

LP2 - Example settings for different materials

Category	Material	Specification	Mode	Res	Coated	Power	Depth	Times
Bamboo	Bamboo Products	Nanzhu	Gray	1K	-	100	60	1
Bamboo	Bamboo Products	Nanzhu	Gray	2K	-	100	20	1
Bamboo	Bamboo Products	Nanzhu/Varnished Bamboo/Yuzhu	Bin	1K	-	50	20	1
Bamboo	Bamboo Ware	Phyllostachys Pubescens	Bin	2K	-	60	5	1
Bones	Ox Horn		Bin	1K	Whiteboard Pen	60	15	1
Bones	Ox Horn		Bin	2K	Whiteboard Pen	50	10	1
Ceramics	Ceramic	Ruyao/Longquan Celadon Ware	Bin	2K	Whiteboard Pen	100	100	1
Ceramics	Ceramic		Bin	1K	Whiteboard Pen	100	100	1
Ceramics	Purple Sand	Red/Brown	Bin	1K	-	100	10	1
Ceramics	Purple Sand		Bin	2K	-	100	5	1
Ceramics	Porcelain	White sublimation cup	Bin	1K	Whiteboard Pen	100	20	1
Ceramics	Porcelain	Black IKEA-mug	Bin	2K	-	100	40	1
Ceramics	Tile	White, Coated with black spray paint	Bin	1K	Black Spray paint	70	2	1
Ceramics	Tile	White, Coated with blue spray paint	Bin	1K	Blue Spray paint	100	5	1
Cloth	Cloth	White Cotton	Bin	1K	-	100	50	1
Cloth	Cloth	Dark And Light Denim	Bin	1K	-	50	15	1
Cloth	Cloth	Dark And Light Denim	Bin	1K	-	100	3	1
Cloth	Cloth	Dark And Light Denim	Bin	1K	-	75	2	2
Cloth	Cloth		Bin	2K	-	20	1	1
Cloth	Cloth	Black Velvet	Bin	1K	-	100	2	1
Cloth	Felt	1 Mm: Black/Orange	GCode-Cut	-	-	100	20	2
Cloth	Felt	1 Mm: Light Pink/Light Purple/Light Blue	GCode-Cut	-	-	100	20	3
Cloth	Felt	1 Mm: Crimson/Light Coffee/Dark Coffee/(Dark Blue/Dark Purple)	Bin	1K	-	20	15	1
Cloth	Felt	1 Mm: Dark Blue	Bin	2K	-	15	15	1
Cloth	Felt	1 Mm: Dark Blue/Dark Purple	Bin	1K	-	20	20	1
Cloth	Felt		Bin	2K	-	20	15	1
Cloth	Microfiber Cloth	Light Pink	Bin	1K	-	20	20	1
Cloth	Microfiber Cloth	Dark Green/Dark Yellow/Light Grey/Light Blue	Bin	1K	-	20	15	1
Food	Food	Cake	Bin	1K	-	40	1	1
Food	Peel	Mango Peel	Bin	1K	-	50	20	1
Food	Food	Macron (dark)	Bin	1K	-	80	5	1
Food	Food	Macron (light)	Bin	1K	-	85	5	1
Glass	Glass	Frosted Glass	Bin	1K	Whiteboard Pen	100	20	1
Glass	Glass		Bin	2K	Whiteboard Pen	80	10	1
Glass	Glass	Beer bottle	Bin	1.3K	Tempera paint	100	20	1
Glass	Glass		Bin	2K	Tempera paint	100	20	1
Glass	Glass	IKEA	Bin	2K	Tempera paint	65	5	1
Glass	Glass	Whiskey Glass	Bin	2K	Black paper tape	100	30	1
Glass	Glass	Wineglass	Bin	2K	Dry moly	100	100	1
Glass	Mirror	Rear engraving	Bin	2K	-	100	5	1
Leather	Composite "Leather"	Basketball	Bin	2K	-	60	2	
Leather	Leather	1.2 Mm Vegetable Tanning	GCode-Cut	-	-	50	10	3
Leather	Leather	Sheepskin/Cowhide/Suede/Plant-Tanned Leather	Bin	1K	-	100	5	1
Leather	Leather	Sheepskin/Cowhide/Turning Fur/Plant-Tanned Skin	Bin	2K	-	100	2	1
Metal	Alumina		Bin	1K	Whiteboard Pen	100	100	1
Metal	Alumina		Bin	2K	Whiteboard Pen	100	100	1
Metal	Alumina Alloy	Gold/Red	Bin	2K	-	100	75	1
Metal	Copper Products	Brass/White Copper	Gray	2K	Oil-based marker	100	100	2
Metal	Copper Products	Brass/White Copper	GCode-Engrave	-	Oil-based marker	100	100	1
Metal	Copperware	Brass/White Copper	Bin	2K	Oil-based marker	100	100	1
Metal	Galvanized Iron Sheet		Bin	2K	Oil-based marker	100	100	1
Metal	Iron	A3	Bin	2K	Oil-based marker	100	100	1
Metal	Iron	A3	Gray	2K	Oil-based marker	100	90	1
Metal	Stainless Steel	304	Bin	1K	Whiteboard Pen	100	100	1
Metal	Stainless Steel	304	Gray	1K	Whiteboard Pen	100	100	2

