

OUR COMPANY

Founded in 1987

EOT collaborates with customers to provide innovative, enabling laser components that represent the best value in terms of performance, reliability, and delivery.

WORLD-CLASS FACILITIES



Traverse City, Michigan – Component Manufacturing & Design

- 15,000 square foot cleanroom; certified ISO 5 & 6
- 5,000 square foot machine shop

Traverse City, Michigan – Optical Coating & Fabrication

- Ion Beam Sputtering (IBS) Coating Machine
- Polishing Capabilities

Idar-Oberstein, Germany – Laser Crystals

- Crystal Growth, Fabrication, & Optical Bonding
- Yb:YAG, CALGO, Nd:YAG, CTH:YAG

COMMITMENT TO QUALITY



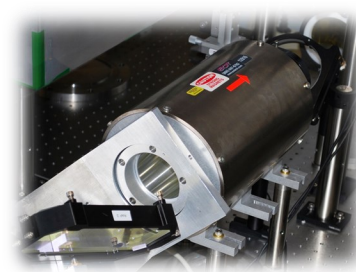
Certified ISO 9001:2015

Rigorous incoming inspection

State-of-the-art metrology equipment

Individual serialization with full component traceability

COMMITMENT TO INNOVATION



Rapid Prototyping (Machining, Optical Fabrication & Coating, Crystal Growth)

Dedicated Custom Solutions team

High power lasers, damage testing, absorption testing, beam diagnostics, & modeling software

ROTATORS & ISOLATORS



MODEL	WAVELENGTH	APPLICATIONS
PAVOS	1010 nm to 1080 nm	Near-IR Solid State Lasers
PAVOS Ultra	1010 nm to 1080 nm	
PAVOS+	1010 nm to 1080 nm	
PAVOS+ Ultra	1010 nm to 1080 nm	
EURYS	720 nm to 950 nm	Visible to Near-IR Lasers
MAKROS	1900 nm to 2100 nm	
TORNOS	500 nm to 1010 nm	Semiconductor Lasers
TORNOS Compact	633 nm to 1064 nm	
TORNOS Broadband	520 nm to 885 nm	
MESOS	4400 nm to 4600 nm	
Dual-stage Isolator	1040 nm to 1120 nm	Fiber Lasers
Fiber-to-Fiber Isolator	1030 nm to 1080 nm	

PHOTODETECTORS



MODEL	WAVELENGTH	TYPE
ET-2000 Series	200 nm to 1100 nm	Silicon
ET-3000 Series	800 nm to 1750 nm	InGaAs
ET-5000 Series	830 nm to 2150 nm	Extended InGaAs
ET-4000 Series	500 nm to 890 nm	GaAs

Amplified versions available

LASER CRYSTALS



FAMILY	CATALOG LASER MATERIALS	APPLICATION
Yttrium Aluminum Garnet (YAG)	Neodymium-doped YAG (Nd:YAG)	Medical, Industrial, Scientific, Military
	Undoped YAG (YAG)	Mirror substrate, Bonding endcaps
	Erbium-doped YAG (Er:YAG)	Medical, Military, Commercial
	Thulium-doped YAG (Tm:YAG)	Medical, Commercial
	Holmium-doped YAG (Ho:YAG)	Medical, Commercial, Sensing, Industrial
	Chromium Thulium Holmium-doped YAG (CTH:YAG)	Medical, Commercial
	Cerium-doped YAG (Ce:YAG)	Scintillation, Fluorescence standards
	Chromium-doped YAG (Cr ⁴⁺ :YAG)	Medical, Military, Industrial
Magneto-Optic	Terbium Gallium Garnet (TGG)	Faraday Isolators
Ytterbium (Yb)-doped Crystals	Calcium Aluminum Gadolinium Oxide (Yb:CALGO)	Femtosecond lasers & applications
	Potassium Gadolinium Tungstate (Yb:KGW)	Femtosecond lasers & applications
	Potassium Yttrium Tungstate (Yb:KYW)	Femtosecond lasers & applications
	Yttrium Aluminum Garnet (Yb:YAG)	Industrial & Scientific applications
	Lutetium Aluminum Garnet (Yb:LuAG)	Industrial & Materials Processing applications

