

# LIN RGB LED DRIVER

## MLX81124 - MLX80124

The MLX81124 and MLX80124 are fully integrated LIN responders for automotive ambient lighting. This family drives RGB LEDs via the LIN bus, giving you flexible control. By integrating the LIN transceiver, protocol controller, and current-controlled outputs—plus the revolutionary code-free configuration in the MLX80124—Melexis enables the rapid and simplest-ever development of ambient light modules!

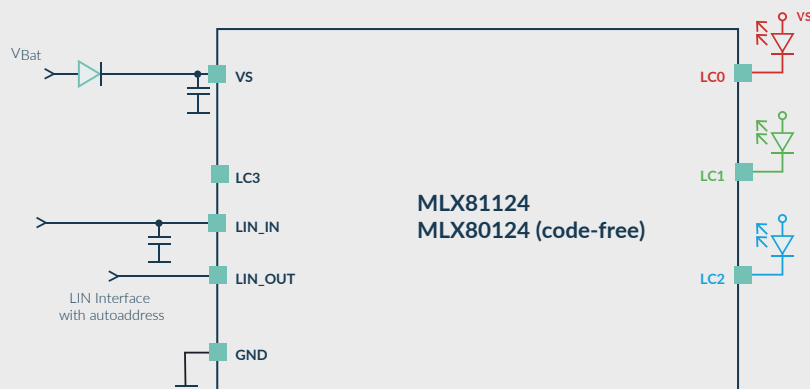


## Key features

- ✓ LIN Transceiver
  - LIN physical Layer
  - LIN protocol controller
  - Support for auto-addressing
- ✓ Voltage regulator
  - Standby current of typ. 25  $\mu$ A in sleep mode
  - Integrated battery monitor including over- and under-voltage detection
- ✓ Low Side Current Source
  - High voltage I/Os with free configurable current source (up to 60 mA) for RGB
  - 16-bit PWM outputs with configurable resolution
- ✓ Automotive standard
  - Temperature range of -40 °C to 125 °C
  - 28 V jump start
  - Integrated temperature sensor
  - ASIL compliant (ISO 26262), supporting up to ASIL B
  - Diagnostic for connected LED (short, open, threshold)
  - AECQ-100 qualified
- ✓ Package RoHS compliant
  - SOIC8 package with exposed pad



## Single-chip RGB LED controller



## Highlights

### MLX81124

- ✓ Programmable  
16 bit microcontroller with 32 KB Flash, System ROM, 2 KB RAM, 512 B EEPROM...

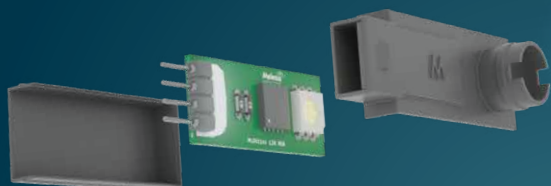
### MLX80124

<Code Free>

- ✓ Code-free, configurable features  
Color control, Intensity multiplier, LED temperature compensation...

## Applications

- Automotive ambient lighting
- Connected interior light



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