UART over CAN RGB LIGHTING

Highly dynamic lighting animations

Melexis offers a range of smart, multi-channel RGB LED drivers featuring high-speed communication. These fully integrated solutions enable vibrant, high-speed light animations for automotive applications.



RGB

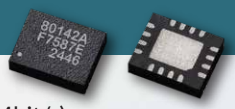
Key features

- Extended LED control algorithm, color mixing and full diagnosis
- Red/Green and Blue LED temperature compensation
- Color mixing accuracy of < 1% delta UV
- Storage of LED calibration data directly within LED driver
- Programmable calibrated current sources for LED control
- Direct and multiplex LED drive
- LEDs fully diagnosable
- High-speed differential bus system
- ASIL B compliant
- Compact QFN packages
- Code free variant

ASIL <Code Free>

Highlights

	Control	#Channel (#multiplexed)	Extra
MLX81116	MCU	12 (36)	Code-free variant
MLX81117	MCU	16	Ind. LED supply
MLX81132	MCU	24 (48)	Lowest cost per pixel
MLX81143	MCU	21 (42)	Ind. LED supply
MLX80142	State machine	6	Pinout supporting single layer



MeLiBu® by Melexis = **UART protocol** over CAN-FD PHY

CAN FD
- High speed (up to 4 Mbit/s)
- EMC/ESD robustness
- Automotive proven PHY
- Enables light animation

LIN LOCAL INTERCONNECT NETWORK
- Simple protocol
- RGB lighting optimized
- Easy to integrate
- Enables low BOM

Real-time update of 3500 RGB LEDs without delay

Ambient & Animated Lighting

melexis.com/MeLiBu

Exterior Signaling & Lighting

- Turn indicator and projection
- Daytime Running Light (DRL)
- Grille & logo illumination
- Rear Combination Lamp (RCL)
- Charge port illumination

Interior Illumination & Trim

- Steering wheel illumination
- Surface lighting
- Matrix lighting
- Decorative and integrated trim
- Center stack and console lighting
- Floor and footwell illumination
- Reading lights
- Overhead and roof lighting



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