

CKLASER

Flashing Technology

Introduction

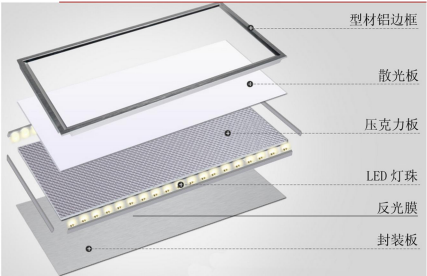
LGP laser marking machine could convert dot light or line light into even surface light source, very environmental, suitable for High-volume, multi-species, high-speed, high-precision continuous production of industrial processing site.



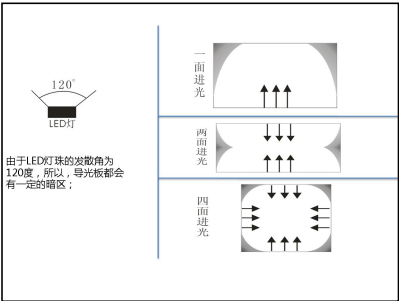
Parameters

LGP Laser dotting machine			
	Basic	Standard	Superior
> Marking system parameters			
Average power (Lowest)	180W	250W	350W
Peak power	298W	525W	630W
Laser Level	4		
Laser wavelength	10640nm		
Marking speed (Max)	1500dots/s	2200dots/s	4000dots/s
Pulse frequency	0-130KHz		
Marking scope (Standard)	800mm×800mm	800mm×800mm;1200mm×1200mm	
Spot size (R)	0.4mm-0.7mm	0.5mm-1.0mm	0.3mm-0.8mm
> Working parameters			
Input voltage	220VAC		
Power consumption	4.5KW	8KW	10KW
Average consumption	3KW	4.5KW	5.5KW
Cooling method	Constant Temperature Cooling Unit		
Temperature	20-30℃ , No condensation		
Humidity	30%-80% , No condensation		
Operation software	EZLASER2.0		
> Dimension and weight			
Host	1420mm×1020mm×710mm	2600mm×1350mm×1920mm	3300mm×1350mm×1920mm
Controller dimensions	1670mm×1020mm×900mm	810mm×920mm×710mm	810×mm920mm×710mm
Water cooling dimensions	484mm×393mm×967mm		
Net weight	226KG		

LED flat light



Led flat light composition



Led flat light way path

类型	尺寸	功率
圆形面板灯	4~12寸	5~18W
	300X300X15mm	10W
	300X600X15mm	20W
	300X1200X15mm	40W
吊顶面板灯	600X600X15mm	40W
	600X1200X15mm	72W
	110X110X15mm	12W
方形面板灯	220X220X15mm	16W
	1200X1200内	—

Led flat panel specifications

What is LGP?



Laser dot of light guide plate



Outdoor LED lighting

Light guide plate is widely used in liquid crystal display backlight, ultra-thin advertising light boxes, medical X-ray film, flat-panel lighting, light engineering light use, luminous signs and other new environmental protection lighting, its function is to convert the side light source into a surface light source and uniform light.

Silk screen dots and laser dots



Silk screen dots



Laser dots

Silk screen dots only attached the ink to the acrylic surface, but laser is stripped part of the acrylic plate; in the course of the experiment, we found that the deeper engraved dots, the higher reflection rate.

Comparison between silk screen and laser dot

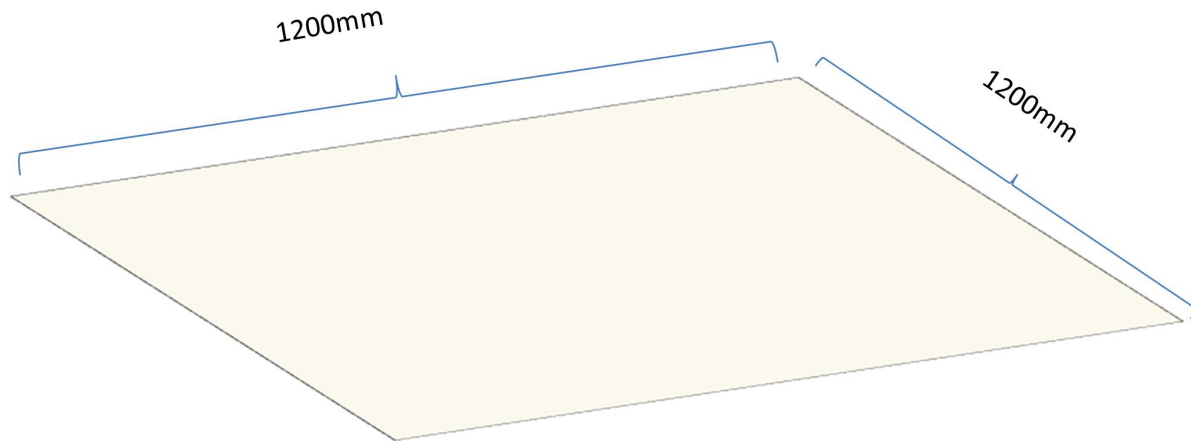
	Laser engraving	screen printing
Reflection unit	Convex bump	Plane bump
Reflection medium	Vaporized on PMMA	Printed ink on PMMA
Surface illuminance	20% higher than printing	—— ——
Evenness	More than 90%	About 75%
Transmittance	More than 95%	About 85%
Yellowing rate	No yellowing	More than 5%
Dot accuracy	0.2-0.6mm	1-2mm
Life	5-8 years	2-3 years (Ink damp deterioration)
Quality	Never fade	Gradually fade
Environmental	No pollution	Ink easy to fall off
Anti-UV level	Strong	Weak
Shape	Can be cut to any shape	Fixed shape

