



improving life thru light



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LIGHTING THE WAY SAFELY & SUSTAINABLY

As energy regulations tighten and infrastructure demands grow, the need for high-efficiency, low-maintenance tunnel lighting systems has never been more critical. Rising energy costs, stricter environmental standards, and increased safety expectations are reshaping how tunnel infrastructure is specified and delivered.

At HEPER, we address these requirements with performance engineered tunnel luminaires that ensure visual safety, operational efficiency, and long-term sustainability. As a member of the International Dark Sky Association and a supporter of the UN Sustainable Development Goals, we develop solutions that:

- Significantly reduce power consumption
- Lower environmental impact across the lifecycle
- Comply with evolving international standards

All while ensuring uninterrupted visual comfort and traffic safety.

COMMUNICATION ON PROGRESS

This is our **Communication on Progress** in implementing the Ten Principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.

4 QUALITY EDUCATION

5 GENDER EQUALITY

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

ENGINEERED FOR CRITICAL VISUAL TASKS

Tunnel lighting is a precision-driven field requiring exact photometric control and long-term reliability. Our luminaires are engineered to meet the international tunneling standards along with the ZTV-ING standard for Germany, offering:

- Accurate luminance levels and uniformity ratios
- Low-glare performance that improves driver adaptation
- Enhanced contrast for rapid obstacle detection

Optimized optics and thermal management allow us to achieve target lighting classes with fewer luminaires, leading to:

- Reduced system wattage
- Lower infrastructure and installation complexity
- Decreased thermal and material loads for longer system life



OPTICAL PRECISION, ENGINEERED IN-HOUSE

At the core of our system performance lies our in-house optical R&D Center. Leveraging decades of global field experience, our optical engineers develop custom secondary optics that optimize beam control, tunnel zone transitions, and compliance with local and international lighting classes.

Our luminaire platforms are designed for:

- Custom optics designed to meet tunnel lighting standards and project-specific requirements
- Optimization of luminance, uniformity, and contrast for safe driving conditions
- High-efficiency light distribution that maximizes luminance delta while minimizing the number of luminaires per segment.

Electrical systems are engineered to complement the optical performance, ensuring:

- Design of high-efficiency power conversion systems
- Selection of robust, long-life electronic components for extended system durability
- Integration of smart dimming and control interfaces to support adaptive lighting and energy-saving strategies

