

A man and a woman are shown in profile, facing each other. The man is on the left, and the woman is on the right. Between them, several horizontal, glowing blue lines create a sense of connection or data flow. The background is dark, and the lighting is focused on the profiles and the glowing lines.

Corporate Information

Engineering and beyond.

eagleyard AT A GLANCE

Engineered to earn your trust.

Founded 2002 as Spin-off
from Ferdinand-Braun-
Institut/Berlin

Member of the Toptica
Group/Munich since 2013

Products: High Power Single
Emitter Laser Diodes

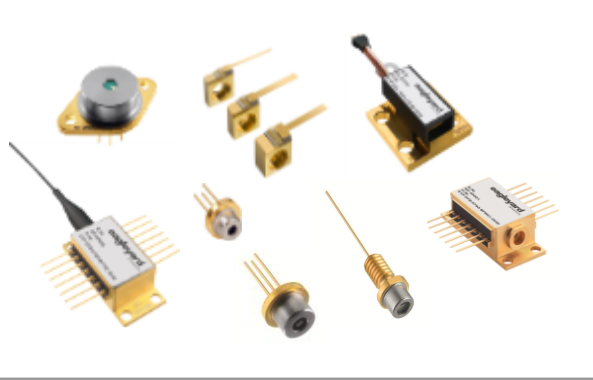
Employees: 45

Partner Sales Offices: 15

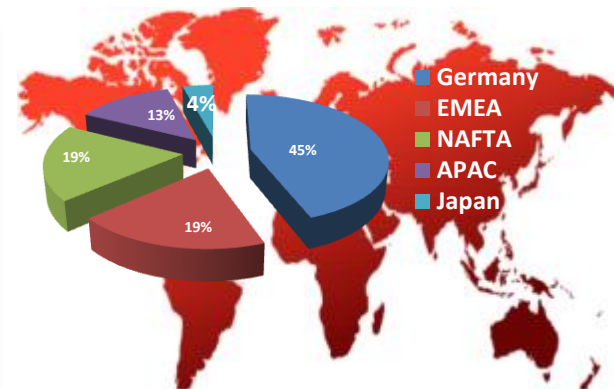
European Manufacturing
Sites: 5

(incl. Contract Manufacturers)

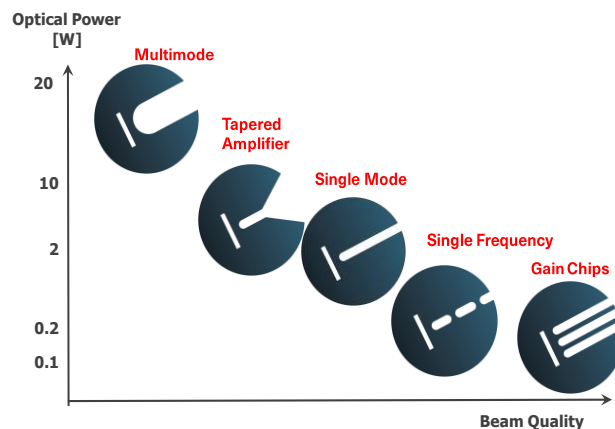
Portfolio



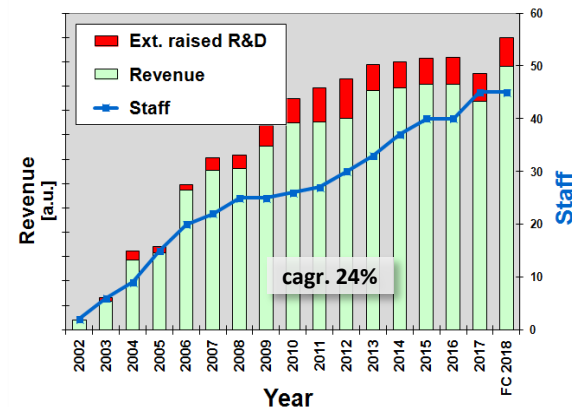
Regional Share



Product Families



Company Development



WHY eagleyard ?

We are closing the gap between research and industry.



INFRASTRUCTURE

Where Science meets Industry.

