

Laternix® Innovation for Sustainable Lighting

Since our founding in 2013, **sustainability** has been the central focus of our work. For us, this is not about certificates or scorecards for PR purposes, but about creating real added value through innovative solutions. Our products are fully repairable and recyclable, making them consistently sustainable. They save energy, conserve resources, provide better light for people, and respect nature and the environment.



Our **inventive spirit** and **development expertise** in optics, mechanics, electronics, and software- combined with **decades of experience in professional lighting**- form the foundation of our innovations, which are valued by numerous users across Europe.

We are **ISO 9001 certified**, our manufacturing is **ENEC-audited**, and we hold the **Q1 quality seal** of **Deutsche Bahn**. We see ourselves as a **solution partner** for planners, installers, and facility operators, and we make the difference through attractive service offerings:

Laternix® Refurbishment

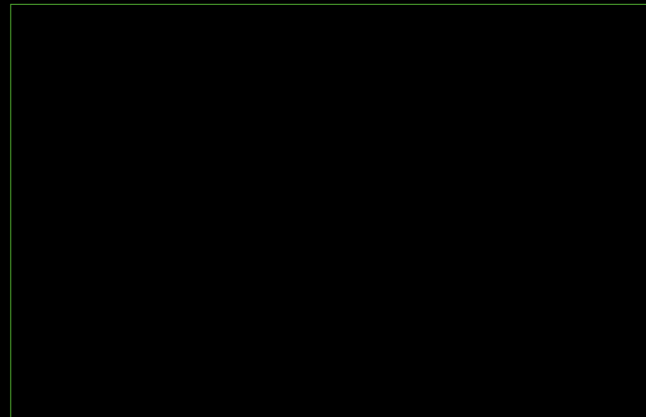
Solutions for legacy LED luminaires

Manufacturer support discontinued? No spare parts available?

We design customized LED modules and driver configurations to repair, upgrade efficiency, and ensure the long-term operation of your LED luminaires.

Laternix® Services

- Application consulting & product sampling
- Planning support
- Customized developments starting from a single unit



Get in touch with us — we look forward to working with you.

<p>QUALITY MADE IN GERMANY</p>	<p>Web: www.laternix.de Mail: info@laternix.de Fon: +49 861 90992040</p>		<p>Laternix GmbH & Co. KG Axdorfer Feld 20 83278 Traunstein Germany</p>	
--	---	--	--	--

Specifications are subject to change without notice. Errors and misprints excepted.
© 2026 Laternix GmbH & Co. KG. All rights reserved.



**BioDIM® - Outdoor lighting
with respect for nature and people**



BioDIM®



Outdoor lighting with respect to nature and people

Artificial lighting serves people when moving through outdoor spaces at night. It creates the conditions necessary for visual perception and thus ensures safety and orientation. However, artificial lighting can also have negative effects:

- Disturbance of residents during nighttime hours
- Attraction of insects
- Disruption of nocturnal wildlife and flora
- Light pollution of the surroundings and the night sky

Research has demonstrated that the **blue portion** of the light spectrum is particularly responsible for **attracting insects**. Consequently, many European countries have established regulations **restricting** the color temperature of outdoor lighting to **≤ 3,000 K**.

To **minimize negative environmental** impacts, lighting should contain **as little blue light as possible**. However, a certain blue component is required to maintain **adequate color rendering (CRI)** and good **visibility**. Furthermore, **cooler light** is perceived as **brighter** by the human eye, meaning that the same brightness impression can be achieved with less light output.

In modern LED technology, blue light emitted by the LED chip is converted into white light using phosphor materials. This conversion process is **extremely efficient at cool color temperatures**. At lower color temperatures- i.e., very warm light with little blue content- **efficiency drops** noticeably.

This creates a **conflict** between maximizing energy efficiency and reducing the light's attraction effect on insects.

Light attracts insects. But at what times?

Nighttime **insect activity** is influenced by climate, season, and environmental conditions. While insects are abundant on warm summer nights, virtually no activity occurs **during extended frost periods** in winter.

Due to **climate change**, these patterns are becoming less predictable and no longer strictly tied to the seasons, making **reliable forecasting** difficult.



Where economy meets ecology

BioDIM® resolves the conflict between highly efficient outdoor lighting with excellent visibility and the need to protect nature and the environment.