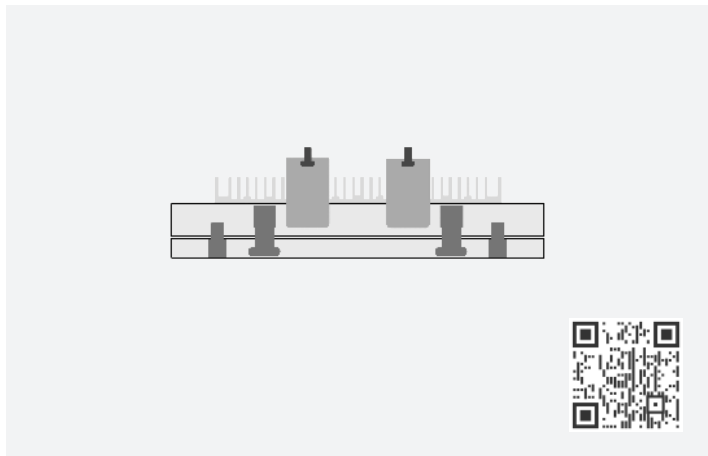
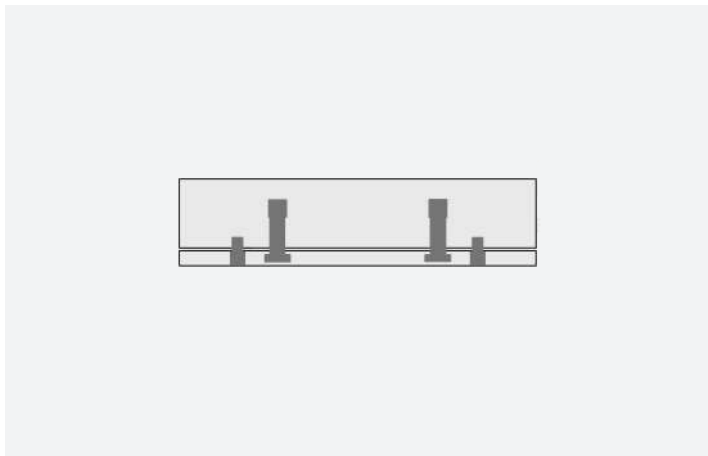
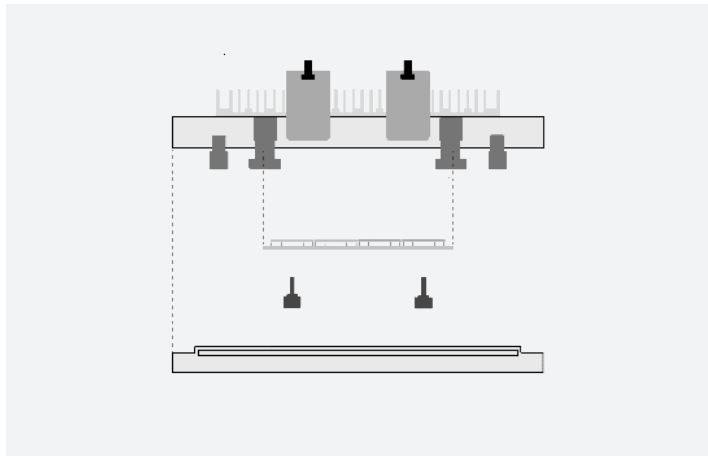
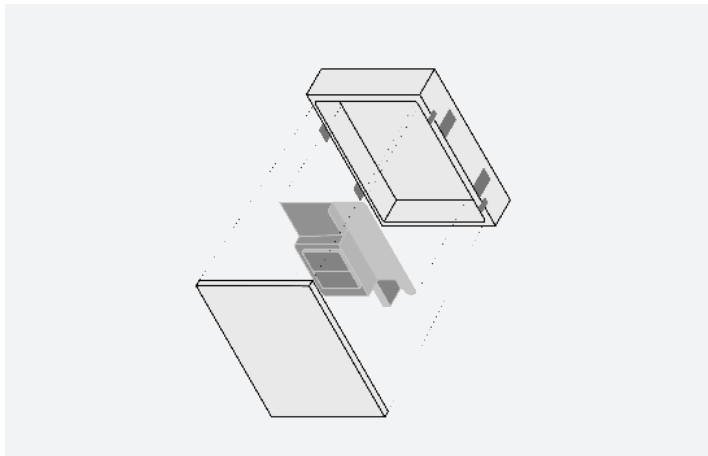
TOOLLESS DESIGN FOR CRITICAL MAINTENANCE ACCESS

Tunnel closures for maintenance are logistically complex and economically disruptive. Our luminaires feature a full flexible modular toolless access system for fast, secure handling

- Quick-connect components for driver, optics, and housing
- Slide-lock or latch mechanisms for zero-tool servicing
- Ingress protection and corrosion resistance maintained post-servicing

This design significantly reduces:

- Mean Time to Repair (MTTR)
- Personnel and equipment needs
- Operational downtime



TESTED FOR GLOBAL RELIABILITY



Reliability is non-negotiable in tunnel lighting, where safety and performance are critical.

Before deployment, every luminaire undergoes rigorous testing at LiC (Lighting Innovation Center)—our ISO 17025-accredited, third-party laboratory. Here, our products are subjected to extreme environmental simulations, including temperature variations, humidity, impact and ingress protection, and corrosion resistance tests, ensuring they perform flawlessly in any climate or demanding condition worldwide. Standards and norms might differ, but the goal is the same.

By validating durability and efficiency under the strictest conditions, we guarantee that our luminaires deliver consistent, long-term performance with minimal maintenance, making them a reliable and cost-effective solution for tunnel lighting projects.

HIGH-PERFORMANCE TUNNEL LIGHTING REDEFINED

At HEPER, we combine engineering depth with application-specific insight to deliver reliable, energy efficient tunnel lighting systems that meet today's infrastructure demands.

#thrulight — Precision. Efficiency. Sustainability.



GOLEDO T

Built for Harsh Climates. Proven
Across Continents.

