

# INNOVATIVE LIGHTING SYSTEMS

Modern Technology and Top Quality

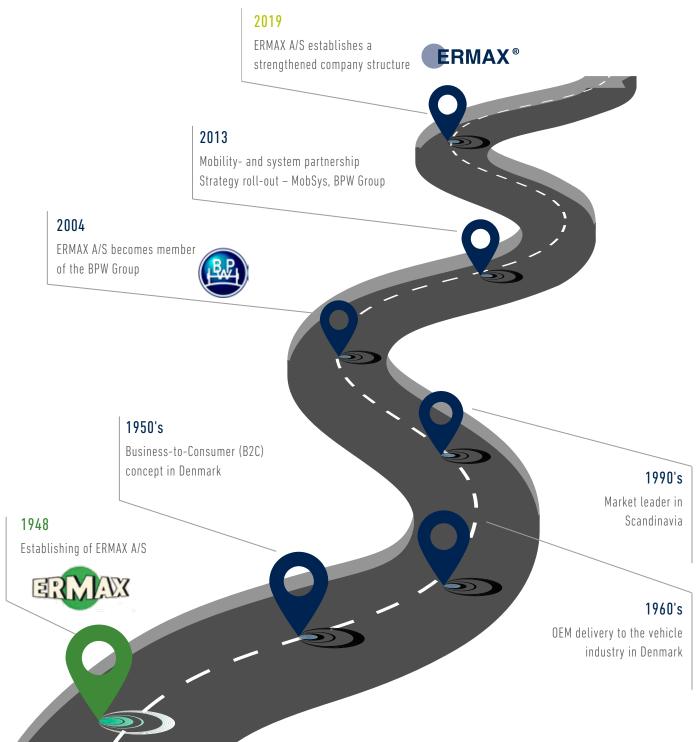




### ERMAX Lighting Systems Innovative Quality

Ermax A/S has more than 70 years' experience with lighting technology for commercial vehicles and industry. Much has been changed since the beginning. The evolution and experience over the years have made the company to what it is today: a growing, flourishing and innovative production company with committed employees and partners.

### Milestones - 1948 - 2020





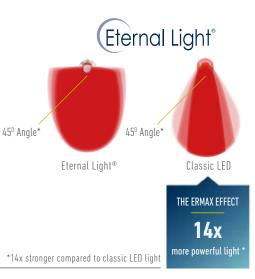
### Convincing Technology The best choice

Ermax lighting systems fulfil the highest demands concerning quality, functionality and reliability. Unique design, newest light- and LED technology, durability second-to-none and high quality are united in the ERMAX lighting programme - and due to the cost-effectiveness, a real highlight.

### Lighting technology Eternal Light® - increases traffic safety

ERMAX Eternal Light<sup>®</sup> technology is designed for the best possible SAFETY when driving. It offers the best possible homogeneous light function and has various advantages based on test results.

- Eternal light<sup>®</sup> is perceived by other road users earlier than classic LEDs lights or 4 bulb lights.
- Contributes to reduces number of accidents in connection with changing tracks and right-turns.
- > Soft visuality when platooning.
- > Prevents fatique in case of long-lasting impact and thus also accidents.



### Impact resistance - durable and environmentally friendly

Use of high-quality impact resistant polycarbonate in the ERMAX lights ensures long life-time and is very environmentally friendly due to the impact resistance and choise of material.

#### Extreme durability

- Reduction of costs no use for spare parts due to the long life-time.
- > Sustainability reduces the entry of microplastics in the environment.



### Intelligence – all integrated

ERMAX offers various innovative solutions and control systems for failure control of flashing sidemarker lights and LED tail lights

- optimum as integrated in the tail lights or as alternative as Plug-In solutions.

- Intelligent control of flashing sidemarker lights SIMAC<sup>®</sup> according to ECE R48.
- Built-in intelligent control for monitoring and failure report of LED tail lights according to
  ECE R48 for indicator and stop functions but also as a universal variant for all tail light functions
- > Uses a technology which is NOT limited to ISO13207 and therefore suitable for all vehicles\*.

