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VCSEL Diode

Overview

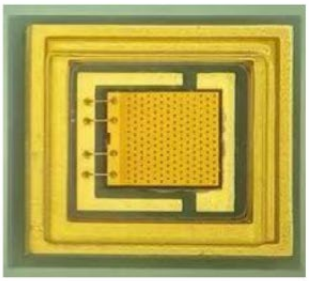
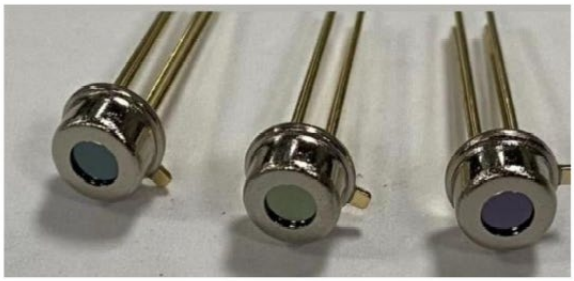
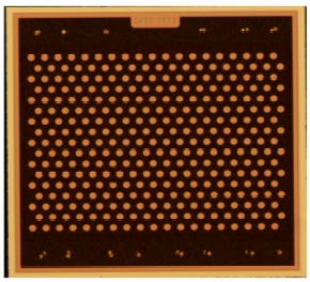
The vertical-cavity surface-emitting laser (VCSEL) is a type of semiconductor laser diode with laser beam emission perpendicular from the top surface, contrary to conventional edge-emitting semiconductor lasers (also in-plane lasers) which emit from surfaces formed by cleaving the individual chip out of a wafer. VCSELs are used in various product application fields: 3D perception, data communication, laser radar (lidar) ,and other fields.

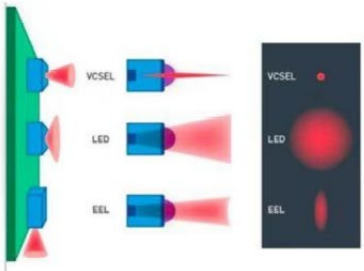
Features of VCSEL:

Compared with EEL (edge emitter) and LED light source, VCSEL has a different structure and has unique characteristics and advantages, as shown in the figure below. The vertical structure of VCSEL is more suitable for wafer-level manufacturing, packaging and testing.
Compared with side-emitting LEDs, the cost after mass production has advantages and high reliability.
Compared with LED, VSCEL has some significant advantages, such as high spectral quality and fast response speed.

VCSEL Product Description

940nm band chip: multiple product series with power from mW level to W level.
850nm band chip: multiple product series with power from mW level to W level.
VCSEL module series: the products involve various packaging modes such as SMD and TO.



KT Photonics Inc.
Unit 8, 62 Fawcett Road
Coquitlam, BC V3K 6V2, Canada
Tel: 1.604.516.6667 /Tell Free: 1.866.391.6970
Email: sales@ktphotonics.com Website: www.ktphotonics.com