Depending on the usage profile and environmental conditions, **BioDIM®** automatically adjusts both the light spectrum and light level to actual demand. Using the integrated **AstroDIM function**, **BioDIM®** can operate autonomously according to a freely programmable time schedule or respond to external control signals (e.g., midnight switching, motion sensors, or an SLC controller).

During periods of traffic or activity, the system provides full, undimmed illumination at **3,000 K** to ensure safe visibility. During late-night hours, when no one is around, the lighting level is reduced and the spectrum shifts to **1,900 K** (candle white) with an almost negligible blue component.

Completely blue-free lighting in the form of **colored light**, such as deep red, is also possible.



Light for the safe Way Home

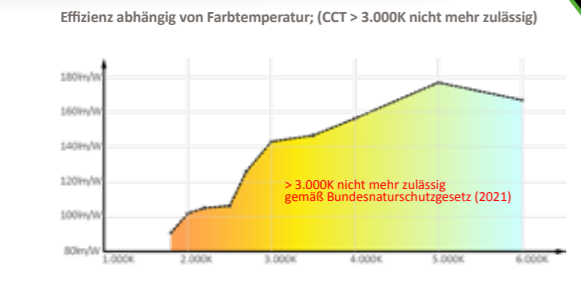
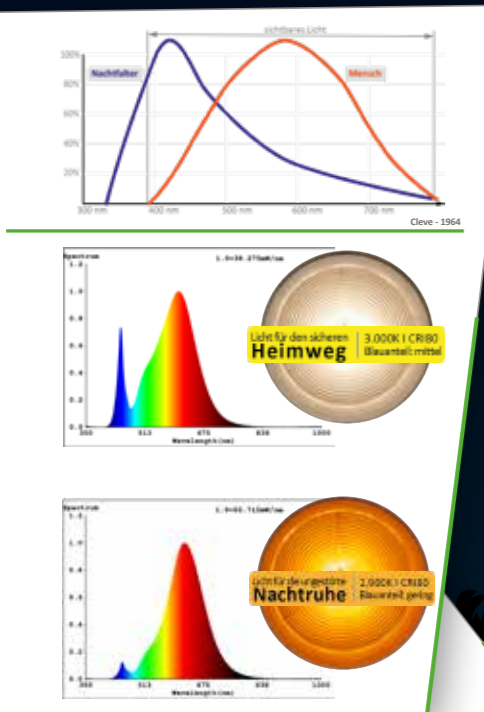
3.000K | CRI80 Blue: medium

Light for undisturbed Nighttime

1.900K | CRI80 Blue: negligible

Light for undisturbed Nighttime

Red | CRI 0 Blue: 0

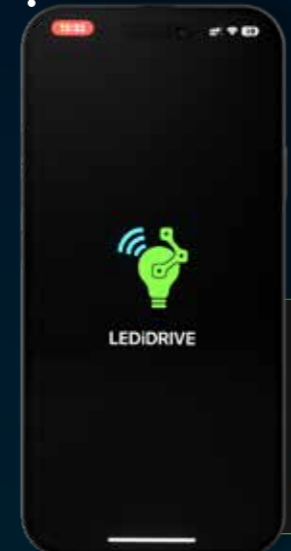


Upgrade to BioDIM®

BioDIM® is available for every scenario — **integrated into new LEDILUM® luminaires** or as flexible **LEDiKIT®** upgrade kits for retrofitting virtually **any** existing luminaire.

Detection of activity phases

Our intelligent **LEDiDRIVE®** technology monitors the ambient temperature of the luminaire and, using a **smart algorithm**, determines periods when **insect activity is unlikely**. During these nights, the light spectrum remains at a constant **3,000 K** for the entire night.



Thanks to the higher luminous efficacy, up to **30% energy can be saved** during nights without insect activity.

Ideal lighting for neighborhoods and nature-sensitive areas

We recommend our **BioDIM® technology** for lighting in residential areas, urban outskirts, parks, green spaces, as well as roads and pathways in natural surroundings. **BioDIM®** is based on our intelligent **LEDiDRIVE® platform** with autonomous lighting control - completely independent of any network infrastructure. In combination with the intuitive **LEDiDRIVE® Service App**, commissioning is simple, safe, and efficient. **BioDIM®** has already been successfully deployed thousands of times over many years and receives extremely positive feedback from both users and local residents in surveys.