

## Partnership Agreement with TriLumina, VCSEL Company for LiDAR ~New Business Development for future self-driving society~

NAGASE & CO., LTD. (Tokyo, President : Kenji Asakura, “NAGASE”) and TriLumina Corporation (New Mexico, US, “TriLumina”) have agreed to a distribution agreement to market, promote, and sell TriLumina’s product to customers in Japan and US. TriLumina develops and produces leading illumination products for LiDAR (Light Detection and Ranging) and 3D Sensing, which is a critical component for future self-driving vehicles, mobility, and consumer 3D sensing applications.

LiDAR is a detection system which uses the pulse from a laser to collect measurements. It measures how long it takes for the emitted light to return to the sensor, which can then be used to create 3D models and maps of objects and environment. LiDAR is viewed to be a critical component for future self-driving vehicles, but the challenges of LiDAR are known to be the detection distance, product size, and data’s reliability.

TriLumina develops VCSEL = Vertical Cavity Surface Emitting LASER, the laser illumination for LiDAR. TriLumina’s innovative back-emitting and flip-chip VCSEL array approach enhances the power output and enables LiDAR’s detection capability to surpass 200m, while delivering products that are much smaller than alternative technologies. TriLumina’s VCSEL will play a significant role in the next generation LiDAR and realization of self-driving vehicles in Japan and US as well as consumer and industrial applications.

In addition to conventional EV / HEV inverter parts, lithium ion battery materials, and optical materials for in-vehicle display, NAGASE will take this opportunity to expand its business in sensors and peripheral devices that are essential for self-driving vehicles. With self-driving vehicle arriving in near future, NAGASE is looking to be the solution provider in the new car electronics business.

■**11th International Automotive Electronics Technology Expo (Car-Ele Japan) January 16 – 18, 2019.**  
TriLumina and NAGASE to exhibit the latest TriLumina’s VCSEL module at Tokyo Big Sight. (NAGASE Booth: E47-002)



TriLumina 300W output VCSEL Module (8mm x 16mm)

■ **TriLumina Corporation Company Profile**

( 1 ) Name	TriLumina Corporation
( 2 ) Head Quarter	Albuquerque, New Mexico, US
( 3 ) CEO	Brian Wong
( 4 ) Founded	2011
( 5 ) Business	VCSEL module development and production
( 6 ) Employees	40

◆ **Make inquiries to**

NAGASE & CO., LTD. Automotive & Energy, Car Electronics

TEL : +81-3-3665-3646 FAX : +81-3-3661-6210

URL : <https://www.nagase.co.jp/automotive/>

Nagase America Corporation, California Branch

TEL : +1-408-567-9728

NAGASE & CO., LTD. Corporate Planning

TEL : +81-3-3665-3640 FAX : +81-3-3665-3135

URL : <https://www.nagase.co.jp/>