\* All known brands within the EU countries from 11/2019





LED-Steuerung Modul mit Kabel

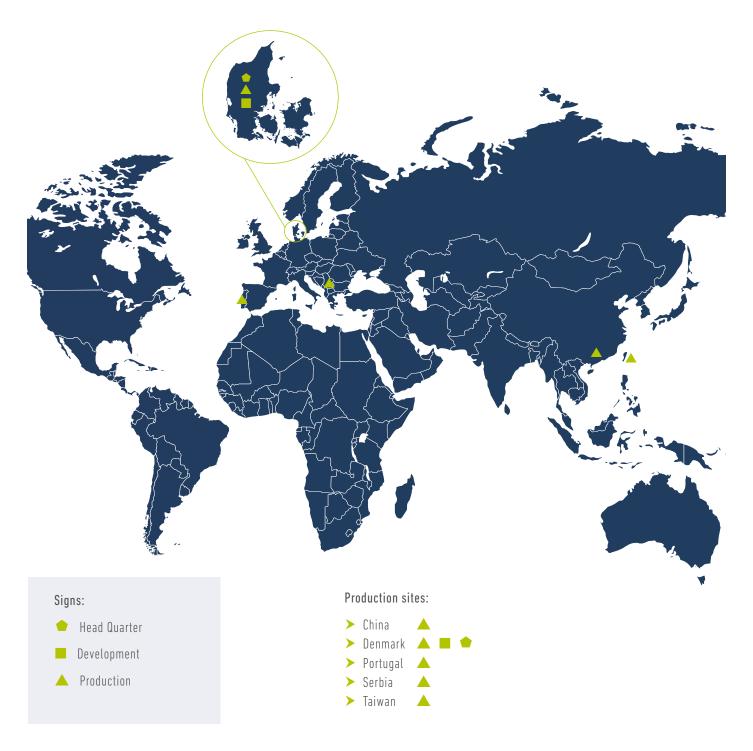


\* compared to plug-in solutions

### ERMAX Globally Positions Locations, production and development

ERMAX has placed the activities in stategic places in Europe and the Far East. The combination of own production in Denmark and license production in few selected and exclusively certified production partners worldwide, makes it possible to offer an innovative product programme.

The strategic centre is in Denmark where development and quality management is placed. For more than 70 years complete solutions within lighting systems for heavy vehicles have been developed here.

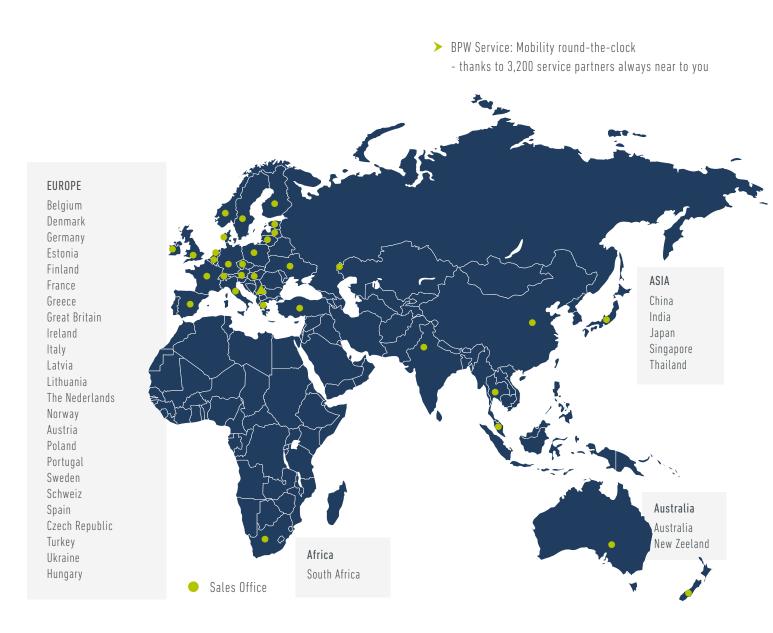




### Local Represented Always near to you

As a member of the BPW group, which is operating world wide, ERMAX has a unique sales- and distribution net with local agencies and support, which guarantees the best possible customer support.

Service partners can also be found globally, so that service is always available around the clock.



### First-Class Tested Quality From ERMAX Focus on development

Ongoing in the manufacturing process, the defined quality criteria and test methods of the ERMAX lights are checked in order to guarantee the high product quality. Numerous complex test procedures are carried out to ensure the quality. The development as well as the serial production is ensured by observation, monitoring and testing.













#### Temperature / humidity cycle test

The ERMAX work lights are going through a temperature cycle test in climatic chambers with temperature fluctuations from -40  $^{\circ}$ C to +65  $^{\circ}$ C. During this test, the materials used for the work light, the individual components of the electrical components and the LED light sources are tested.

### Vibration test

During the vibration test the ERMAX work lights are being shaken for hours in order to simulate the toughest conditions in the daily use. The products are tested in all possible mounting positions (horizontal, vertical etc.).

### Splash water test

In a splash water chamber, the ERMAX work lights are tested for simulated rain and water jets, and also tested for density/tightness with a water pressure of 1 bar and a water temperature of 20  $^{\rm 0}\rm C$  (IP54).

#### Immersion and pressure tightness test

In the immersion test, the ERMAX work lights are under water lowered for 1 hour in a water tank in a depth of 1 meter (IP67).

#### Pressure washer test

The ERMAX work lights are subjected to a test with a water pressure of 80-100 bar and a water temperature of 80  $^{\rm 0}\rm{C}$  (IP69K).

#### Dust test

The dust test according to IEC60529 uses dust to check how safety the ERMAX work lights are protected towards the ingress of dust and other solid particles.

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### Your Partner For Complete System Solutions Core competencies for OEM solutions

For heavy vehicles in the OEM area we offer universal products as well as vehicle specified product solutions. Developed from concept to product ready for series production, ERMAX produces and tests solutions within the themes lighting, cable systems and electronics for trailers, agricultural vehicles and – machines, vehicle builders, Off-Road and busses.





Vehicle builders



Off-Road



Busses

Brands of the BPW Group:



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