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**TO SERVE GROWING KOREAN INDUSTRY OF RECORDABLE DVD DRIVES,  
mitsubishi electric will boost production capability of high-power  
red semiconductor laser diodes for recordable dvd drives to 10  
million units per month**

**Tokyo, June 20, 2005** – Mitsubishi Electric Corporation (President and CEO: Tamotsu Nomakuchi) has announced today it will boost monthly production capability of its High-Power Red Semiconductor Laser Diodes for recordable DVD drives from current 7 million units up to 10 million units in October 2005. Enjoying a current market share of approximately 70% in respect of said laser diodes, Mitsubishi Electric is willing to have additional production capability in order to meet increasing market demand for the recordable DVD drives in Korea and other countries. In addition, mass production of 350mW Laser Diodes (ML1XX27 series) will start in June 2005. This series boasts a record-high optical power output in the industry and supports the highest x16-speed recording on the double layer discs.

**Background and Outline**

High optical power output semiconductor laser is essential to increase recording speed of the recordable DVD drives corresponding to the required recording speed. Since its pioneering commercialization in 1997 of the first generation laser diode with 50mW-class optical power output for the recordable DVD drives, Mitsubishi Electric has been a forerunner in consecutive development and commercialization of the high power red laser diodes supporting high-speed recording evolved rapidly from x4, x8 and x12 up to x16. In 2004, mass production of the 250mW laser diodes (ML1XX25 series) turned into reality at Mitsubishi Electric, supporting the highest x16-speed recording. These series of laser diodes employ the window mirror structure\* that avoids laser mirror degradation caused when increasing output power, a low-loss optical waveguide structure\*\* that lowers operating current and other own unique technologies. These independently developed technologies and products have led Mitsubishi Electric to gain approximately 70% of market share and to monthly produce 7 million units of the High-Power Red Semiconductor Laser Diodes. These accomplishments and the contribution to the industry were highly commended by the prestigious “Okochi Memorial Foundation”\*\*\*, whose “Grand Production Prize”\*\*\*\* of 2004 was presented to Mitsubishi Electric.

The recordable DVD drives market is predicted to grow further, and the market size in 2005 is estimated 50% larger than in 2004. In particular, Korean producers of the recordable DVD drives are expected to sharply increase their production. To meet the increasing market demand Mitsubishi Electric has determined to build a production system that enables monthly production of 10 million units starting from October 2005. In addition, the industry's first 350mW laser diode (ML1XX27 series) that supports the highest x16-speed recording on the double layer discs\*\*\*\*\* has already been developed at Mitsubishi Electric, and the mass production is scheduled to start in June 2005.

As described above Mitsubishi Electric is committed to serving the rapidly growing recordable DVD drives industry with the largest market share and production capability as well as with the high-power red semiconductor laser diodes having the industry's highest performance characteristics.

Notes:

- \* : It is a structure in which the laser diode's mirror emitting optical output does not absorb any laser light with the use of specially treated mirror facet. It enables high optical output and high reliability, by avoiding crystal disruption (catastrophic optical mirror damage phenomenon) caused by heat generation due to the absorption of light in the mirror facet.
- \*\* : It is a path where the light goes through when amplified inside the semiconductor laser diode. In order to stabilize the oscillation of laser light the waveguide has to be processed with higher accuracy. Mitsubishi Electric has realized such high accuracy processing by utilizing the dry etching technology.
- \*\*\* : Okochi Memorial Foundation was established in 1954 in commemoration of Dr. Masatoshi Okochi's achievements. The foundation annually presents prizes for outstanding achievements in Japan's production engineering and technology development.
- \*\*\*\* : This is the supreme prize among those presented to enterprises that rendered the most distinguished industrial achievement with originality in production engineering and technology.
- \*\*\*\*\* : The disc has 2 layers for recording so that nearly double recording capacity is available. The single layer disc has capacity of 4.7GB per side. The double layer disc has 8.5GB per side capacity and needs extra optical power output by approximately 50% more than that needed for the single layer one.

## **Features of Mitsubishi Electric's High-Power DVD Laser Diode Business**

### **1. Always Pioneering in the Development of Highest-Power Laser Diode**

Mitsubishi Electric has been and is a pioneer in the development of the industry's highest power laser diodes for recordable DVD drives, by employing its own unique window mirror structure, optimized optical waveguides and highly accurate process technologies. Currently it produces 250mW laser diode (ML1XX25 series) that supports the highest x16-speed recording, and will start in June 2005 mass production of 350mW laser diode (ML1XX27 series) for double layer discs with x16-speed recording.

### **2. Stable Production and Higher Market Share**

Adoption of the unique device structure with less manufacturing man-hour coupled with quantitative process control technology used in a process has realized the stable production of products with superb uniformity of quality. This has led the monthly production of 7 million units and nearly 70% of market share, which has encouraged many customers to place a high level of confidence in Mitsubishi Electric.

### 3. Contribution to the Industry and High Recognition

Mitsubishi Electric's advanced technology for increasing optical power output of laser diodes for recordable DVD drives is highly recognized by standardization organizations like DVD Forum, and has contributed to formulation of industry standards and improvement of recording performance for recordable DVD drives by means of a series of industrial presentations that Mitsubishi Electric made as guest presenters to general audience, and of industrial seminars as well. Having commended Mitsubishi Electric for its development and production activities of laser diodes that have served the industry, Okochi Memorial Foundation chose it for a winner of the "Grand Production Prize" of 2004.

### **Future Business Strategy**

Japanese domestic pickup manufacturers have so far been the major customers of the laser diode. It is predicted, however, that the supply to Korean manufacturers will increase also in the future. Utilizing its ample production capability coupled with its accumulated technology for the high-power red semiconductor laser diode, Mitsubishi Electric is now committed to also serving the Korean industry of recordable DVD drives. In addition, it will provide dual wavelength laser diode for integrated CD and recordable DVD use, and more variety of compact package types suitable for slim-type models of DVD drives.

### **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 3,410 billion yen (US\$ 31.9billion\*) in the fiscal year ended March 31, 2005.

For more information visit <http://global.mitsubishielectric.com>

\*At an exchange rate of 107 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2005.

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