Oil-based marker = permanent, Sharpie, Dry moly

Many thanks to those (Zhenlu, Yi, Mark, Victor, Michael and more..) who tested and published these settings

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Metal	Stainless Steel	304	Gray	2K	Whiteboard Pen, Dry moly	100	100	2
Metal	Stainless Steel	304	Gray	2K	Oil-based marker	100	100	1
Metal	Stainless Steel	304/201	Bin	2K	Whiteboard Pen	100	100	1
Metal	Stainless Steel	304/201	Bin	2K	Oil-based marker	100	100	1
Metal	Titanium	Ta2	Bin	1K	Whiteboard Pen	100	100	1
Metal	Titanium	Ta3	Bin	2K	Whiteboard Pen	100	100	1
Metal	Aluminium Business Card	Oxidised	Bin	2K	-	100	20	1
Metal	Aluminium Business Card	Painted	Bin	1.3K	-	100	1	1
Metal	Varnish Business Card	Blue/Black	Bin	1K	-	50	20	1
Metal	Varnish Business Card	Rose Gold/Blue/Rose/Yellow	Bin	2K	-	50	10	1
Metal	Varnish Tinplate-White Marks	Pink Blue	Bin	1K	-	100	90	1
Metal	Varnish Tinplate-White Marks	Dark Blue/Rose Gold/Pink Blue	Bin	2K	-	100	75	1
Other	Ceramic Colored Paper		Bin	1K	-	100	20	1
Other	Ceramic Colored Paper		Bin	2K	-	100	5	1
Other	Christmas balls	coloured	Bin	1K	-	70	6	2
Other	Double wall flask	Drink bottle	Bin	1K	-	85	25	1
Other	Embossing Powder		Bin	1K	-	20	15	1
Other	Engraving Film	Pu	GCode-Cut	-	-	50	30	1
Other	Leaves	Dry, Magnolia	Bin	1K	-	50	10	1
Other	Leaves	Dry, Magnolia Veins	GCode-Cut	-	-	100	20	1
Other	Leaves	Fresh	Bin	1K	-	60	2	1
Other	Modeling Clay	Dried for at least a week	Bin	2K	-	100	100	1
Other	Photosensitive Seal		Bin	1K	-	15	10	1
Other	Photosensitive Seal		Bin	2K	-	10	10	1
Other	Photosensitive Seal		Bin	1K	-	10	15	1
Other	Photosensitive Seal		Bin	2K	-	5	15	1
Other	Soap		Bin	1K	-	70	60	1
Other	Lighter	Zippo 236 outdoor black crackle lighter	Bin	2K	-	75	40	1
Paper	Colored Paper	Weight: 230 Gram -2 Dark Yellow/Dark Green/Red/Orange	Bin	1K	-	20	35	1
Paper	Colored Paper	Weight: 230 Gram -3 Light Yellow/Light Green/Light Pink + Coffee/Dark Purple/Dark Grey/Pure Black	Bin	1K	-	20	45	1
Paper	Colored Paper	Weight: 230 Gram - 4 Dark Blue/Light Purple	Bin	1K	-	20	55	1
Paper	Colored Paper	Weight: 230 Gram -5 Light Blue	Bin	1K	-	30	45	1
Paper	Colored Paper	Weight: 70 Gram -1 Dark Yellow/Dark Green/Red/Orange/Dark Purple	Bin	1K	-	15	15	1
Paper	Colored Paper	Weight: 70 Gram -2 Light Yellow/Light Green/Light Pink/Light Purple/Dark Blue	Bin	1K	-	25	15	1
Paper	Colored Paper	Weight: 70 Gram -3 Light Blue	Bin	1K	-	30	15	1
Paper	Colored Paper-Scratch White	Weight: 230 Gram -1 Dark Yellow/Dark Green/Red/Orange/Dark Purple/Coffee/Dark Grey/Pure Black	Bin	1K	-	20	5	1
Paper	Corrugated Paper		Bin	1K	-	100	5	1
Paper	Kraft Paper-0 Common Use	Weight: 120/160/200/250/300/350/400/450 Gram	Gray	1K	-	100	30	1
Paper	Kraft Paper-0 Common Use	Weight: 120/160/200/300/350/400/450 Gram	Bin	1K	-	15	35	1
Paper	Kraft Paper-1 Copy Paper Thickness	Weight: 70/80 Gram	Bin	1K	-	15	25	1
Paper	Kraft Paper-1 Copy Paper Thickness + 2 Thicker	Weight: 70/80/120/160/200/250 Gram	GCode-Cut	-	-	100	20	1
Paper	Kraft Paper-2 Thicker	Weight: 120/160/200 Gram	Bin	2K	-	10	20	1
Paper	Kraft Paper-3 Card Thickness	Weight: 300/350/400/450 Gram	GCode-Cut	-	-	100	30	1
Paper	Paper folder	Blue	Bin	1K	-	80	2	1
Paper	Post-It Notes		Bin	1.3K	-	55	3	1
Paper	Post-It Notes		Bin	2K	-	25	2	1
Paper	Post-It Notes		GCode-Cut	-	-	100	8	1
Paper	White Cardboard	Weight: 230 Gram	Bin	1K	-	30	55	1
Plastic	Acrylic	2 Mm Black	GCode-Cut	-	-	100	100	2
Plastic	Acrylic	Black	Bin	2K	-	20	5	1
Plastic	Acrylic	Dark Blue	Bin	1K	Whiteboard Pen	10	20	1
Plastic	Acrylic		Bin	2K	Whiteboard Pen	10	1	1
Plastic	Acrylic	Transparent	Bin	1.3K	Whiteboard Pen	75	3	1
Plastic	Acrylic	Transparent	Bin	2K	Whiteboard Pen	100	5	1

