

Laser welding of plastics.



Welding plastics with the laser: Precise and flexible.

The new diode lasers TruDiode 151 and TruDiode 301 offer numerous benefits during the welding of thermoplastics. They enable contactless, clean and flexible welding of thermoplastics by means of the transmission welding method. Extremely powerful, tight and esthetic joins can be produced in this way. Transmission welding enables almost any weld geometry in the lap joint. This precise application of energy results in minimal thermal and mechanical stress. Weld seams can even be realized in direct proximity to heat-sensitive parts, e.g. electronic components.

Diode lasers: Excellent beam quality and high efficiency.

TruDiode 151 and TruDiode 301 share high performance, excellent beam quality and high efficiency and reliability. Investment and operating costs are low. The lasers are modular in design and offer good output scalability. The integrated power monitoring and real-time power control ensure power stability of < 1% across the entire life cycle of the laser. TruDiode lasers are equipped with the intuitive TRUMPF operating software TruControl 1000. Naturally, they also feature long-distance diagnostics and maintenance via Telepresence.

Welding plastics with TruDiode: Benefits at a glance.

- 1 High precision and reproducibility.
- 2 Top processing quality.
- 3 High mechanical stability.
- 4 Easy integration in production lines.
- 5 Maximum flexibility.



	TruDiode 151	TruDiode 301
Wavelength	920–970 nm	920–1050 nm
Laser power ^[1]	150 W	300 W
Beam quality	< 8 mm · mrad	< 8 mm · mrad
Minimum Ø of laser light cable	150 µm	150 µm
19" Version Dimensions (W x H x D)	483 x 495 x 513 mm	483 x 495 x 513 mm
Stand-alone Version Dimensions (W x H x D)	600 x 1500 x 800 mm	600 x 1500 x 800 mm

^[1] At the workpiece, independent of ambient temperature.