

## Your Frontlight All-Rounder.

### Benefits

- Analog and digital dimming
- Current defined by external transistor
- Two channel version with 180° phase shift
- Overvoltage protection of LED chain
- EMC optimized
- E522.31 - 1-channel, ± 40kHz spread spectrum
- E522.33 - 1-channel
- E522.32 - 2-channel, ± 40kHz spread spectrum
- E522.34 - 2-channel

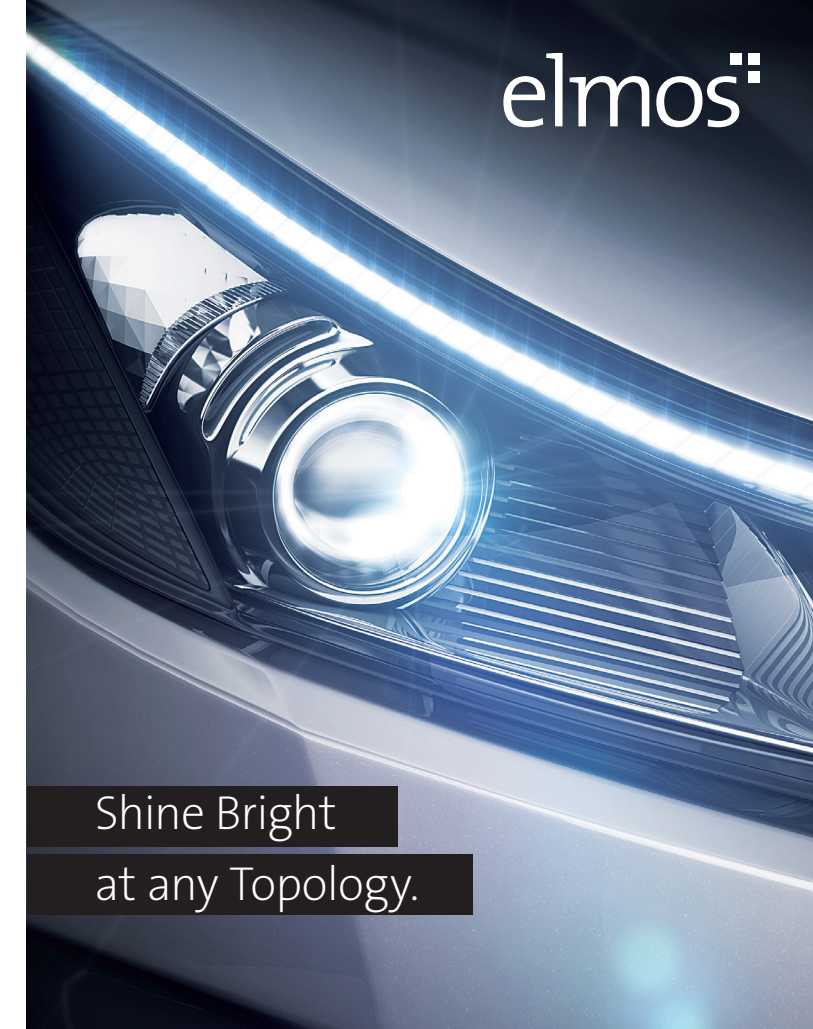
### Key Features

- $V_{IN}$  : 5V to 55V
- $V_{OUT}$  : up to 80V
- Switch-mode, single or dual LED controller
- Boost-, SEPIC, Buck-Boost or Buck topology supported
- Constant current regulation
- High precision differential high side sense up to 60V

Simplify your LED or Laser Diode System:  
One IC, performing brilliant in various applications.



*The Elmos high voltage LED Controllers offer top performance at almost every topology. In addition the ICs give you full control and monitoring of the system.*



GET YOUR ELMOS HIGH VOLTAGE LED CONTROLLER

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## Overview E522.3x family

With the E522.3x chips, Elmos introduces a LED controller family. The ICs are designed for input voltages between 5V and 55V and output voltages of up to 80V in boost mode. They can be operated – depending on the type – in single or dual LED chain mode.

### High Robustness.

With an ambient temperature range of –40°C to +150°C, the Elmos ICs are made especially for use in harsh environments such as automotive conditions.

### Great Variety.

In addition to high robustness, the components offer a great variety in the selection of circuit topologies, such as Boost, SEPIC, Buck-Boost and Buck. The switching frequency can be adjusted from 250KHz up to 600KHz by means of an external resistor or synchronized with other components in master-slave configuration. Power consumption in sleep mode is only 8µA.

### Complete Monitoring.

The versatility of the E522.3x controller family is completed by various control and monitoring functions, e.g. protection against short-circuit, overtemperature, overvoltage, undervoltage and load break.