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Category	Material	Specification	Mode	Res	Coated	Power	Depth	Times
Plastic	Airpods		Bin	2K	Whiteboard Pen	50	1	1
Plastic	Car Window Tint Film	Brite White	Bin	2K	Whiteboard Pen	20	5	1
Plastic	Plastic	Chevrolet	Bin	1K	-	30	15	1
Plastic	Plastic	Eva: 2 Mm Black	GCode-Cut	-	-	50	20	1
Plastic	Plastic	Eva: 4 Mm Black	GCode-Cut	-	-	50	30	1
Plastic	Plastic	Pet	Bin	1K	Whiteboard Pen	10	30	1
Plastic	Plastic	PLA	Bin	1K	-	100	10	3
Plastic	Plastic	Pp/Pvc	Bin	1K	Whiteboard Pen	20	20	1
Plastic	Silicone	Silicone Wrist Bands, Yellow	Bin	1.3K	-	85	25	1
Plastic	Silicone	Silicone Wrist Bands, Blue	Bin	1.3K	-	85	35	1
Stone	Black Pebbles		Bin	1K	-	30	30	1
Stone	Brick		Bin	2K	-	100	100	1
Stone	Jade-White Traces	Serpentine Jade	Bin	1K	Whiteboard Pen	100	50	1
Stone	Jade-White Traces	Xiuyu	Bin	2K	Whiteboard Pen	100	30	1
Stone	Jade-White Traces	Afghan White Jade	Bin	1K	Whiteboard Pen	100	50	1
Stone	Jade-White Traces	Afghan White Jade/Xiuyu Jade/Jadeite	Bin	2K	Whiteboard Pen	100	30	1
Stone	Stone	Slate/Bianshi	Bin	1K	-	100	20	1
Stone	Stone	Slate Coaster	Bin	1.3K	-	100	3	1
Stone	Stone	Slate Coaster	Bin	1K	-	90	3-5	1
Wood	Cork		Bin	1K	-	100	2	1
Wood	Cork		Gray	1K	-	50	5	1
Wood	Cork		Bin	2K	-	10	1	1
Wood	Cork		Gray	2K	-	30	1	1
Wood	Walnut	Unpainted Walnut	Bin	1K	-	30	10	1
Wood	Wood	Beech	Gray	1K	-	100	40	1
Wood	Wood	Coaster	Bin	1K	-	95	4	1
Wood	Wood	Red Sandalwood/Black Walnut/Pine/Big Fruit Red Sandalwood	Bin	1K	-	30	30	1
Wood	Wood		Bin	2K	-	30	10	1
Wood	Wood		GCode-Cut	-	-	100	31	5-10
Wood	Wood		Bin	1K	-	100	16	1
Wood	Wooden Seal	Beech Yinwen/Black Walnut	Bin	1K	-	100	10	3

Good to know:

There are two main categories of surface coatings:

1. **Energi absorber** is a dark coating that improves the absorption of the laser energy and so the effect of the surface burning.
(ex. dry marker pens and sharpies for metal, spray on galvanising for ceramics and acrylics paint.)
2. **Enamelling agent** is a material that itself is burnt onto the surface for materials that cannot be directly burnt or marked.
(ex. dry moly, cerakote or something that contains MoS₂ - molybdenum disulphide)

The engraver's output resolution (pixel/mm) are 10px/mm (1K), 13px/mm (1.3K) and 20px/mm (2K).

If you want to engrave something 60*40mm in 1K then your image should be (60*10=600 and 40*10=400) **600*400px**

If you want to engrave something 60*40mm in 1.3K then your image should be (60*13=780 and 40*13=520) **780*520px**

If you want to engrave something 10cm*1m (trolley) in 1K then your image should be (100*10=1000 and 1000*10=10000) **1000*10000px**

100*100 in 1K = 1000*1000px

100*100 in 1.3K = 1300*1300px

100*100 in 2K = 2000*2000px

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