

**Product Announcement**

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**FOR IMMEDIATE ANNOUNCEMENT**

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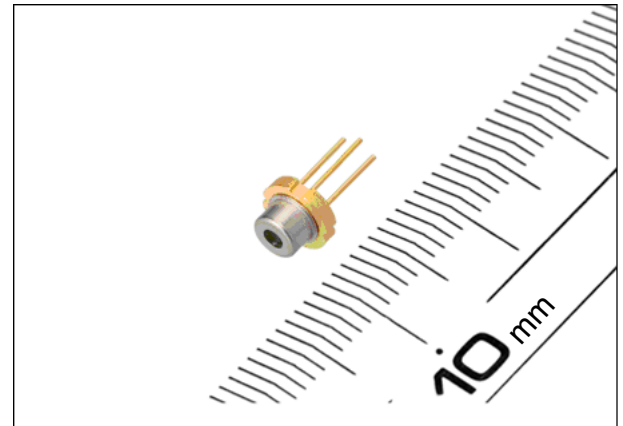
**Sharp Marks Milestone in Volume Production of High-Power Laser Diodes**

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**210 mW Blue-Violet (406 nm) Laser Diodes  
have been produced for over a year**

Sharp's High-Power Blue-Violet Laser Diode GH04P21A2GE has been delivering an industry-leading power output of 210 mW in consumer goods and industrial devices for over a year. This device, with its high power output and 406 nm (TYP.) wavelength, is key to high-speed 6X recording on next-generation dual-layer Blu-ray Discs.

The GH04P21A2GE makes full use of crystal growth technology developed for infrared, red, and blue-violet low-power laser diodes. In addition to Sharp's laser chip utilizing a proprietary facet structure to yield a high optical power output of 210 mW, this device also features a long service life of 10,000 hours, a level that leads the industry.



As terrestrial digital broadcasting spreads, worldwide demand for LCD TVs and HD recorders that support full-spec 1080p HDTV is expanding rapidly; as are computer peripherals capable of recording on next-generation DVDs. Demand for blue laser diodes is following this upward trend. Demand for faster recording times requires speeding up the write process for individual layers on these discs.

Since beginning mass production of the industry's first infrared laser diode for use in CD players in 1982, Sharp has consistently been an industry leader in both technology and production.

The GH04P21A2GE targets optical storage applications, as well as Office Automation equipment, Audio/Visual equipment, Home appliances, Telecommunications equipment, Measuring equipment, and Factory Automation applications.

**Major Features**

Wavelength: 406 nm (TYP.)

Optical power output of 210 mW (MAX.), one of the highest in the industry.

Long service life of 10,000 hours, currently the industry's longest – means high reliability.

A lower-power version (20 mW MAX.) is available as GH04020A2GE.

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PARAMETER	CONDITION	VALUE
DC optical power (CW MAX.)	Continuous Wave (CW)	105 mW
Pulse optical power (MAX.)	Pulse, 50% Duty Cycle	210 mW
Threshold DC optical current (TYP.)	—	40 mA
Operating current (TYP.)	$P_O = 105 \text{ mW (CW)}$	120 mA
Wavelength (TYP.)		406 nm
Beam divergence (TYP.)	$P_O = 105 \text{ mW (CW)}$	9° Horizontal
		19° Vertical
Operating temperature (CW and Pulse)	-10°C to +70°C	

**GH04020A2GE Specifications**

PARAMETER	CONDITION	VALUE
DC optical power (CW MAX.)	Continuous Wave (CW)	20 mW
Threshold DC optical current (TYP.)	—	25 mA
Operating current (TYP.)	$P_O = 10 \text{ mW (CW)}$	35 mA
Wavelength (TYP.)		406 nm
Beam divergence (TYP.)	$P_O = 5 \text{ mW (CW)}$	9.5° Horizontal
		20° Vertical
Operating temperature	0°C to +70°C	

The above are only partial specifications. Full specifications for these parts are available on the Sharp Microelectronics of the Americas website ([www.SHARPsma.com](http://www.SHARPsma.com)). These parts are RoHS\* compliant.

Please contact Abdul Aslami at [aslamia@sharpsec.com](mailto:aslamia@sharpsec.com) with any questions you may have regarding these new additions to the Sharp product line.

**About Sharp Microelectronics of the Americas**

Sharp Microelectronics of the Americas (SMA) drives innovative LCD, optoelectronics, memory, imager, and RF components to market. The world's leading manufacturers of consumer and business technologies look to SMA for the products, expertise, and worldwide support they need to make their visions a reality.

SMA, in Camas, Washington, is the microelectronics sales and marketing division of Sharp Electronics Corporation, a wholly owned subsidiary of Sharp Corporation.

For more information, visit us at [www.SHARPsma.com](http://www.SHARPsma.com).

\* The Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive (2002/95/EC). This directive took effect July 1, 2006.