



## Media Information

October 2024

### From ‘Lutzmann’ to the New Opel Grandland: 125 Year of Lighting Innovations at Opel

- Automotive and light development since 1899: Long lighting tradition at Opel
- From Kapitän to Opel GT and Signum: Opel models set lighting and headlight trends
- A decade of Intelli-Lux: Glare-free technology in Astra, Grandland, Corsa and Combo
- Industry leading: New Grandland’s Intelli-Lux HD with over 50,000 individual elements
- In the spotlight: Opel has always democratized innovative lighting technologies

Rüsselsheim. [125 years of automotive production at Opel](#) is synonymous with 125 years of making leading technologies available at affordable prices. The brand with the Blitz is a pioneer in making innovation available to a broad range of customers and enabling individual mobility for all. The cars are thus becoming safer and more visible in the truest sense of the word. The motto “see and be seen” was already followed by Opel’s first car, the Opel Patentmotorwagen ‘System Lutzmann’ of 1899, as well as by all the other models that followed, from the famous Opel Kapitän and the legendary GT up to the latest generations of the Opel Astra, Corsa and Combo which turn night into day with innovative Intelli-Lux lighting technologies. The next ‘highlight’ is the all-new Opel Grandland – with its pioneering Intelli-Lux HD headlights.

#### Romantic candlelight à la “System Lutzmann”

The beginnings of automobile lights, on the other hand, were quite dark. What is today taken for granted in road traffic was still unimaginable over 125 years ago – instead lanterns were carried in front of the car. The primary intention was not to illuminate the road, but to be seen by other road users. At the end of the 19<sup>th</sup> century, the [Opel Patentmotorwagen ‘System Lutzmann’](#) went a step further. It also illuminated the surroundings with household candles, but no one had to carry them anymore. The candle now sat in a shaft above which the “headlight” was mounted as a glass container with



mirror. A spring constantly pushed the candle so far upwards during the burning process that it could optimally shine at a consistent level through the glass. A simple solution for low cost with a major effect – in short, typical Opel.

### **Opel Kapitän – A car that belongs to the world**

Opel also set trends in headlamp design early on. After all, the 1938 **Kapitän** was one of the first cars to help say goodbye to round lamps: the headlamps of the large Opel were not only fully integrated into the fenders, but were also hexagonal in shape. A car for everyone, a “car that belongs to the world”, according to a brochure from 1938. In other words, the Opel Kapitän “will remain a contemporary car for years to come thanks to its modern lines and progressive design”.

In the 1960s, the shape of the headlamps continued becoming more angular. Opel led the trend with the 1964 Kapitän A, which together with its sister models Admiral and Diplomat emphasised a flat, wide look with rectangular headlamps. No wonder that the successful Kapitän models became real flagships: progressive, comfortable and powerful cars that one could afford.

The **Opel GT** continued on this path in 1968, impressing not only with its completely new Coke bottle design – the legendary sports car for everyone was also the first German car with pop-up swivel headlights. Who could resist these affectionately called "sleepy eyes"? Via the lever on the centre console, the headlamps popped up. Halogen spotlights in the grille below the bumper also doubled as parking lights.

### **Outgoing 1990s: More light, more visibility with xenon headlamps**

The **Opel Omega B** was the first model to offer Xenon gas discharge headlamps as standard from 1998. They owed their name to the natural gas with which the lamp bodies were filled. Compared to the halogen headlamps commonly used at the time, the triple light intensity not only gave them a greater range, but also better illumination of the road. And they were much more efficient: Energy consumption was one third lower, heat radiation 40 per cent lower and service life longer.



A dynamic headlamp levelling system was now also on board. This compensated for changes in body position – for example with a heavy load or during acceleration and braking. This resulted in the road always being uniformly illuminated. Once again, Opel pioneered lighting technologies that were affordable for a wide range of buyers.

### **Pioneering Opel Signum: AFL for everyone in the mid-size class**

So it is only logical that Opel was the first vehicle manufacturer to bring dynamic curve light and 90-degree cornering light into the mid-size class in 2003 with AFL (Adaptive Forward Lighting) in the **Opel Signum**. The innovative Opel lighting technology combined dynamic curve lighting with a static cornering light for intersections and tight bends for the first time. An additional comfort function of AFL was the Motorway Light: at speeds from around 120 km/h and constant straight ahead driving, the low-beam lighting automatically adjusted itself slightly higher and thus optimised long-distance vision. The now standard dynamic headlamp levelling system ensures that there is no glare for oncoming traffic.

