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**No. 2425**

*Product Inquiries*

High Frequency & Optical Semiconductor  
Overseas Marketing Department  
Tel: +81-72-780-3837  
Sasaki.Hideo@dn.MitsubishiElectric.co.jp  
<http://www.mitsubishichips.com/Global/>

*Media Contact*

Public Relations Division  
Mitsubishi Electric Corporation  
Tel: +81-3-3218-3380  
prd.gnews@nk.MitsubishiElectric.co.jp  
<http://global.mitsubishielectric.com/news/>

## **MITSUBISHI ELECTRIC ANNOUNCES SALE OF TRANSMITTER OPTICAL SUB ASSEMBLY LASER MODULES FOR 10Gbps/8Gbps SFP+**

**Tokyo, February 5, 2008** – Mitsubishi Electric Corporation (President and CEO: Setsuhiro Shimomura) announced today the development of four 1.3-micrometer band transmitter optical sub assembly (TOSA) laser modules for 10Gbps and 8Gbps optical transmission. The module is small enough to be installed in an enhanced 8.5 and 10 Gigabit small form factor pluggable module (SFP+) <sup>1</sup> compliant optical transceiver and operates at low power consumption and a wide temperature range. Shipment will begin on February 18, 2008.

1 A standard for optical transceivers made to unify methods of Ethernet, fiber channels and other data transmission. Module size is 13.3mm(H) x 13.4mm(W) x 56.5mm(D).

### **Summary of Sale**

Model	Specifications	Sample price (w/o tax)	Use and features	Shipment date
FU-456RDF-6M1	10Gbps DFB-LD TOSA, SMF <sup>2</sup> 10km transmission	35,000 yen	- Suitable for SFP+ small sized optical transceivers	Feb. 18, 2008
FU-466RLD-6M1	10Gbps FP-LD TOSA, MMF <sup>3</sup> 220m transmission	28,000 yen	- XMD-MSA compatible LC receptacle package (body)	
FU-442RDF-6M1	8Gbps DFB-LD TOSA, SMF <sup>2</sup> 10km transmission	33,000 yen	- Small flexible printed circuit (FPC) interface	
FU-443RLD-6M1	8Gbps DFB-LD TOSA, SMF <sup>2</sup> 1.4km transmission	28,000 yen	- Low power consumption at package temperature of -5 to 90C	

2 Single-mode optical fiber

3 Multi-mode optical fiber

### **Aim of Sale**

Carriers have been rushing to expand metro area fiber optic communications networks with the recent increase in traffic due to the spread of ADSL, Fiber To The Home (FTTH), and other high-speed, large-volume communication services for the residential market. Similarly, there is a growing demand to increase transmission capacity in high-speed storage area networks, which also uses optical fiber to transmit data between storage devices and servers in cases such as transmitting music, images and other digital contents, or to be used in high-volume databases for companies.

To further expand transmission capacity in these networks, which currently use optical transceivers compliant to an industry standard called 10 Gigabit small form factor pluggable module (XFP), carriers have been looking for transceivers that are small and operate at low power consumption with a wide temperature range, thus enabling high-density installation.

Meanwhile, another standard called SFP+ is being considered, which uses smaller transceivers with lower power consumption compared to XFP, and transceiver manufacturers were waiting for the development of a small-sized pluggable transceiver module to use in their transceivers.

With a smaller flexible printed circuit (FPC), which is an electric interface between modules and transceivers, and a highly efficient laser diode, Mitsubishi Electric's new TOSAs for 10Gbps and 8Gbps enable perfect installation in small optical transceivers compliant to SFP+.

### **Product Features**

#### ***1) Smaller flexible printed circuit, perfect for small SFP+ compliant optical transceivers***

Due to the small size of SFP+ compliant transceivers, which has a 40 percent width and 30 percent length compared to XFP, TOSAs needed further minimization.

While maintaining the 10Gbps miniature device (XMD-MSA)<sup>4</sup> compatible LC receptacle package, the new module can be installed even in SFP+ compliant transceivers, due to an 80 percent minimized flexible printed circuit (FPC).

<sup>4</sup> A unified standard for mechanical and electric interface of small optical devices installed in XFP.

#### ***2) Fast response with low power consumption, operates at wide temperature range***

Previous transceivers used a large amount of electricity to get a response fast enough for 8Gbps and 10Gbps high-speed transmission.

By using highly efficient distributed feedback (DFB-LD)<sup>5</sup> and fabry-perot (FP-LD)<sup>6</sup> laser diodes, the new product can operate at 70mA, 20 percent lower than previous modules, thus reducing the transceivers' power consumption. The module can also operate at a 10-degree higher temperature of 90 degrees C., widening the range of operating temperature in transceivers.

<sup>5</sup> Mainly used in medium and long distance transmission.

<sup>6</sup> Mainly used in short distance transmission.

### **Future Developments**

Mitsubishi Electric will continue development to further increase the module's performance and output, and plans to expand the lineup of these modules.

### **About Mitsubishi Electric**

With over 80 years of experience in providing reliable, high-quality products to both corporate clients and general consumers all over the world, Mitsubishi Electric Corporation (TSE: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. The company recorded consolidated group sales of 3,855 billion yen (US\$ 32.7billion\*) in the fiscal year ended March 31, 2007. For more information visit <http://global.mitsubishielectric.com>

\*At an exchange rate of 118 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2007