Material Parameter Reference of AlgoLaser_Alpha_MK2 for 20W for LaserGRBL

Material	Image	Conversion Tool	Speed (mm/min)	Laser Mode	S-MIN (laser power)	S-MAX (laser power)	Mode	Pass Count	Test Result	Remark	Reference Picture(Parameter setting location)
4mm Birch Plywood 4mm 桦木胶合板		Vectorize	400	M3	0%	100%	line	1			
6mm Birch Plywood		Vectorize	300	M3	0%	100%	line	1			
9mm/10mm Birch Plywood		Vectorize	100	M3	0%	100%	line	1			
12mm Birch Plywood		Vectorize	100	M3	0%	100%	line	3		The bottom of the cut is slightly burnt	
3mm Basswood Plywood 3mm 椴木胶合板		Vectorize	700	M3	0%	100%	line	1			
5mm Basswood Plywood		Vectorize	300	M3	0%	100%	line	1			
6mm Basswood Plywood		Vectorize	300	M3	0%	100%	line	1			
8mm Basswood Plywood		Vectorize	200	M3	0%	100%	line	1			
10mm Basswood Plywood		Vectorize	100	M3	0%	100%	line	1			
12mm Basswood Plywood		Vectorize	100	M3	0%	100%	line	1			
13mm Basswood Plywood		Vectorize	100	M3	0%	100%	line	2			
14mm Basswood Plywood		Vectorize	100	M3	0%	100%	line	2			
15mm Basswood Plywood		Vectorize	100	M3	0%	100%	line	2			
20mm Basswood Plywood		Vectorize	200	M3	0%	100%	line	15		Drop the focal length by 1mm	
5mm Eucalyptus plywood 5mm 桉木胶合板		Vectorize	300	M3	0%	100%	line	1			
10mm Eucalyptus plywood		Vectorize	200	M3	0%	100%	line	2			
12mm Eucalyptus plywood		Vectorize	200	M3	0%	100%	line	4			
15mm Eucalyptus plywood		Vectorize	300	M3	0%	100%	line	6		The bottom of the cut is slightly burnt	
5mm Pine Board 5mm 松木板		Vectorize	200	M3	0%	100%	line	1			
10mm Pine Board		Vectorize	100	M3	0%	100%	line	1			
12mm Pine Board		Vectorize	100	M3	0%	100%	line	1			
15mm Pine Board		Vectorize	100	M3	0%	100%	line	2			
19mm Pine Board		Vectorize	100	M3	0%	100%	line	3			
20mm Pine Board		Vectorize	100	M3	0%	100%	line	3			
30mm Pine Board		Vectorize	100	M3	0%	100%	line	10			
3mm Paulownia Plank 3mm 泡桐木板		Vectorize	1000	M3	0%	100%	line	1			
5mm Paulownia Plank		Vectorize	700	M3	0%	100%	line	1			
8mm Paulownia Plank		Vectorize	500	M3	0%	100%	line	1			
10mm Paulownia Plank		Vectorize	100	M3	0%	100%	line	1			
12mm Paulownia Plank		Vectorize	100	M3	0%	100%	line	1			
15mm Paulownia Plank		Vectorize	200	M3	0%	100%	line	1			
20mm Paulownia Plank		Vectorize	200	M3	0%	100%	line	1			
3mm MDF 3mm 中密度板		Vectorize	200	M3	0%	100%	line	1			
5mm MDF		Vectorize	200	M3	0%	100%	line	2			
12mm MDF		Vectorize	300	M3	0%	100%	line	6			
8mm White Oak 8mm 白橡木		Vectorize	200	M3	0%	100%	line	1			
10mm White Oak 10mm 白橡木		Vectorize	160	M3	0%	100%	line	1			
12mm White Oak 12mm 白橡木		Vectorize	200	M3	0%	100%	line	2			
15mm White Oak 15mm 白橡木		Vectorize	200	M3	0%	100%	line	4			
20mm White Oak 20mm 白橡木		Vectorize	200	M3	0%	100%	line	5			
8mm red oak 8mm 红橡木		Vectorize	160	M3	0%	100%	line	1			
10mm red oak 10mm 红橡木		Vectorize	130	M3	0%	100%	line	1			
12mm red oak 12mm 红橡木		Vectorize	200	M3	0%	100%	line	3			
