Melexis

INSPIRED ENGINEERING

SELECTION GUIDE

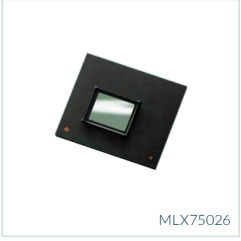
MELEXIS TIME-OF-FLIGHT

Enabling high accuracy, high resolution, robust and wide field-of-view 3D detection, classification and anti-spoof authentication of persons and objects for automotive, industrial, AGVs (automated guided vehicles), robotics, security (smart entry, smart cities), etc.

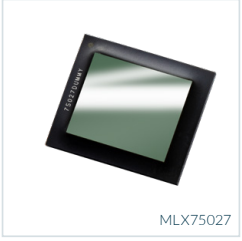
Microbats generate ultrasound via the larynx and emit the sound through the nose or open mouth: from 14,000 to over 100,000 hertz, well beyond the range of the human ear. The emitted vocalizations form a broad beam of sound used to probe the environment as well as communicate with other bats.

Feature	Gen 3 QVGA	Gen 3 VGA
	Single chip MLX75026	Single chip MLX75027
Ordering code*	MLX75026RTH-ABA-210	MLX75027RTC-ABA-210
Resolution	QVGA 320 x 240 pixels	VGA 640 x 480 pixels
Pixel size	10 x 10 µm	
Optical format	1/4"	1/2"
Illumination	VCSEL	VCSEL
Depth precision	Typ. <1 cm @ 1 m distance	
Sunlight robustness	>120 klux (with optical BP filter)	
Option with Integrated IRBP filter	Yes	No
Distance framerate	up to 180 fps	up to 135 fps
Modulation frequency	up to 100 MHz	
Compatibility	Same optical performances and drivers	
Built-in temperature sensor	**yes**	
Data interface	MIPI CSI-2 D-Phy 2 or 4-Lane	
ARC or integrated optical filter	Double-sided ARC, optional integrated BP filter	Double-sided ARC
Supply domains	1.2, 1.8 and 2.7 V	
Power consumption	typ. 115 mW @ 30 fps	typ. 221 mW @ 30 fps
Operating temperature (Ta)	Ta = -40 ... +105 °C	
AEC-Q100	**Grade 2**	
Package size	MLX75026: 9.2 x 7.8 mm	MLX75027: 14 x 14 mm

*See datasheets for all the options.



MLX75026



MLX75027

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