LUMOTIVE

M30 Lidar Reference Design for Industrial Applications

M30 Lidar Module

Availability	Now
Featured LCM™	LM10
Depth Sensor Type	Indirect Time-of-Flight (iToF)
Absolute Maximum Range	25 m
Minimum Range	0.1 m
Range Performance[†] 85% target, 10 klux ambient	25 m
Range Performance[†] 10% target, 100 klux ambient	10 m
Field of View[†]	120° (non-steering) x 90° (steering, programmable)
Frame Rate[†]	10 Hz full-frame
Readout Rate[†]	910 regions/second
Supported Resolutions[†]	VGA (640x480) QVGA[††] (320x240)
Power Consumption[†]	8 W
Dimensions	55 mm x 35 mm x 25 mm
Operating Temperature	−20° C to +70° C
Eye Safety	Class 1
Data Interface	MIPI

VCSEL

iToF
depth sensor

LCM
solid-state
beam steering

1D steering with LCM

Specifications subject to change

[†] *Lidar performance is software-defined through Lumotive's API and can vary based on configuration*
[††] *All other specifications are measured at the default resolution of QVGA*
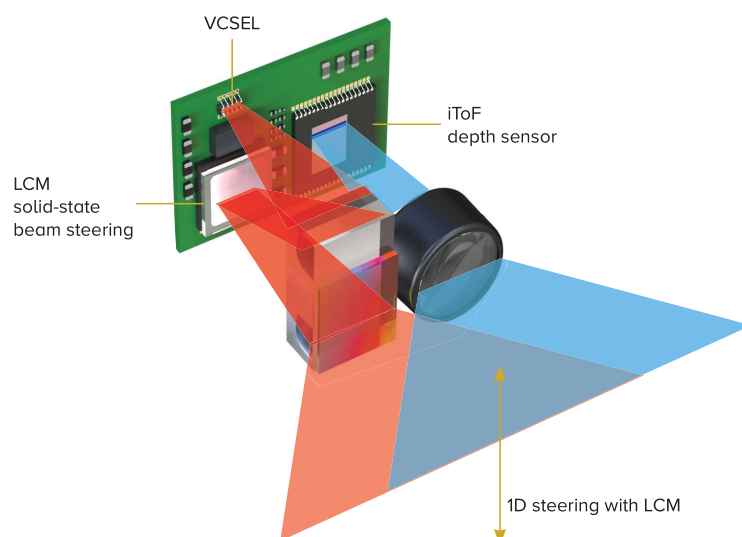
System-Level Advantages Of LCM Beam Steering

The M30 Reference Design showcases how solid-state LCM beam steering modules can be used to build the next generation of low cost and high performance lidar systems with unprecedented software programmability.

All-Semiconductor
Leveraging the massive economies of scale of CMOS and VCSEL technology for high reliability and low cost

No moving parts
Truly solid-state beam steering technology delivers all the advantages of scanning lidar with no moving parts

Simple, like a camera
Designed and assembled like smartphone camera modules, which are made by the billions annually

Scalable
Architecture scales from tiny near-range lidar to high performance long-range

Software-defined
Dynamically reconfigurable scan patterns enable adaptive perception and resource optimization

Easy Evaluation and Adoption For Fast Time-to-Market

Experience the advantages of solid-state, software-defined lidar powered by LCM beam steering with the **M30 Evaluation Kit**, which includes:

- M30 lidar module
- Embedded compute module
- Tripod-ready mounting plate
- Software license, API, and examples
- Cables, accessories, and documentation
- 6 months of basic email support

Premium support options are also available, which include a dedicated FAE, phone/on-site support, and access to Lumotive's modeling and product planning services

Ready to start your own solid-state lidar design?
*Design materials (CAD files, schematics, BOMs, manufacturing processes, engineering design support, and more) are available as part of our **Reference Design Adoption Program**.*

Contact us to learn more!

About Lumotive

Lumotive's award-winning optical semiconductor solutions enable advanced sensing and perception capabilities in next-generation consumer, mobility, and industrial automation products such as mobile devices, autonomous vehicles, and robots. The company's patented Light Control Metasurface (LCM™) beam steering chips deliver an unparalleled combination of high performance, exceptional reliability, and low cost — all in a tiny, easily integrated solution. Lumotive has received measurable industry acclaim including Fierce Electronics' 2021 Startup of the Year award, CES Innovation Awards in 2022 and 2024, Fast Company's Next Big Thing in Tech 2023, a 2022 SPIE PRISM Award, and a prestigious Edison Award. Investors include Gates Frontier, MetaVC Partners, Quan Funds, Samsung Ventures, and Uniquest.