CAPABILITIES

EOT has invested extensively in our optical fabrication capabilities with the addition of two new facilities. Our acquisition of EOT GmbH (Germany) has added crystal growth and fabrication to our capabilities. We have also dedicated a second facility in Traverse City that is responsible for the manufacture of key optical components. Through these vertical integration efforts, EOT is excited to present new, world-class capability and technology for our customers' benefit. We have built a strong supply of components with shorter lead times, improved cost structure, and superior, predictable quality. We work closely with laser manufacturers from product development through OEM production. Below are some of the capabilities EOT has to offer:

CRYSTAL CAPABILITIES

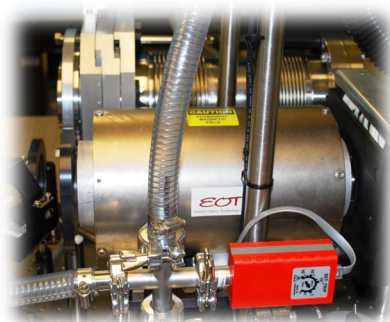
EOT's high quality standards in manufacturing laser and nonlinear crystals are the result of intensive research and development activities in order to improve crystal growth processes and to develop new materials. EOT offers custom manufacturing of laser rods, slabs, discs, and YAG optics for low-volume development efforts or high-volume production needs. EOT's expertise includes:

- Czochralski Oxide growth and Top-seeded Solution growth
- Flat interface Czochralski Oxide growth
- Crystal Engineering
- Optical Contacting and Diffusion Bonding
- High-precision fabrication and polishing of laser rods, slabs, and discs
- Advanced Optical Metrology
 - Interferometer
 - Refractometer
 - Spectrophotometer
 - Polarization Microscope
 - X-ray Diffractometer
- Mechanical Probing of Surface Roughness and Cylindricity
- Profile Projector
- Extinction Ratio



CUSTOM SOLUTIONS

EOT has years of experience designing and manufacturing high quality laser solutions for demanding applications not addressed by our standard product offerings. Below is a listing of some of EOT's experience with custom devices:



- Large aperture, free space Faraday rotators
- High aspect ratio Faraday rotators for slab lasers or high average power lasers
- Work with custom fibers
- Non-standard wavelengths
- Vacuum-compatible or Space-qualified
- Faraday rotators and isolators
- Customized mechanical design
- PCBs, C-mounts, fiber input, and other customization of detectors

APPLICATIONS

Solid State & Ultrafast Lasers

Materials Processing, Defense/Military, LASIK, Medical, and R&D applications

Prevent parasitic oscillations in amplified laser systems due to ASE



VIS to Mid-IR Semiconductor Lasers

Biophotonics, LIDAR, Medical, Spectroscopy, and R&D applications

Eliminate frequency instability in diode lasers and QCLs due to optical feedback



Fiber Lasers

Laser Marking, Micromachining, Laser Engraving, and
Selective Material Removal applications

High energy laser systems used in Directed Energy applications



Photodetectors

Monitoring output of Q-switched, mode-locked, and externally-modulated
CW lasers

Measure time domain and frequency response of pulsed laser systems



Crystals for Diode-pumped, Solid State Lasers

Yb:CALGO

Yb:KGW

Yb:KYW



Medical, Industrial, & Scientific End-use Applications

Nd:YAG

Yb:YAG

Er:YAG

Tm:YAG

Ho:YAG

Ce:YAG

CTH:YAG

Yb:LuAG



Materials for Bonding

Nd:YAG

CTH:YAG

Er:YAG

Yb:YAG

Cr4+:YAG

