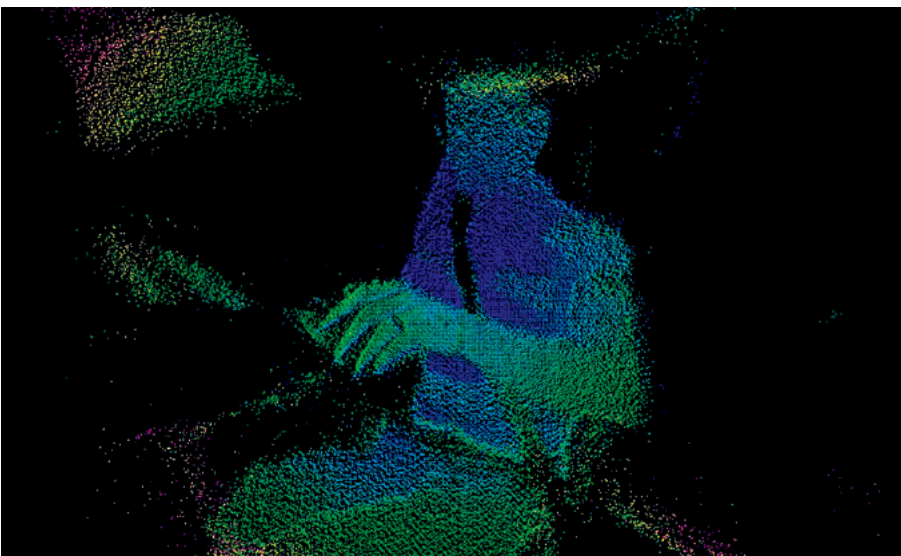




# LUXEON IR for Automotive

High power infrared emitters with automotive qualification



The LUXEON IR for automotive is a family of high power infrared emitters tailored to application needs by offering a variety of products at multiple infrared wavelengths and optical radiation patterns. All LUXEON IR LEDs for automotive are AEC – Q102 qualified.

## FEATURES AND BENEFITS

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- Available in 850 nm and 940 nm wavelengths to provide optimized performance for each type of application
  - Available with primary optics of 50°, 60°, 90° and 150° or as a non-domed component for optimal beam control
  - Ultra-low thermal resistance ( $R_{th}$ ) solves thermal challenges and supports space-saving designs
- 

## PRIMARY APPLICATIONS

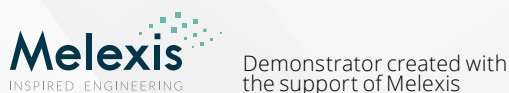
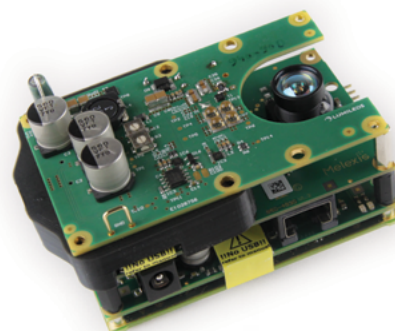
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- Driver Monitoring Systems
  - Biometric Identification
  - Exterior sensing application
  - Interior presence detection
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# In this demonstrator, we show our new LUXEON IR for Automotive LEDs in a Time-of-Flight application.

In a Time-of-Flight camera application, the travel time of the light to- and back from the object is used to calculate the distance enabling a 3D representation.

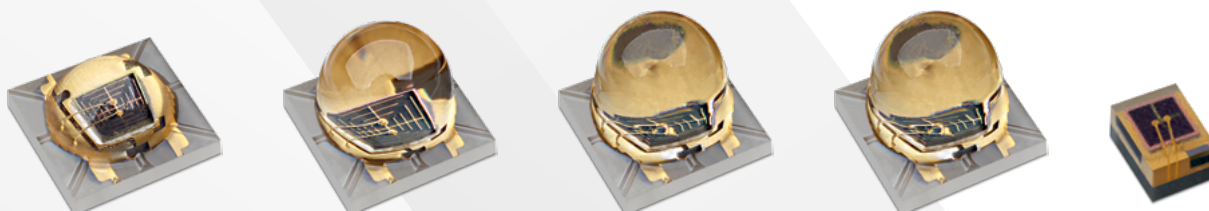
- 4 LUXEON IR Domed for automotive LEDs
- New Melexis QVGA Time-of-Flight chipset MLX75024 MLX75123
- Lumileds designed LED driver for high frequency operation



## LUXEON IR Domed and LUXEON IR Compact for automotive

The LUXEON IR for automotive emitters with state-of-the-art performance are specifically designed and tested for use in automotive applications. A unique range of available radiation patterns will ensure optimal light distribution to meet the requirements of applications like driver monitoring systems, gesture control and optical exterior sensing.

Through best-in-class thermal conductivity, the LUXEON IR automotive family has excellent performance at actual operating conditions.



## Product performance and characteristics of LUXEON IR for automotive at 1000 mA. $T_j=25^{\circ}\text{C}$ .

Peak Wavelength (nm)	Mechanical Dimensions (mm)	Typical FWHM Beam Angle ( $^{\circ}$ )	Typical Radiometric Power (mW)	Typical Radiant Intensity (mW/SR)	Forward Voltage (V)	Thermal Resistance- $R_{th}$ (K/W)	Part Number
850	3.70 x 3.70	150	1350	350	3.2	2.5	L110-A850150000000
850	3.70 x 3.70	90	1350	780	3.2	2.5	L110-A850090000000
850	3.70 x 3.70	60	1350	1205	3.2	2.5	L110-A850060000000
850	3.70 x 3.70	50	1350	1310	3.2	2.5	L110-A850050000000
850	1.90 x 1.37	120	1050	250	3.2	3.5	L11Z-A850000000000
940	3.70 x 3.70	150	1450	360	2.9	2.5	L110-A940150000000
940	3.70 x 3.70	90	1450	800	2.9	2.5	L110-A940090000000
940	3.70 x 3.70	60	1450	1220	2.9	2.5	L110-A940060000000
940	3.70 x 3.70	50	1450	1370	2.9	2.5	L110-A940050000000
940	1.90 x 1.37	120	1150	300	2.9	3.5	L11Z-A940000000000

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