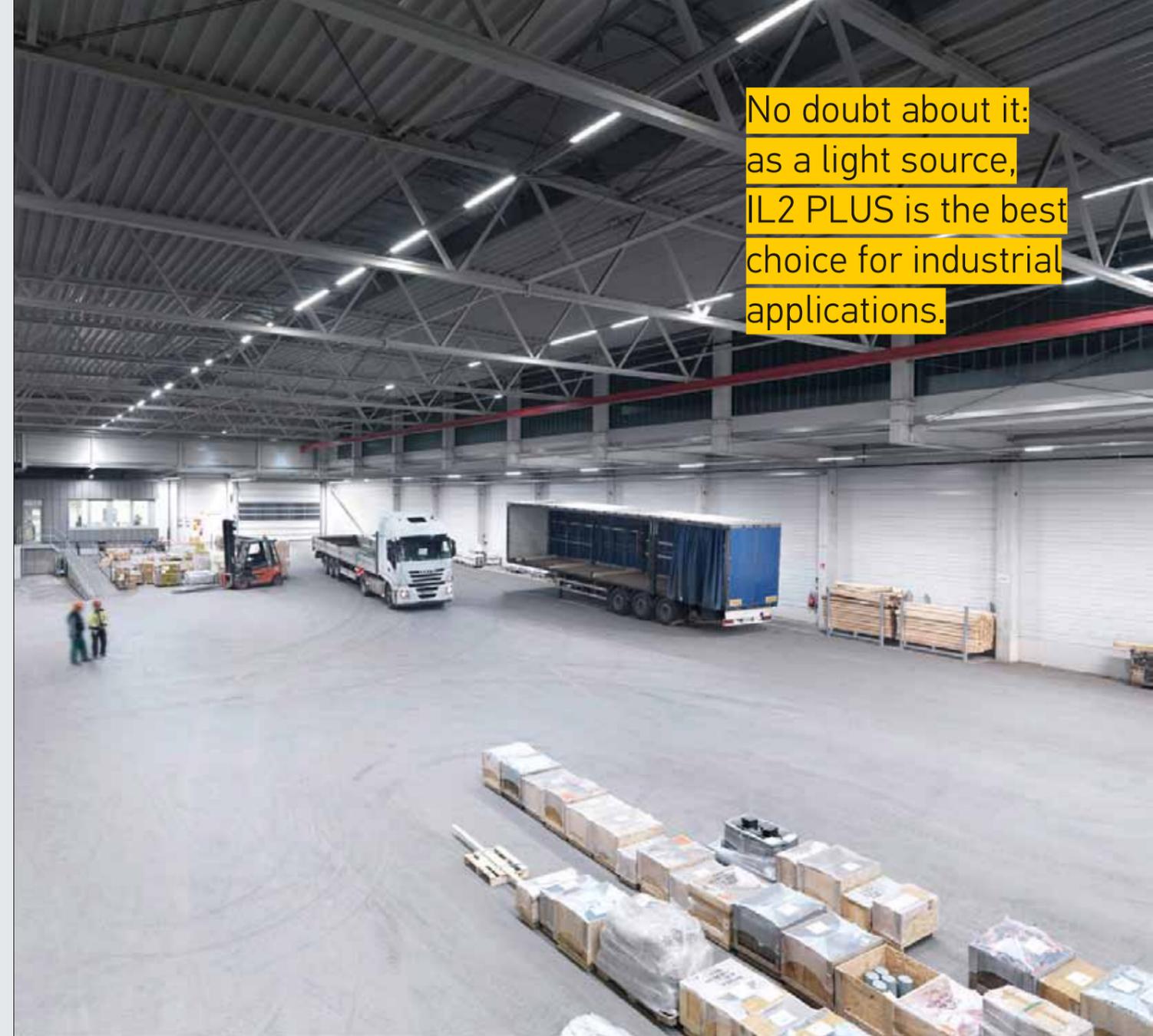
Another advantage of LED lights is their significantly lower energy consumption. LEDs reduce CO2 emissions, do not contain harmful mercury or extremely fragile parts, do not overheat and, above all, have a greater luminous intensity than conventional lights. They are also superior due to their long design life and energy savings of up to 70 percent. And that really pays off, especially for industrial applications.