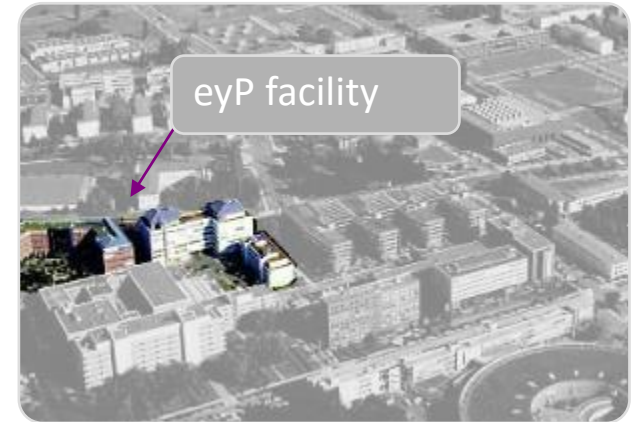
Headquartered at Berlin-Adlershof campus

FBH facilities (frontend):

- New fab in 2003
- cleanroom class ISO 5
- Capacity ~20 wafer starts/week
- Typ. 2", 3" and 4" wafer size

eagleyard facilities:

- 400m² office space
- 750m² cleanroom area (backend)
 - Backend manufacturing
 - Burn in, Testing, Logistics



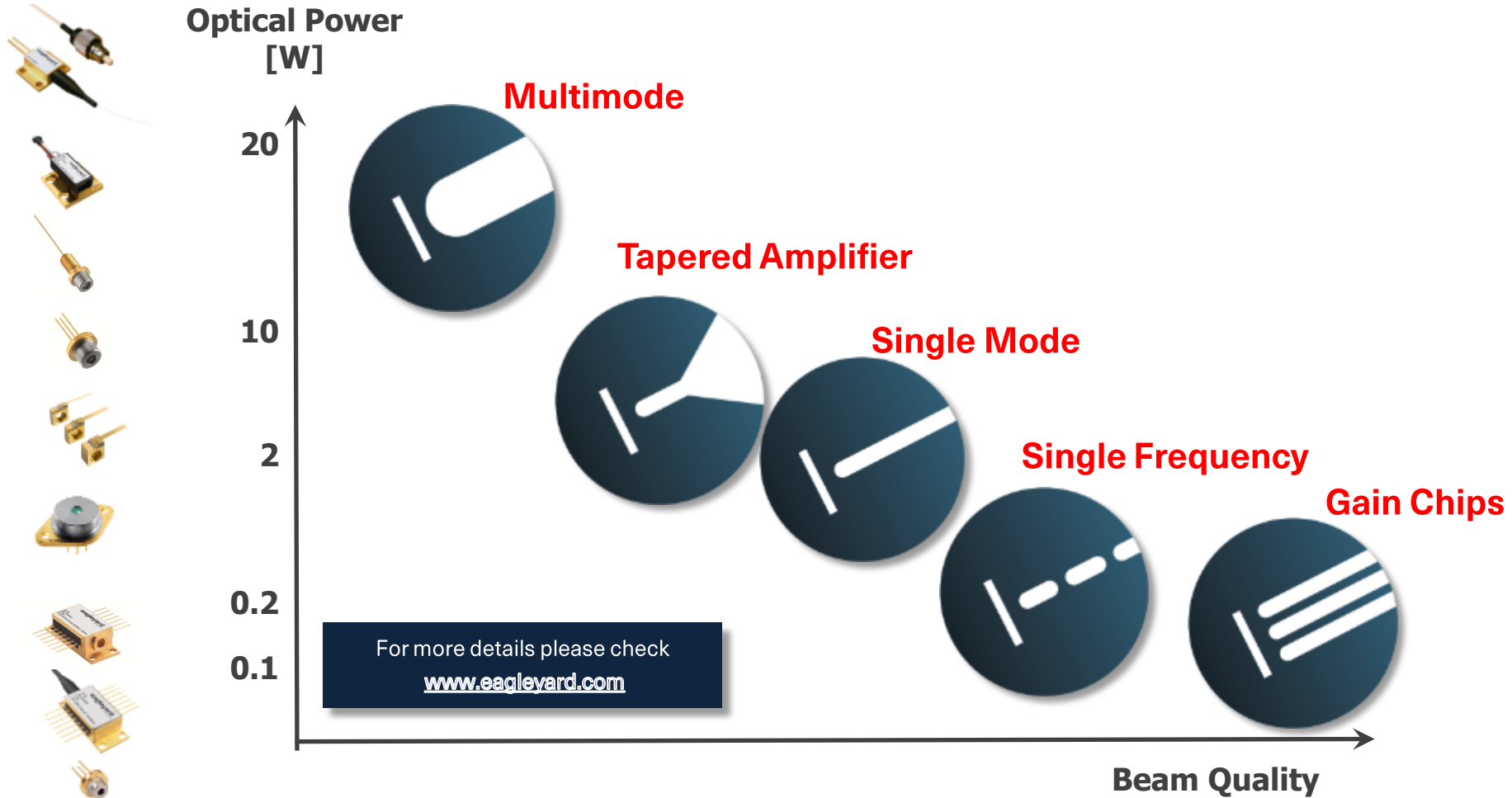
SEMICONDUCTOR LASERS

Emission wavelengths of different semiconductor compounds.