15mm red oak 15mm 红橡木		Vectorize	200	M3	0%	100%	line	4			
20mm red oak 20mm 红橡木		Vectorize	200	M3	0%	100%	line	4			
25mm red oak 25mm 红橡木		Vectorize	200	M3	0%	100%	line	10			
3mm red translucent Acrylic 3mm 红色半透明亚克力		Vectorize	100	M3	line	100%	line	1			
3mm Yellow transparent Acrylic 3mm 黄色透明亚克力		/	/	/	/	/	/	/	Can't cut		
3mm light tan transparent acrylic 3mm 浅棕色亚克力		/	/	/	/	/	/	/	Can't cut		

Material								Notes
3mm dark gray acrylic 3mm 深灰色亚克力	/	/	/	/	/	/	/	
5mm Black Acrylic 5mm 黑色亚克力(不透明)	Vectorize	100	M3	0%	100%	line	1	
6mm Black Acrylic	Vectorize	100	M3	0%	100%	line	1	
8mm Black Acrylic	Vectorize	100	M3	0%	100%	line	1	
10mm Black Acrylic	Vectorize	60	M3	0%	100%	line	2	
15mm Black Acrylic	Vectorize	100	M3	0%	100%	line	4	
20mm Black Acrylic	Vectorize	100	M3	0%	100%	line	4	There is an irritating odor when cutting, so cut with caution
25mm Black Acrylic	Vectorize	100	M3	0%	100%	line	10	
30mm Black Acrylic	Vectorize	100	M3	0%	100%	line	10	
40mm Black Acrylic	/	/	/	/	/	/	/	
45mm Black Acrylic	Vectorize	100	M3	0%	100%	line	15	
47mm Black Acrylic	/	/	/	/	/	/	/	
50mm Black Acrylic	/	/	/	/	/	/	/	
3mm Green Acrylic 3mm 绿色亚克力(不透明)	Vectorize	300	M3	0%	100%	line	2	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
5mm Green Acrylic	Vectorize	100	M3	0%	100%	line	2	
8mm Green Acrylic	Vectorize	100	M3	0%	100%	line	4	
3mm Orange Acrylic 3mm 橙色亚克力(不透明)	/	/	/	/	/	/	/	Can't cut
6mm Orange Acrylic	/	/	/	/	/	/	/	
3mm Blue Acrylic 3mm 蓝色亚克力(不透明)	/	/	/	/	/	/	/	Can't cut
3mm Yellow Acrylic 3mm 黄色亚克力(不透明)	Vectorize	100	M3	0%	100%	line	1	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
5mm Yellow Acrylic	Vectorize	100	M3	0%	100%	line	2	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
8mm Yellow Acrylic	/	/	/	/	/	/	/	Can't cut
3mm Red Acrylic 3mm 红色亚克力(不透明)	Vectorize	100	M3	0%	100%	line	1	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
5mm Red Acrylic	Vectorize	100	M3	0%	100%	line	1	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
10mm Red Acrylic	Vectorize	200	M3	0%	100%	line	6	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
15mm Red Acrylic	/	/	/	/	/	/	/	Can't cut
3mm PolyVinyl Chloride (雪弗板)	Vectorize	1600	M3	0%	100%	line	1	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
5mm PolyVinyl Chloride	Vectorize	900	M3	0%	100%	line	1	
15mm PolyVinyl Chloride	Vectorize	300	M3	0%	100%	line	2	
1mm Gray Cardboard 1mm 灰纸板	Vectorize	1200	M3	0%	100%	line	1	
2mm Gray Cardboard	Vectorize	500	M3	0%	100%	line	1	
3mm Gray Cardboard	Vectorize	300	M3	0%	100%	line	1	
6mm Gray Cardboard	Vectorize	300	M3	0%	100%	line	2	
1mm White Cardboard 1mm 白纸板	Vectorize	1100	M3	0%	100%	line	1	
2.5mm White Cardboard	Vectorize	600	M3	0%	100%	line	1	There is a slight yellowing next to the cutting path
3mm White Cardboard	Vectorize	600	M3	0%	100%	line	1	There is a slight yellowing next to the cutting path