	Laser engraving	Screen printing
Efficiency	90 s (600X600mm)	120 s/piece (Singal product line)
Material consumed	Electricity	Ink water and gas network plate acid
Grouped equipment	no need	Transmission lines and oven equipment
Design cycle	Short	Long (Stencil making takes a long time)
Labor	1 person	Multi persons
Operability	Simple	Complex
Scrap rate	low	High (Ink easy to fall off)
Plant occupancy	4 square meters per device	200 square meters per line
Market price	Much higher	From 100,000 to 200 million

CK-LGP Advantages

- I Large processing format**
1200mm×1200mm
- II High Processing efficiency**
4000 dots/s
- III high processing uniformity**
90% uniformity

Large processing scope



The device is mainly used for laser light guide plate network, the standard range of 600mm × 600mm, 800mm × 800mm, 1200mm × 1200mm. Using the moving platform to be extended to 1200mm × 2400mm.

Higher processing rate

The fastest speed can up to 4000 dots/s, it will take about 2 minutes to complete per square meter RBI. Light guide plate equipment is a high-speed RBI equipment, conventional laser takes 2-3 minutes to make a LGP dot production, while CK equipment only takes 30-40 seconds, 4-5 times higher efficiency.

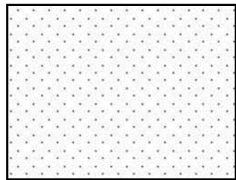
High processing uniformity



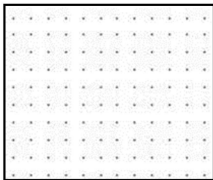
light guide plate uniformity of laser dot up to 90%, the surface brightness is 10% higher than silk screen, 30% higher than the crossed, yield up to 99%, almost no waste.

Professional marking software

错开：



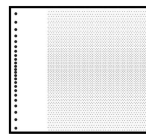
对齐：



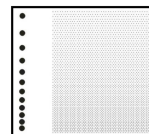
Intelligent dot layout



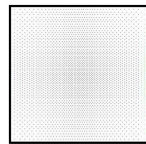
Bitmap marking



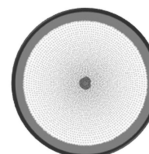
二面进光的布点



一面进光的布点



四面进光的布点

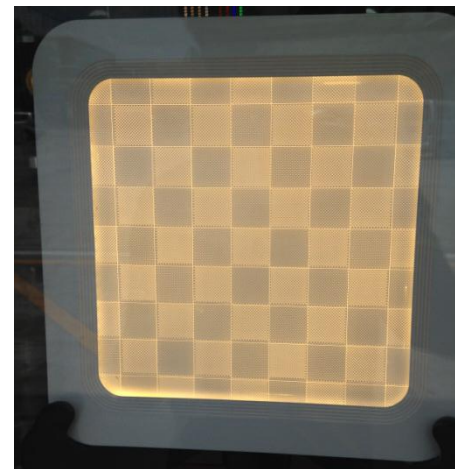
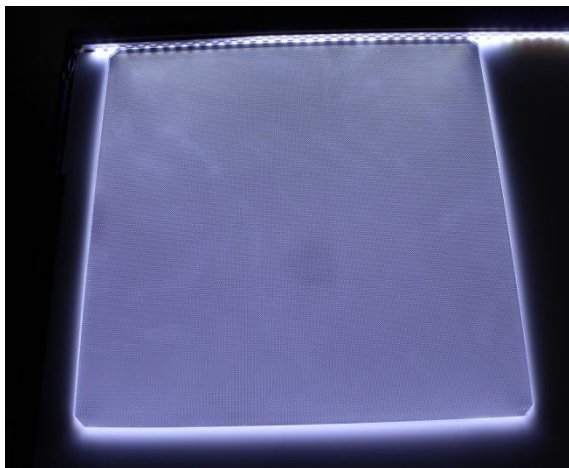


环形进光的布点

Light way path

Optimize the marking path

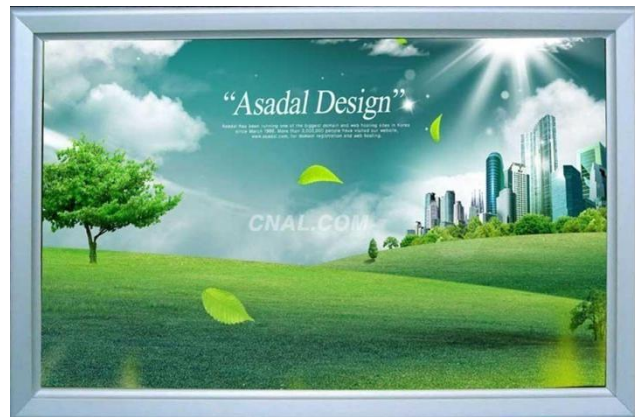
Product Application - Spotlight



Product Application - Flat light



Product Application - Light box



CKLASER

Thanks for your watching