

FARO® Tracer^M Imaging Laser Projector

3D Laser Projector for Laser-Guided Assembly and Production

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.



Key Features

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

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 nonconformances

Specifications

Performance	
Projection Range	1.8 to 15.2 m (6 to 50 ft)
Angular Field of View	60° Az x 60° El
Focused Line Width	0.5 mm (0.02 in)
Positional Accuracy	± 0.25 mm @ 4.6 m (± 0.010 in @ 15 ft)
Hardware Specifications and Environmental	
Power Input	100/240 VAC 50/60 Hz
Ambient Temperature Range	10 - 35°C (50 - 95°F)
Connectivity	Ethernet LAN CAT 6 Shielded 100Base-T
Laser Emission	532 nm Laser, 5 milliWatt max/CW, Class 3R Laser Product ^a
Certifications	EU - RoHS UL listed
Complies With	EU/EMC Directive 2014/30/EU Laser Safety IEC 60825-1: 2014a EN 61010-1:2001/CSA-C22.2 No 61010-1 EN 61326-1:2006 EN 301 489 FCC Part 15, Subpart B, Class A ICES-003 2011/65/EU-RoHS
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.)

^aProduct complies with radiation performance standards under the U.S. Food, Drug and Cosmetics Act (FD&C Act) 21CFR 1040 and international standard IEC 60825-1: 2007-03

Software

BuildIT Projector is a modern and intuitive software solution used to generate and plan Tracer^M Laser Projector workflows. With user-friendliness as one of its core strengths, BuildIT Projector allows Tracer^M users to set up laser projection projects in no time. BuildIT Projector flawlessly imports native CAD from all major formats (CATIA, Siemens NX, SolidWorksTM, PTC Creo, AutoCAD[®] DXF/DWG, etc.). Its capabilities cover the creation of the projections as well as the configuration of the Tracer^M and its alignment features.

Local offices in over 25 countries around the world. Go to www.faro.com to learn more.

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Industries and Applications

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

Composites

- Hand ply lay-up
- Advanced Fiber Placement (AFP) machines

Other Industries

- Shipbuilding and marine construction
- Railway

