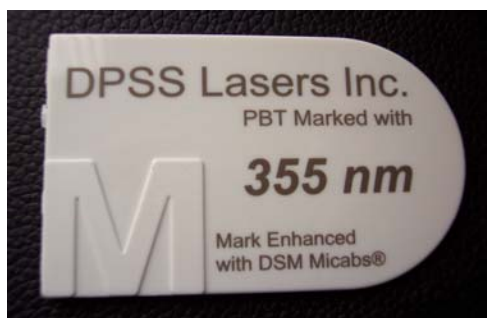


355 nm DPSS LASER MARKING OF PP, POM, TPU AND PBT

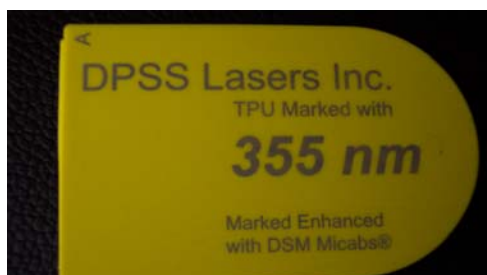


PP, POM, TPU and PBT are thermoplastic polymers used in a wide variety of applications, including packaging, laboratory equipment and medical devices.

These plastics are rugged and unusually resistant to many chemical solvents, bases and acids. By their nature, they resist marking and are only affected by very high heat. This makes these materials very difficult to mark directly, and any attempt to use a laser source usually results in charring or melting of the material.



However, by using an additive such as TiO₂ or Micabs® from DSM, these materials can be easily marked with a DPSS 355 nm laser with no damage to the materials.



The samples pictured contain a 3% mix of Micabs® and are marked using a 355 nm DPSS Laser, Model 3510-30. The resulting high contrast marks are permanent and the polymer remains undamaged.

Laser Model	Average Power	Rep Rate	Scan Rate
3510-30	1 Watt @ 355 nm	30kHz	2 to 4 meters / sec