Laser diode material (active region / substrate)	Typical emission wavelength
InGaN / GaN, SiC	380 - 470 nm
AlGaInP / GaAs	630 - 670 nm
AlGaAs / GaAs	720 – 850 nm
InGaAs / GaAs	900–1100 nm
InGaAsP / InP	1000–1650 nm

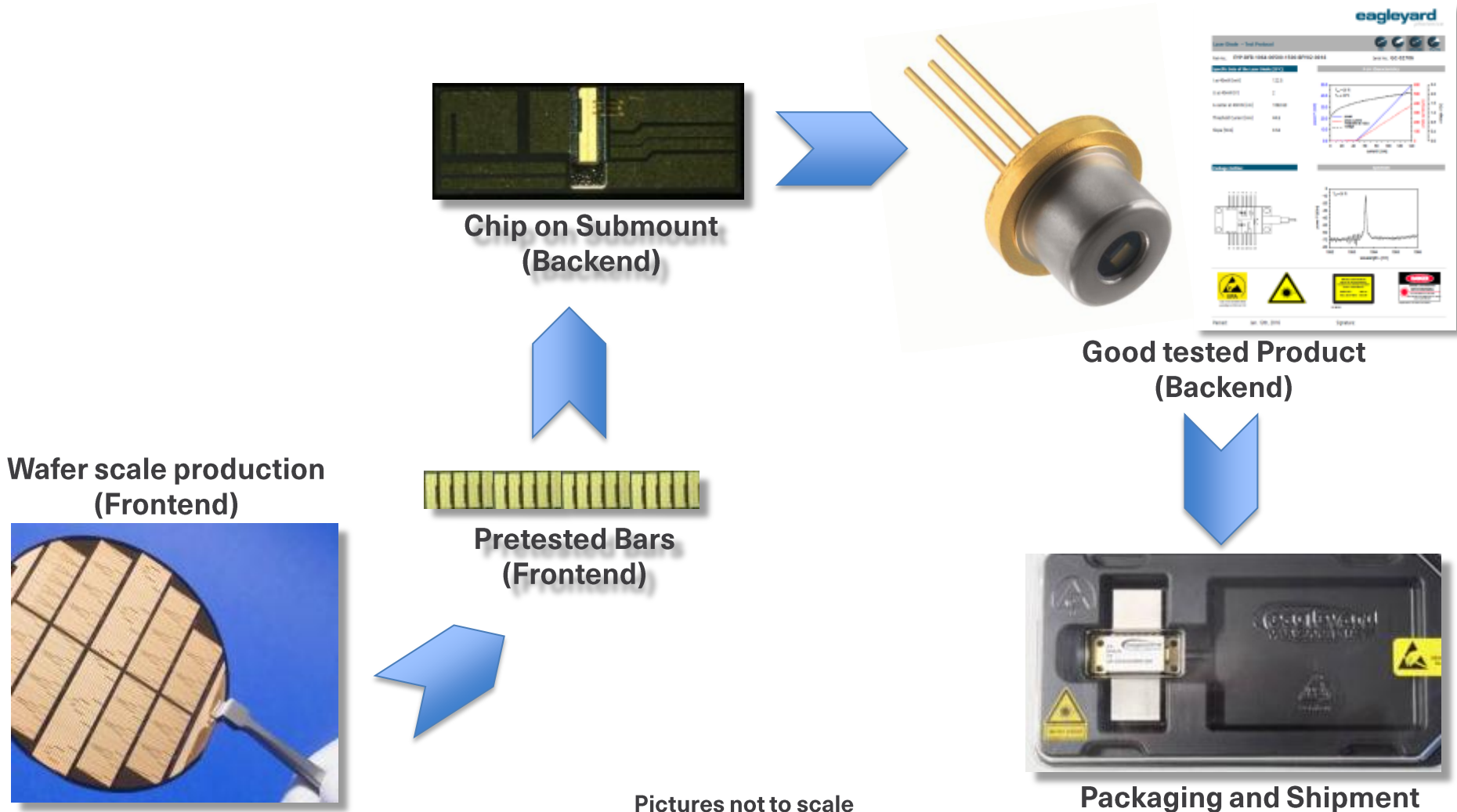
PRODUCT FAMILIES

Single emitter laser diodes: 633nm – 1120nm.