### Full Control.

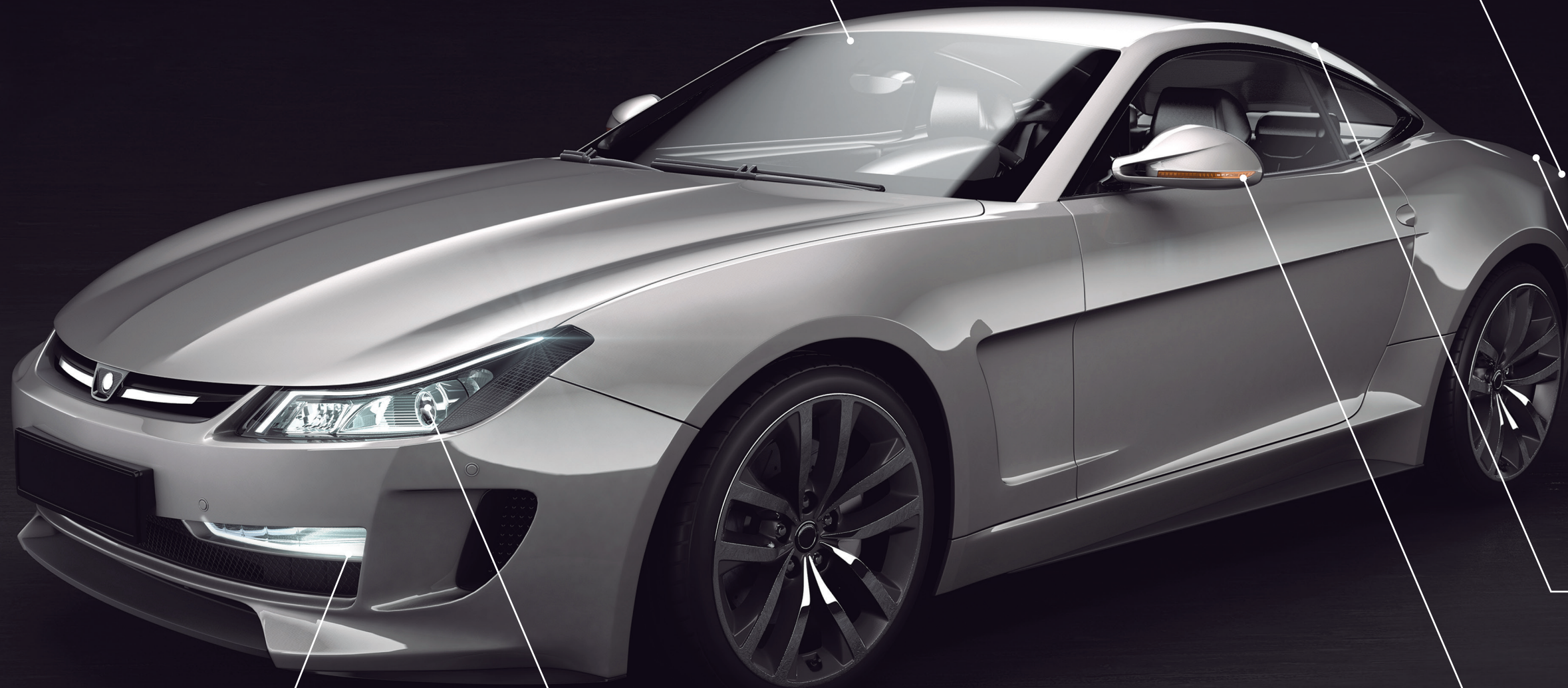
The LED controllers support PWM and analog dimming for the LED brightness control, both are working in parallel. The PWM of E522.3x allows a wide dimming ratio of >1000:1 at PWM frequencies of up to 400Hz.

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Simplify your LED or Laser Diode System:  
One IC, performing brilliant in various applications.

- **AMBIENT LIGHT** E521.31
- **READING LAMP** E522.80-87 | E522.10
- **FLOOR LIGHT** E522.80-87
- **ENTRANCE LIGHT** E522.80-87

- **REAR LAMP** E522.80-87
- **BRAKE LAMP** E522.80-87
- **BACK UP LIGHT** E522.80-87
- **REAR FOG LIGHT** E522.80-87 | E522.01-10
- **DIRECTION INDICATOR LIGHT** E522.80-87



- **TRUNK LIGHT** E522.80-87 | E522.10
- **LICENSE PLATE LAMP** E522.80-87

- **THIRD BRAKE LAMP** E522.80-87

- **FOG LIGHT** E522.31-34

- **LOW BEAM LIGHT** E522.31-34 | E522.10
- **HIGH BEAM LIGHT** E522.31-34 | E522.10
- **DAYTIME RUNNING LIGHT** E522.80-87 | E522.31-34
- **SIDE LIGHT** E522.80-87
- **CURVE LIGHT** E522.80-87 | E522.01-10
- **DIRECTION INDICATOR LIGHT** E522.80-87

- **BLIND SPOT DETECTION SIGNAL** E522.80-87
- **DIRECTION INDICATOR LIGHT** E522.31-34 | E522.10

■ Constant Current LED Controller  
■ Other LED Applications