

## China Photoelectron Crystal Materials & Components Industry Report, 2008



With the rapid development of electro-optics materials and components, a backbone of hi-tech industry, namely, the optoelectronic technology industry has already taken shape around the world, the progression and application of which reflects the hi-tech strength of a country in a way. As the core of optoelectronic technology, electro-optical crystal materials play a key role. Besides, there are higher and updating requirements on electro-optical crystal materials, following the development and application of optoelectronic technology. All Solid State Laser (DPL) Technology that takes artificial crystal as a core component and large power semiconductor laser (LD) as pump source is a profound development trend of optoelectronic technology, which is prevalently used in such fields as military, science & technology and medical treatment. Along with the entry of tri-color GRB laser display into home theatre system and laser big-screen market, all solid state laser (DPL) technology gets a bright future for large-scale production. Non-linear laser crystal component is the core component of tri-color GRB laser products, which is of a higher added value. China takes a lead in this field and has its own intellectual property rights.

Nowadays, the all solid state laser that is featured with high efficiency and high power is the main development trend of lasers. The development trend of electro-optical crystal materials is as follows. Firstly, more efforts ought to be made to improve the quality and good yield of original materials so as to considerably reduce the cost for access to civilian market. Secondly, new functional crystal materials should be developed according to the demand of information technology and other application technologies. Thirdly, crystal processing techniques should be further improved through in-depth study, and the development of processing crystal components should be strengthened.

Fourthly, more attempts should be made in the research and development of crystal components to continuously increase the output power and stability of lasers. Facing an ever-increasingly fierce competition in international market, China must resolve the problem of poor capability in R&D of forward-looking new materials in artificial crystal and artificial crystal materials with self-owned intellectual property. In addition, China should reinforce its strength in technical innovations to obtain more technologies with independent intellectual property for more effective large scale production.

At present, non-linear optical crystals are mainly applied in solid state lasers. Along with the wider application and increasing application of solid state laser, the application of non-linear optical crystal materials is constantly expanding.

### Market Shares of Key Products of Fujian CASTECH Crystals Inc. in Recent Three Years

Item	Product	2004 yr	2005 yr	2006 yr
Non-linear Optical Crystal Elements	LBO	75.51%	55.93%	56.54%
	BBO	28.68%	26.39%	25.26%
	KTP	2.69%	3.37%	3.58%
Laser Crystal	Nd:YVO4	20%	25%	30%
Glued Crystal	Nd:YVO4+KTP	40%	50%	50%

Source: CASTECH

China is one of the earliest researchers in non-linear optical crystals and its crystal growing technology leaves other nations behind. So far, China has had nearly 30 electro-optical crystal materials growing or processing enterprises, of which Fujian CASTECH Crystals, Inc is the world's largest producer of non-linear optical LBO and BBO crystals and related components.

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## How to Buy

Product details			How to Order
Single	USD	File	By email: report@researchinchina.com
	499	PDF	By fax: 86-10-82600829
Enterprisewide	998	PDF	By online: www.researchinchina.com
Publication date: May 2008			
For more information, call our office in Beijing, China: Tel: 86-10-82600828 Website: www.researchinchina.com			