

Frequently asked questions on the LZ1 engraver.

Can the LZ1 engrave textured powder coat? This is where the LZ1 works exceptionally well. The LZ1 simply heats up and darkens the surface. There are no paint fill or other operations required. The entire painting and marking process is simplified. Paint the panel in the desired color, engrave, done.

How do I engrave a black panel? A black or dark gray panel will require 2 color coats where the engraver removes the top coat to reveal a different color underneath. In this case the EG2 or laser are about the same although the set up is simpler on the laser. The success of this method is predicated on a very even layer of the top coating whether using the EG2 or the LZ1.

Does the LZ1 replace the EG2 and Diamond engraver? Each engraver has its strengths and areas that make its operation more challenging. One of the driving forces in developing the LZ1 is the common use of textured powder coat as a panel paint. Textured or flat finish paint is impossible to paint fill.

Can I engrave plastics with the LZ1. Many plastics can be engraved with the LZ1 or EG2. One such material is Rowmark UltraGrave.

Can the LZ1 engrave aluminum or stainless steel? No. for direct engraving on aluminum or stainless steel, we recommend the Diamond engraver.

Can the EG2 and Diamond engraver be used with all Panel Pro models? Yes.

Can the LZ1 engraver be used with all Panel Pro models? The LZ1 can only be used on a new or modified model 5925.

Does the LZ1 engrave pictures? Not at this time. We are working on a raster file compatibility and do not have an availability date. The LZ1 uses dxf files like all other Panel Pro files.

How big is the laser spot size? The LZ1 has a spot size of .010 inches. If more material than .010 is to be removed, then additional lines must be drawn in. This spot size works perfectly for panel engraving.

Where is the EG2 better? Cutters are available in larger tip widths to make a wider stroke.

Will it cut 6mm plexiglass. NO. This is an engraver, it can cut some thin materials.

Does this engrave faster than the EG2? The engraving time is about the same.

Is this harder to use than the EG2? The LZ1 is easier to use.

How much smoke is generated? Normal engraving in paint or powder coat produces very little smoke. Engraving materials like wood can produce a lot of smoke. We have cut up to 1/16 plastic, but that gives off a LOT of smoke. The LZ1's intended use is engraving. In any operations, good ventilation is required. If cutting operations are contemplated, powered air extraction would be necessary, as well as a fire extinguisher.

What powers the laser? The SC3 Panel Pro controller powers the laser. It connects to the same location that the Measure Pro plugs in. It uses a different connector than the Measure Pro and the Measure Pro uses a different connector as well. It is switched on and off by AvCAM version 18.xxx

What safety precautions should be taken for the use of the LZ1? The LZ1 is a class 4 high power laser. This is the highest classification for rating lasers. The user is responsible for safe use. We supply safety glasses that protect against the 445nm light. At a minimum, the laser must never be used unless properly mounted in the Panel Pro accessory mount pointed down, and the protective glasses used for all personnel in a 1.8 meter radius. We also supply a supplementary view shield that reduces the scattered light.

Can anyone use the LZ1? The user must comply with attached labels, users manual and reference to ANSI Z136.1, American National standard for safe use of lasers. Government regulations regarding the operation of lasers may apply.

Can you give us a copy of ANSI Z136.1? No, it is copyrighted. It is available at www.ansi.org.



LASER LIGHT -- AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT
405 - 460 NM < 10 WATTS CW
EN/IEC 60825-1 2014 (2007 USA)

The label indicates the bounds for certification. Nominal power for the LZ1 is less than 7 watts and a wavelength of 445nm.

Comparison of Panel Pro engravers:	LZ1	EG2	Diamond
engrave light textured powder coat	exceptional	ok	no
engrave and paint fill smooth paint	ok	great	no
engrave through a top layer to reveal another paint layer	great	great	no
note that in either case the top layer needs to be thin and even.			
engrave stainless or bare aluminum	no	possible	great
engraving plastics	great	great	no
engrave anodized aluminum	no	ok	great
engrave large letters with the center filled	outline only	great	no
Ease of use	exceptional	good	great
consumables (cutters to chip or wear)	no	yes	no
possibility of scratching the panel (shadowing)	no	yes	na