In 2004, the **Opel Astra** was the first compact model with curve light. In 2006, the brand democratised safety technology even further when Opel made curve and cornering light based on bi-halogen available for the first time in the minivan and small car segments in the Meriva and Corsa.

The next light generation AFL+ based on powerful bi-xenon headlamps made its debut in 2008 with the introduction of the first **Insignia**. It set a new standard in the automotive industry. Using complex algorithms, the light distribution of the headlamps was automatically adjusted to the respective road profile and the prevailing visibility conditions. The modern Opel flagship offered a total of nine lighting functions – Town Light, Pedestrian Area Light, Country Road Light, Motorway Light, Adverse Weather Light, Static Cornering Light, Dynamic Curve Light, High Beam Light and High Beam Light Assistant. Another innovation in the Insignia was the LED daytime running light, which consumes considerably less electricity and thus fuel than daytime running light from the main headlamp.



### **Intelli-Lux LED: Bright as day but no one is dazzled**

The ground-breaking Intelli-Lux LED matrix light was launched in 2015 with the Opel Astra K. Once again thanks to Opel, a feature that was previously reserved for luxury vehicles made its debut in the compact class. The headlamps of the compact class best-seller have a total of 16 LED elements (eight on each side), which automatically and continuously adjust the length and distribution of the light cone to any traffic situation and simply "cut out" oncoming cars and those driving ahead. So there is zero glare effect – with excellent visibility. How this works is quite simple: as soon as the car leaves the city limits, the matrix headlamps switch to high beam mode and continuously adjust the length and distribution of the light cone. The state-of-the-art system turns night into day for drivers and passengers without disturbing other road users.

The adaptive Intelli-Lux technology is not only affordable, it is also highly sophisticated full LED lighting. For example, as not every Astra has a built-in navigation system, Intelli-Lux must be able to detect whether the car is travelling in an urban or extra-urban area. This works via the camera/speed interface. As soon as the speed exceeds 50 km/h, the camera checks where the car is at the moment. On a poorly lit road or in dark surroundings, the high beam automatically switches on. The system recognizes motorways and cities by their street lighting, among other things. In Motorway Light mode, part of the left-hand LED elements is permanently deactivated so as not to dazzle oncoming traffic. In 2015, the Opel solution is thus the first matrix lighting system for a production vehicle that continuously adapts to its surroundings without being coupled to a navigation device.

### **Latest evolutionary stage: Intelli-Lux HD with over 50,000 LED elements**

In 2017, the continuously evolving lighting technology is launched in the Insignia. The Grandland, the electrified small car bestseller [Corsa](#) and, most recently, the practical [Combo Electric](#) all follow. The latest and most advanced evolutionary stage of adaptive technology is now available with the all-new Opel Grandland top-of-the-line SUV, which [has been available to order for a few days](#).

For the first time, the new Intelli-Lux HD headlights have more than 50,000 elements, enabling high-resolution, glare-free light distribution that provides optimum vision at all



times without dazzling the traffic ahead, oncoming traffic or the Grandland driver. This is ensured by new functions such as situational dimming of the LEDs to prevent excessive reflection from road signs. At the same time, the new Intelli-Lux HD light gives a glimpse of the future: new animations, which are projected in front of the vehicle in the form of graphic videos as a greeting and farewell, give a first impression of the lighting innovations that the engineers are already working on today.

### ***About Opel***

Opel is one of the largest European car manufacturers and a leader in the reduction of CO<sub>2</sub> emissions thanks to its extensive electrification offensive. The company was founded by Adam Opel in Rüsselsheim, Germany, in 1862 and started building automobiles in 1899. Opel is part of Stellantis NV, a global leader created for the new era of sustainable mobility. Together with its British sister brand Vauxhall, the company is represented in more than 60 countries around the globe, continuing to enter new international markets. Opel is currently consistently implementing its electrification strategy to secure sustainable success and ensure that the future mobility demands of customers are met. By 2024, a battery-electric variant of each Opel model will be available. Visit <https://int-media.opel.com>

### **Contact:**

Leif Rohwedder	+49 (0) 6142-6927466	<a href="mailto:leif.rohwedder@opel-vauxhall.com">leif.rohwedder@opel-vauxhall.com</a>
Colin Yong	+49 (0) 6142-6922084	<a href="mailto:colin.yong@opel-vauxhall.com">colin.yong@opel-vauxhall.com</a>
Carina Elsinger	+49 (0) 6142-6927811	<a href="mailto:carina.elsinger@opel-vauxhall.com">carina.elsinger@opel-vauxhall.com</a>