1mm Black Cardboard 1mm 黑纸板	Vectorize	1100	M3	0%	100%	line	1	There is a slight yellowing next to the cutting path
2.5mm Black Cardboard	Vectorize	600	M3	0%	100%	line	1	
1mm Coated Duplex Board (牛卡纸)	Vectorize	1100	M3	0%	100%	line	1	
2mm Coated Duplex Board	Vectorize	600	M3	0%	100%	line	1	
2mm Corrugated Board 2mm 瓦楞纸	Vectorize	2000	M3	0%	100%	line	1	
5mm Corrugated Board	Vectorize	1000	M3	0%	100%	line	1	
1.5mm Leather 1.5mm 皮革	Vectorize	600	M3	0%	100%	line	1	There is an irritating odor when cutting, so cut with caution
2mm Leather	Vectorize	600	M3	0%	100%	line	1	There is an irritating odor when cutting, so cut with caution
0.2mm colored paper 0.2mm 彩纸	Vectorize	10000	M3	0%	100%	line	1	
0.6mm colored canvas 0.6mm 彩色帆布	Vectorize	2000	M3	0%	100%	line	1	Cut edges neatly, but slight burn marks can be seen
0.6mm white canvas 0.6mm 白色帆布	Vectorize	1000	M3	0%	100%	line	1	Cut edges neatly, but slight burn marks can be seen
0.7mm denim 0.7mm 牛仔裤	Vectorize	1800	M3	0%	100%	line	1	Cut edges neatly, but slight burn marks can be seen
0.8mm denim	Vectorize	1800	M3	0%	100%	line	1	Cut edges neatly, but slight burn marks can be seen
1mm rubber 1mm 橡胶	Vectorize	400	M3	0%	100%	line	3	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
3mm rubber	/	/	/	/	/	/	/	Can't cut
1mm white ABS sheet 1mm 白色ABS	Vectorize	200	M3	0%	100%	line	2	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
0.8mm black ABS sheet 0.8mm 黑色ABS	Vectorize	1200	M3	0%	100%	line	1	

Material	Mode	Speed	Pass	Min Power	Max Power	Type	Count	Notes
2mm black ABS sheet	Vectorize	700	M3	0%	100%	line	1	There is an irritating odor when cutting, so cut with caution
3mm black ABS sheet	Vectorize	400	M3	0%	100%	line	1	
4mm black ABS sheet	Vectorize	300	M3	0%	100%	line	1	
6mm black ABS sheet	Vectorize	200	M3	0%	100%	line	2	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
8.5mm bamboo **8.5mm 竹子**	Vectorize	100	M3	0%	100%	line	1	
0.2mm 3K carbon fiber board **0.2mm 3K碳纤维板**	Vectorize	200	M3	0%	100%	line	1	There are burn marks along the cutting path and a pungent odor is emitted during the cutting process. Cut with caution
0.5mm 3K carbon fiber board	Vectorize	100	M3	0%	100%	line	10	
1mm 3K carbon fiber board	/	/	/	/	/	/	/	
clear acrylic **透明亚克力**	/	/	/	/	/	/	/	
copper **铜**	/	/	/	/	/	/	/	
gold **金**	/	/	/	/	/	/	/	Can't cut
Pure aluminum **纯铝**	/	/	/	/	/	/	/	
pure iron **纯铁**	/	/	/	/	/	/	/	

Notice：
1、The results would be different in even same material with different finishing or different colors, So you need to adjust the speed and power rate based on different objects. Also, please adjust the focal length to be the best, make the focal spot to be the smallest.
2、It couldn't engrave or cut directly: Glossy metal plate, Transparent materials, Reflecting materials, Some materials in white color or pervious to light, etc. Then, you need to use the marker pen to black it to engrave.