

Features

- Fast I²C bus interface for dynamic LED control
- Device and LED supply voltage range from 5V up to 40V
- 16 PWM generators with 10bit resolution
- 16 programmable LED drivers up to 100mA
- LED driver current selection step size of 100μA
- 2 prioritized PwMIN interface pins
- PwMIN interface with fallback data
- Direct PWM input
- 10bit ADC for LED open, short and system diagnosis
- Single lamp mode behaviour option
- Advanced device power management by channel bundling option
- Automatic supply and temperature dependent LED current derating
- LED channel individual bin class brightness correction
- Optional external LED bin class resistor evaluation
- Developed according ISO26262 supporting applications up to ASIL B

General Description

The E522.48 is a multi-channel PWM driver for e.g. light application. It provides 16 current sinks with integrated 10bit PWM generator for each channel. Each of the drivers can digitally be configured to drive up to 100mA with a selectable slew rate.

The device supports I²C bus controlled operation to enable fast light animation sequences. For failsafe conditions the device provides internal non-volatile memory to store channel individual current and duty cycle information for highest flexibility.

An advanced device power management feature allows LED channel bundling with automatic current balancing to external resistors resulting in reduced device power dissipation. Various diagnostic features, like LED open, short condition detection and temperature sensor, are provided to meet automotive requirements.

To protect the device from thermal damage, the device implements a configurable LED supply and device temperature dependent automatic LED current derating.

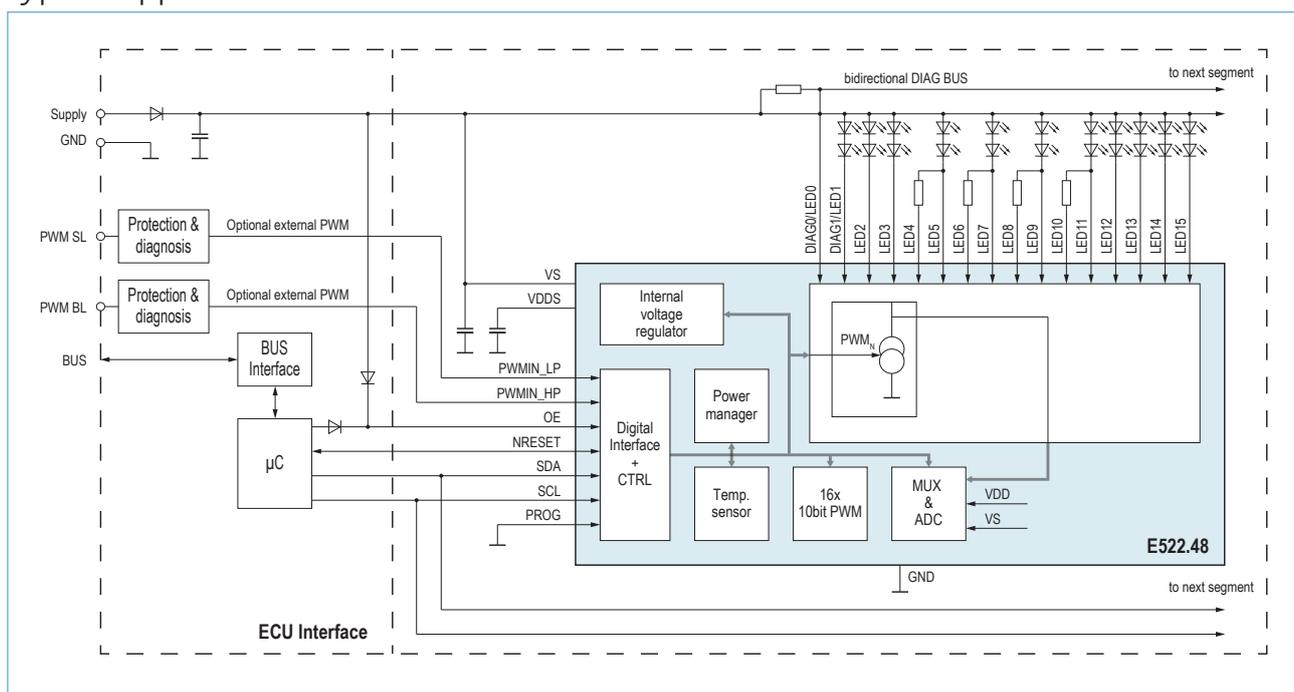
Applications

- Automotive interior and exterior light systems
- General LED Applications
- High speed LED light animations

Ordering Information

Product ID	Temp Range	Package
E52248B77B554	-40°C to +125°C	QFN32L6

Typical Application Circuit



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