Illuminating the most important aspects

The IL2 PLUS LED system proves its worth due to:

- Low production downtimes thanks to easy module replacement
- Flexible assembly for different or changing applications
- Customized light distribution
- Glare-free and pleasant working atmosphere
- Time and cost savings thanks to simple installation and tool-free maintenance
- Excellent energy and eco-efficiency
- 20-year availability guarantee on modular components and spare parts

No doubt about it: as a light source, IL2 PLUS is the best choice for industrial applications.



HELLA in all halls

The advantages of IL2 PLUS become apparent, especially where high shelves, irregularly shaped industrial halls or dark corners need light. No spot remains unlit thanks to the individual light distribution of the IL2 PLUS light line system. The lighting elements are also quite easy to assemble and replace. Light homogeneity ensures a friendlier lighting in your work environment.

A powerful partner

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Lighting Technology

Optics

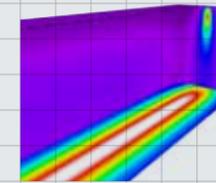
Light distributions

False-color display

Light distribution curve (polar)

Special feature

XN

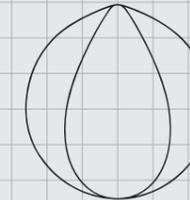
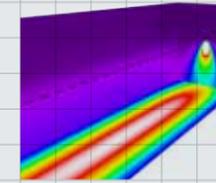


Very narrow light
distribution

TYP mounting height: ≥ 10 m

Areas of application: \rightarrow high-bay storages / narrow corridors / very high mounting heights

N

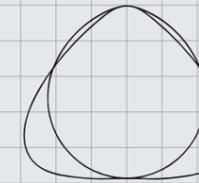
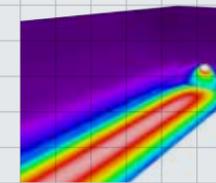


Narrow-beam
light distribution

TYP mounting height: ≥ 6 m

Areas of application: \rightarrow production halls / logistic halls / high mounting heights

W



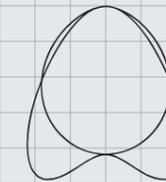
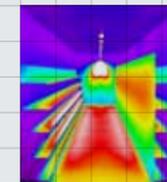
Wide light distribution

Very homogeneous
illumination

TYP mounting height: < 6 m

Areas of application: \rightarrow industry halls / production halls / logistic halls / low mounting heights
 \rightarrow enables large light strip intervals

D



Double-asymmetrical
light distribution

TYP mounting height: ca. 3 m

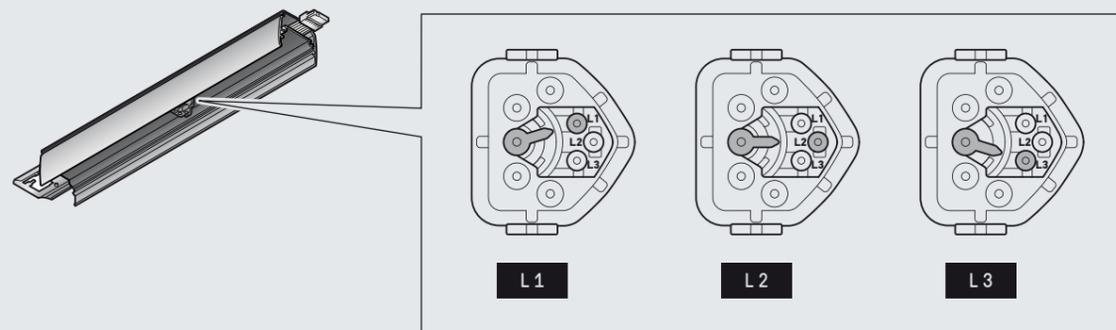
depending on aisle width

Areas of application: \rightarrow Specific illumination of shelves / optimized for supermarkets

IL2 PLUS support rail

The IL2 PLUS support rail forms the basis for the modularity of the IL2 PLUS light line system.

The cable guide at the top section of the support rail is only connected to the lighting units through plug connectors in the lower section of the support rails. This separation of cable duct and lighting unit means that even people who are not electricians can easily replace ballasts or light modules in the operating state.



