

Automotive-grade 12-Channel LED Driver for advanced rear lighting solutions



High-flexibility LED driver with independent brightness control for smart automotive rear and interior lighting solutions

Designed for state-of-art rear and interior lighting systems in premium vehicles, the ALED1262ZT provides a wide range of features to unleash any graphics implementation and at same time meet reliability requirements.

With an input voltage supply range up to 38 V, this highly flexible 12-channel linear LED driver is fully compliant with direct plug-and-play car battery solutions.

With complete diagnostics, protection circuits and improved radiated emissions, the ALED1262ZT is a fully tailored solution for automotive applications.

KEY FEATURES

- 12 independent output channels
- Supply voltage: 5.5 to 38 V
- 19 V rated current generators
- Each channel current from 6 to 60 mA
- 7-bit PWM local brightness control
- Slow turn on/off time for EMI reduction
- Gradual output delay
- Standalone and bus-driven modes
- Error detection for open LEDs
- Custom configuration by OTP
- 400 kHz fast I²C interface with selectable extended Hamming encoding
- Wired OR error flag connection
- Thermal shutdown and over-temperature alert

KEY APPLICATIONS

- Automotive exterior rear lighting
- Automotive interior lighting

MAIN DESCRIPTION

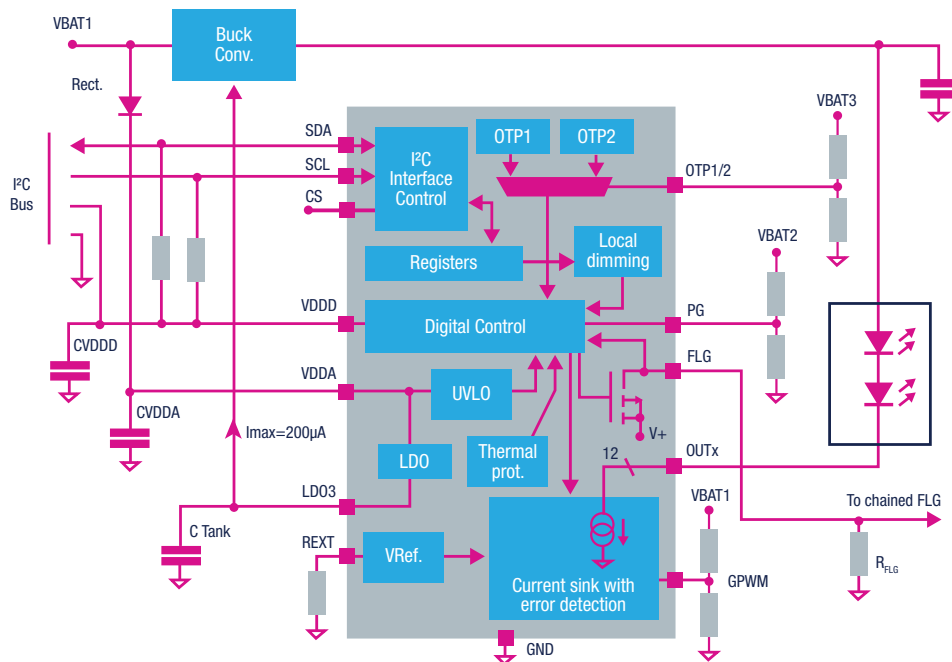
In Bus-driven mode, the ALED1262ZT communicates with the 400 kHz I²C interface to support advanced local dimming requiring high-speed data transmission performance. To improve communication robustness, the extended Hamming code can be selected. The ALED1262ZT can work in Stand-alone mode using pre-programmed configurations without the support of I²C communication.

With 7-bit individual non-linear grayscale brightness control and high data rate transmission ensured by a clock frequency up to 400 kHz, the ALED1262ZT offers an extended graphics experience.

Thanks to a gradual output current delay and over-temperature alert functions as well as embedded power management features, the ALED1262ZT is further strengthened thanks to full diagnostics with a wired OR error flag connection to meet the most demanding automotive robustness requirements. Moreover, each channel benefits from an individual smooth turn-on/off time and clock spread spectrum function for 7-bit PWM dimming which help make the device extremely noise-proof.

Available in a 6.4 x 7.8 mm HTSSOP24 package, the ALED1262ZT is fully AEC-Q100 Grade 1 compliant.

EVALUATION & DEVELOPMENT KIT



PRODUCT TABLE

Part Number	V _{IN} (V)	I _{OUT} (mA)	Package	Packaging	Evaluation board order code
ALED1262ZT	5.5 to 38	6 to 60	HTSSOP24 Exposed pad	Tube	STEVAL-LLL002V1
ALED1262ZTTR				Tape & reel	

