



# PLASTIC MARKING

Laser marking of light- and dark-colored plastics

Plastic laser marking offers several advantages over competing technologies like superior mark quality and lower cost of ownership.

Advantages include:

- **Permanence.** With plastic laser marking, the material itself becomes the mark—improving the mark’s durability compared to ink marks or labels.
- **Quality.** Lasers have high imaging resolution and can create line widths of only a few microns.
- **No consumables.** Lasers avoid the consumables associated with other marking technologies. They also eliminate secondary processes like ink curing.

## LASER MARKING METHODS

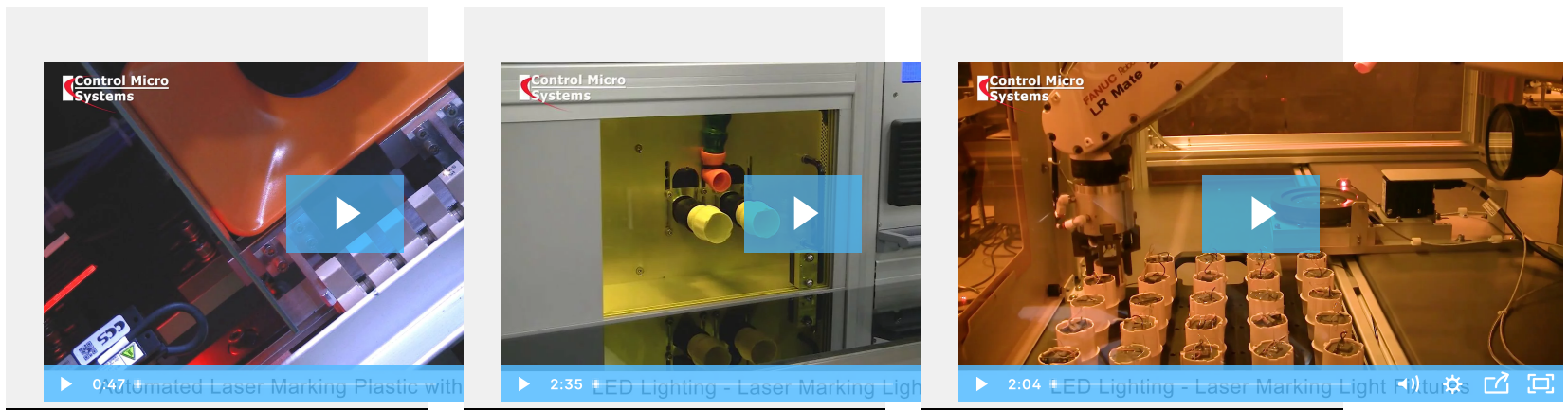
Because “plastic” encompasses a wide range of materials, various types of marks are possible, along with the lasers that produce them.

Our marking processes include:

- **Foaming.** The most common method for marking dark plastics, this process expands the material at the surface to produce a bright color contrast.
- **Carbonization.** The most common method for marking light plastics, this process “burns” the material to produce a dark color contrast.
- **Ablation.** This process removes material by raising the temperature to the vaporization point—producing an engraved mark.
- **Melting.** This process raises the temperature of the material to the melting point—altering the appearance of the mark once it resolidifies.
- **Bleaching.** This process eliminates the plastic’s ability to absorb light—resulting in a white mark.
- **Chemical alteration.** Also referred to as cold marking, this process alters the material’s molecular structure. It’s primarily reserved for applications that are sensitive to thermal damage.

Depending on your type of plastic, one or more of these processes may be appropriate. We can help you select the best method for the job based on the mark’s purpose, its required durability and laser cost.

## VIDEOS



**GET STARTED**

To learn more, contact our **APPLICATIONS LAB**.

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