

Your Shortcut to Added Value Polymer Optical Fibers

About TecSolut

Founded in 2008, TecSolut Ltd. is an Innovation company in the field of Polymer Optical Fibers (POFs). The company develops and produces premium and unique thermoplastic POF's for automotive, medical, military and other applications.

TecSolut's advanced test labs and production facilities are equipped with the most advanced equipment required for cutting-edge R&D.

Core Team

Dr. Oleg Palchik, Founder & CEO Founded TecSolut after more than 19 years of experience in the fields of nanomaterials, polymers, and materials chemistry. Previously served as CTO of a large polymer additives producer in Israel. Oleg has PhD from Bar-Ilan University (Israel) and Post-Doctorate from University of Michigan (USA)

Nadav Tal, CTO

Holds an MSc. in Materials Engineering (Ben-Gurion, Israel) and has more than 10 years of innovative products development. Main areas of expertise: polymers, functional coatings, POF's, and electrons microscopy. Nadav is an expert in R&D project management.

TecSolut has highly professional and experienced team, with background in chemistry, polymer science, materials science, and optics.

The Challenges

The current gold-standard industrial method for manufacturing of Polymer Optical Fibers (POF's) is an extrusion process. It suffers from the following drawbacks:

- **Inflexible:** Cannot be customized to meet special requirements
- **Suitable only** for low-cost commodity POFs
- **Unsuitable** for multicore or other sophisticated POFs

A Revolution in POF Manufacturing

TecSolut's proprietary **Fiber By Design™** method

- Starts with a library of hundreds of commercially available the rmoplastic polymers, their blends with/ without various additives (for refractive index changing purposes).
- TecSolut developed a proprietary extrusion process that can combine numerous clads from a variety of polymers. As many as 15 shells are possible to produce a multistep index POF preform.
- TecSolut technology is allowing production of POF's from incompatible materials.
- TecSolut developed a proprietary drawing process to produce highly sophisticated POFs with complex structure and properties.
- POF's with spherical, rectangular and other shapes are possible.
- The complete, in-house integration and preform production facilities enable low-cost production of premium and added value POFs.



Fiber By Design™ Advantages

Customizable, flexible: Easy customization process to produce a wide variety of premium fiber types and specifications.

Superior fiber attributes: Multi-shell, multi-step index (almost gradient index), hollow, multicore POFs are possible.

Post-treatment: No need for post-treatment

Eco-friendly: Solvent/VOC-free, water-free process

Scale: Suitable for production of small batches or high-volume production of POFs

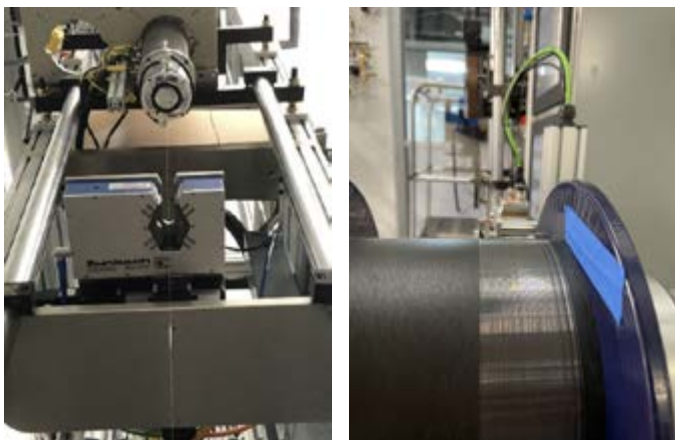
Product cost: low-cost POF-production process

Target Markets: Premium Polymer Optical Fibers

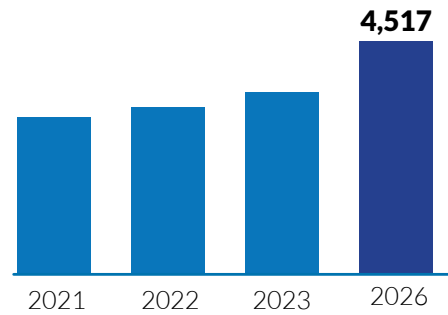
Plastic Optical Fiber Market by Application, 2021-2025

- Automation
- Industrial
- Home Network
- Consumer Electronics
- Interconnections
- Medical
- Others

TecSolut Fiber Production Process



Global Plastic Optical Fiber Market, 2021-2026, in 2021-2026, in USD Million



Source: Exactitude Consulting, 2021.

<https://exactitudeconsultancy.com/reports/711/plastic-optic-fibers-market/>

Strong Portfolio of Patents and Know-How

TecSolut technology is protected by several patents and extensive know-how developed by the company.

Business Models

Joint Development Agreement (JDA) –

development of innovative POFs for specific customer requirements jointly by TecSolut and customer. TecSolut's development cost is covered by customer (part of the cost could be covered by various government subsidies or financial investors). POFs for customers are produced by TecSolut.

Joint Venture (JV) - development of innovative POFs for specific customer requirements jointly by TecSolut and customer. TecSolut's development cost is covered by customer (part of the cost could be covered by various government subsidies or financial investors). POFs for customers are produced by Joint Venture established by TecSolut and customer.

Key Investment Merits for Strategic Partners

Offering a greenfield technology to added-value markets. Paradigm-shift technology with clear competitive advantages. Extensive know-how and patent protection.

Customized. Clean. Simple.

TECSOLUT LTD

26 Adom St. Industrial Park Kanot P.O Box 7017 Gedera 70750, Israel
Tel: +972-8-637-5525 | Cell: +972-50-202-2773 | www.TecSolut.com