

FARO Tracer^M Laser Projector

3D Laser Projector for Laser-Guided Assembly and Production

FARO[®]



ADVANCED TRAJECTORY CONTROL (ATC)

Provides fast projection with superior dynamic accuracy and a rapid refresh rate – which minimizes flicker associated with other laser projection systems.

ACCURATE, VARIABLE AND LONG-RANGE PROJECTION

Variable focus allows multi-range projection from 1.83 to 15.25 meters (6 to 50 feet).

RETRO-REFLECTIVE ALIGNMENT TARGETS

Photogrammetric targets (6 minimum) are used to enable the best fit alignment of the projected image onto the surface or object, thereby allowing the projected image to be consistent with the CAD model.

MULTI-PROJECTOR ARRAY OPERATION

For large assemblies and/or in space-constrained areas, multiple Tracer^M projectors can be controlled from a single workstation to provide large-scale virtual templates in one coordinate system.

RUGGED, RELIABLE SOLUTION

Proven production floor technology in a dust-sealed industrial enclosure.

ELIMINATE PHYSICAL TEMPLATES WITH VIRTUAL TEMPLATING AND POSITIONING SOLUTION

The FARO Tracer^M Laser Projector accurately projects a laser line onto a surface or object, providing a virtual template which operators and assemblers use to quickly and accurately position components with absolute confidence. The laser template is created using a 3D CAD model which enables the system to visually project a laser outline of parts, artifacts, or areas of interest. The result is a virtual and collaborative 3D template to streamline a wide range of assembly and production applications. Laser projection technology uses CAD files to provide a virtual templating solution which eliminates the need for physical templates and hard tooling, and reduces the risk of human error. As a result, organizations are able to avoid the time and expense associated with using large, heavy templates while significantly improving quality control processes. An easy-to-use operator interface minimizes both the time and the skill required for operation. The FARO Tracer^M Laser Projector is the ideal solution for any organization seeking to improve quality and efficiency. The ability to guide a process sequence, along with accurately locating and orienting components, increases manufacturing efficiencies. Costly non-conformances are eliminated by implementing a simple, reliable, and cost-effective solution to streamline production processes.

BENEFITS

Eliminate physical templates

- ▶ Cost and capital expenditure savings versus building and storing physical templates and tooling
- ▶ Time savings with fast setup and no need to reconfigure tooling work cells - moving immediately from CAD design to virtual template

Reduce scrap and rework, and improve quality and throughput to help minimize rejects and non-conformances

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SPECIFICATIONS

Performance	
Projection Range	1.8 to 15.2 m (6 to 50 ft)
Angular Field of View	60° (X & Y)
Focused Line Width	0.5 mm (0.02 in)
Positional Accuracy	±0.25 mm @ 4.6 m (±0.010 in @ 15 ft)

Dimensions	
Projector Size	L 445 mm x W 239 mm x H 338 mm (L 17.5 in x W 9.4 in x H 13.3 in)
Projector Weight	17.24 kg (38 lbs.)

Laser and Certifications	
Laser Output Power	< 5 mW
Laser Class	CDRH IIIa, IEC 3R (60825-1)
Laser Wavelength	532 nm (Green)
Certifications / Conformity	CDRH, UL, CE

Hardware	
Connectivity	Ethernet LAN CAT 6 Shielded 100Base-T
Power Input	100/240 VAC 50/60 Hz
Ambient Temperature Range	10 - 35°C (50 - 95°F)

INDUSTRIES AND APPLICATIONS

Composite Industry

- Hand ply layup
- Advanced Fiber Placement (AFP) machines
- Mandrel tracking and layup

Aerospace and Defense

- System bracket placement
- Rib and stringer placement
- Click-bonds and stand offs
- Fastener/drill location
- Paint masking

Automotive and Heavy Equipment

- Weld stud/block location
- Precision table applications
- Factory floor layout for Production Lines, Fencing and Robotic Station Layout

Other Industries

- Shipbuilding and marine construction
- Railway

SOFTWARE

The FARO RayTracer™ Software Suite - containing the RayTracer Operator and RayTracer Administrator programs - is required to operate the Tracer^M projector. Customers may also choose to use an additional third-party software package that can directly create XML files in the proper format for the Tracer^M to utilize for projection.



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www.faro.com
Freecall 00 800 3276 7253
info.emea@faro.com