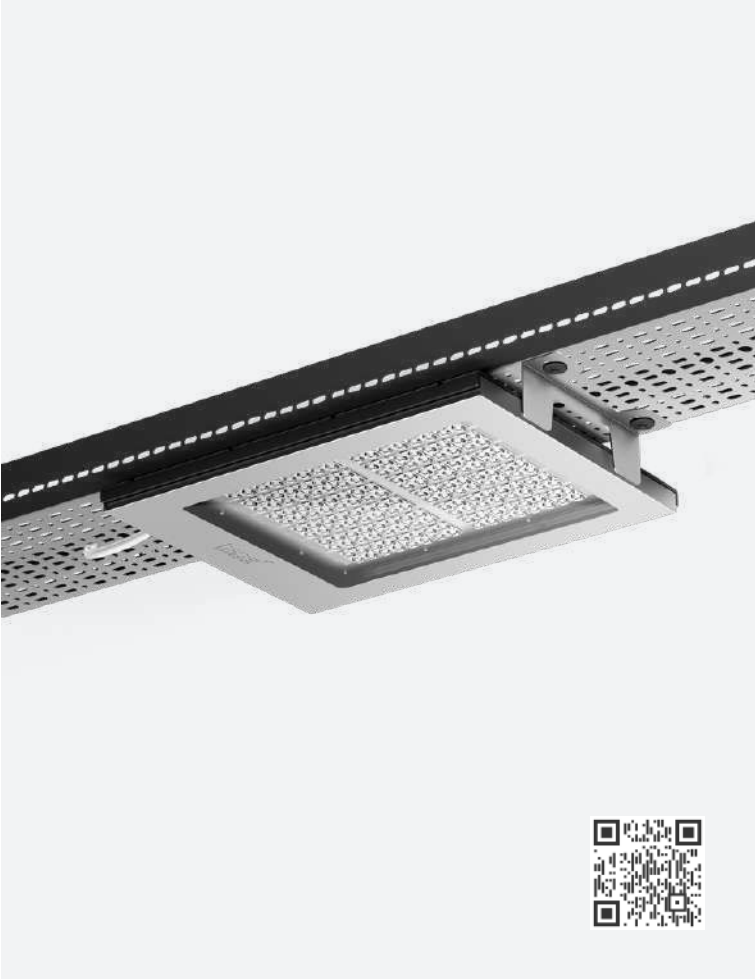
GOLEDO-T is a powerful, corrosion-resistant tunnel luminaire designed for long-term performance in harsh environments — from the icy tunnels of Norway to the scorching heat of Saudi Arabia.

Its advanced thermal management and robust construction ensure stable operation in extreme climates, while a wide range of optical distributions makes it adaptable to any tunnel lighting zone.

- Corrosion-resistant materials and high thermal tolerance
- Precision optics for glare control and zone-specific visibility
- Fast installation with ceiling or cable-tray mounting options
- Compliant with global and local tunnel standards
- Certified: UL, ENEC, and ENEC+

GOLEDO-T is trusted worldwide — a proven solution for safe, efficient, and low-maintenance tunnel lighting.





NOX

Engineered for DACH.
Resistant Where Others Fail.

NOX is a corrosion-resistant tunnel luminaire engineered to withstand the uniquely aggressive conditions of central Europe — where snow, salt, sand, exhaust, and humidity combine to accelerate wear.

With a stainless steel body for maximum corrosion protection, an aluminum alloy heatsink for exceptional thermal control, and robust mounting to meet ZTV-ING mechanical requirements, NOX delivers reliable performance where it's needed most.

- Stainless steel construction for long-term corrosion resistance against road salt and tunnel contaminants
- High-performance thermal management with precision-milled aluminum alloy heatsink
- Mechanically compliant with ZTV-ING standards for German tunnel infrastructure
- High-efficiency LED modules paired with optical flexibility for tailored lighting layouts
- Quick installation via cable-tray or ceiling-mount brackets
- ENEC-ready for trusted European certification

NOX is purpose-built for tunnels in Germany, Austria, and Switzerland — where resilience isn't optional, it's required.

NOX LINEAR

Seamless Light. Structural Confidence.

NOX Linear is designed for seamless, uninterrupted lighting in long tunnels and inner zones — where consistency, structural stability, and material durability are critical.

Built on the same corrosion-resistant foundation as NOX, this linear variant ensures a smooth visual experience across extended distances, eliminating uneven lighting patterns. Its rugged mechanical design supports direct integration into tunnel infrastructure compliant with ZTV-ING standards.

- Uniform linear illumination to prevent brightness fluctuations over long tunnel spans
- Stainless steel body for enhanced corrosion resistance in aggressive environments
- ZTV-ING-ready mounting system for structural reliability and long-term security
- Modular construction for scalable performance and easier handling
- Engineered thermal management for stable long-term operation
- ENEC-ready for European tunnel lighting compliance

NOX Linear brings smooth, reliable lighting to where it matters most — inside the tunnel, built to last.

