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Changes for the Better

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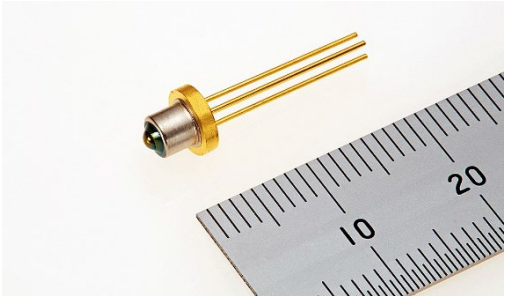
Mitsubishi Electric to Ship Samples of 50Gbps DFB Laser Diode for 5G Mobile Base Stations

Supports high-speed, large-capacity data transmission

TOKYO, March 3, 2022 – Mitsubishi Electric Corporation (TOKYO: 6503) announced today that it will begin shipping samples of its 50Gbps distributed-feedback (DFB) laser diode for optical-fiber communication in fifth-generation (5G) mobile base stations on March 4. The new diode is fully compliant with all relevant optical-transceiver standards and achieves the industry's widest* operating temperature range for high-speed, large-capacity data transmission in 5G mobile networks. It will be on display at the Optical Fiber Communication Conference and Exhibition (OFC) 2022 in San Diego, USA, from March 8 to 10.

* As of March 3, 2022 according to Mitsubishi Electric research



50Gbps DFB laser diode (ML771AA74T)

Product Features

1) Supports 50Gbps high-speed, large-capacity 5G communication in PAM4 format

- Mitsubishi Electric's new DFB laser diode's frequency-response characteristics are compatible with 4-level pulse-amplitude modulation (PAM4) for multilevel signal modulation, supporting transmission rates up to 50Gbps. Also, its industry-leading operating temperature range of -40°C to 90°C eliminates the need for any temperature-control unit, helping to reduce power consumption by mobile base stations.

2) Compliant with TO-56 CAN standard for compact optical transceiver packages

- The new diode's package is compliant with the TO-56 CAN industry standard and is compatible with the SFP56 compact-transceiver standard adopted for Mitsubishi Electric's 25Gbps DFB laser diode (model ML764AA58T; production discontinued).

Main Specifications and Sales Schedule

Product	Model	Wavelength	Operating temperature	Optical output power	Sample shipment
50Gbps DFB laser diode	ML771AA74T	1310nm	-40°C to 90°C	8mW	March 4, 2022

Background

Mobile communication systems are being required to handle increasing data communication volume due to the transition from 4G to 5G, the proliferation of mobile devices and the shift of information to the cloud. DFB laser diodes installed in optical communication equipment for base stations located outdoors must be capable of delivering extra-high-speed performance as well as operating in wide temperature ranges.

Product Lineup for 5G Mobile Base Stations (new model in bold)

Transmission rate	Model	Laser diode chip type	Format
50Gbps	**ML771AA74T**	DFB laser diode	PAM4
100Gbps	ML770B64	EML**	PAM4
25Gbps	ML760B54	EML	NRZ***

** Electro-absorption modulator-integrated laser diode
*** Non-return-to-zero

Environmental Awareness

This product is compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive 2011/65/EU and (EU) 2015/863.

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About Mitsubishi Electric Corporation

With 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Mitsubishi Electric enriches society with technology in the spirit of its "Changes for the Better." The company recorded a revenue of 4,191.4 billion yen (U.S.$ 37.8 billion*) in the fiscal year ended March 31, 2021. For more information, please visit www.MitsubishiElectric.com

*U.S. dollar amounts are translated from yen at the rate of ¥111=U.S.$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2021