- Simple phase selection using a phase selection switch
- Symmetrical network load across 3 phases
- Enables the formation of light groups

High grade, durable support rails made of extrusion molded aluminum. The support rails are available in different lengths: 600 mm, 1200 mm, 3000 mm or 4200 mm. Various color examples are available, too. Various suspension options and end caps are suitable for these support rails.



Intelligent sensor technology

You save more energy thanks to intelligent sensor technology. One benefit of the IL2 PLUS sensors is that they are extremely easy to assemble. By simply clicking in the IL2 PLUS support rail, the sensor automatically connects to the corresponding 1–10 V or DALI interface.

HELLA offers both daylight sensors as well as motion detectors. Daylight sensors measure the brightness in the work area and control the luminous flux correspondingly. Motion detectors control the lighting on the basis of movement in the detection area.

Daylight sensor

Daylight sensor for IL2 PLUS light line systems. The sensor measures the brightness in the work area and controls the luminous flux of the IL2 PLUS light module. The adjustable target value is kept constant. As daylight increases, the artificial light is reduced.

- Simple installation in IL2 PLUS support rails (Plug & Play)
- Direct connection to the 1–10 V
- Interface controls the lighting depending on the incident daylight
- Simple to set the target value using a potentiometer
- Energy savings

Presence detector with constant light control

Infrared motion detector. Highly innovative sensors react to movement and light conditions and automatically control the lighting. With the highly developed lens, the sensor enables a square detection area typical of a room, in which the smallest of movements are detected. 4 Versions available: DALI to 8 m, DALI to 10 m, 1–10 V to 8 m or 1–10 V to 10 m.

- Direct installation in the IL2 PLUS support rail with an automatic contact to the 1–10 V or DALI interface
- Plug & Play system without additional installation material
- 1,780 or 4,800 switching zones for the highest possible detection quality
- Simple adjustment to the specific situation in which it is used
- Optional remote controls are available, enabling easy installation and control
- Energy savings

Technical Data

Daylight sensor			
Electronics		Additional data	
Sensor type	Daylight sensor	Dimensions	175 × 80 × 75 mm
Interface	1 - 10 V	Weight	185 g
Protection class	Class II	Sensor	Makrolon / Polycarbonat
Connection	Plug contact for IL2 PLUS supporting rails	Housing	PPT40
Number of controllable light points	Max. 80 EVGs	Ambient temperature range	0 - 40°C
		IP certification	IP 20
		Certification	   
Installation data			
Max. installation height	8 m		
Light sensor detection range	Conical, approx. 90° opening angle		
Light sensor range of operation	20 - 800 lx		
Target value setting	Target value setting with potentiometer		

Presence detector with constant light control			
Electronics		Additional data	
Implementation	Presence detector	Dimensions	180 × 130 × 95 mm
Sensor type	Passiv-Infrarot	Weight	310 g
Interface	1 - 10 V or DALI (Broadcast)	Housing	PPT40
Dimming	1 - 10 V: 10 - 100 % DALI: 10 - 100 % (switching off possible)	Ambient temperature range	-25°C to + 40°C
Protection class	Class II	IP certification	IP 20
Connection	Plug contact for IL2 PLUS supporting rails	Daylight sensor	Yes
Number of controllable light points	1 - 10 V: Max. 50 driver DALI: Max. 12 driver	Certification	   
Installation data			
	Presence detector to 8 m	Presence detector to 10 m	
Max. installation height	2,5 m to 8 m	2,5 m to 10 m	
Presence detection square	Max. 4 × 4 m (16 m ²)	Max. 8 × 8 m (64 m ²)	
Tangential detection square	Max. 7 × 7 m (49 m ²)	Max. 20 × 20 m (400 m ²)	
Radial detection square	Max. 5 × 5 m (25 m ²)	Max. 8 × 8 m (64 m ²)	
Light sensor working area	100 - 1,000 lx		
Configuration	Configuration directly on the presence detector, remote control optional		
Sensors	13 detection levels, 1,760 switching zones	13 detection levels, 4,800 switching zones	
Where deployed	Building interiors		

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