VALUE CHAIN

Chip Technology – On time at customer's dock

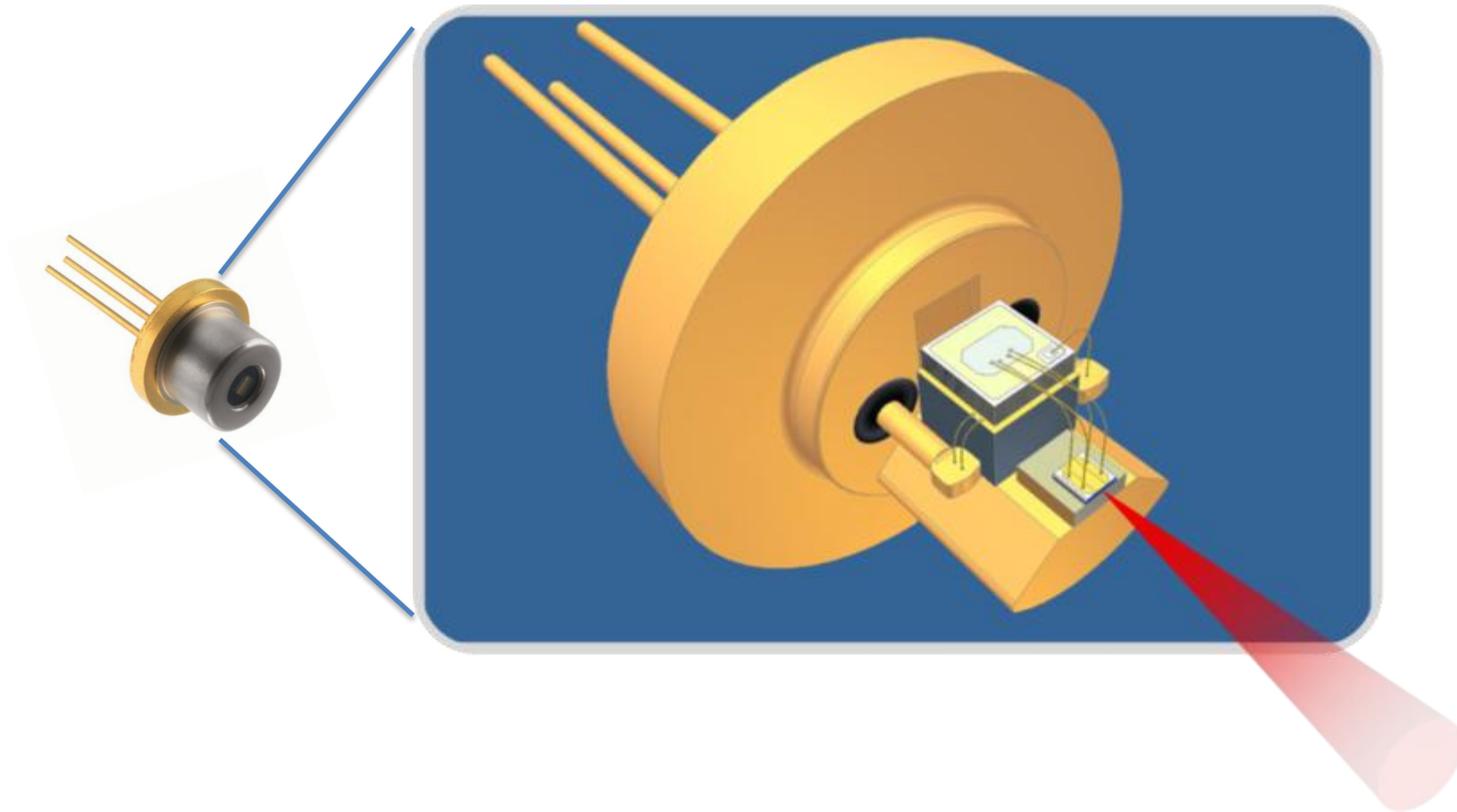


Pictures not to scale

Packaging and Shipment

CORE COMPETENCE

Micro Assembly



GLOBAL SALES FORCE

100 Sales Manager worldwide.



APPLICATIONS

INDUSTRY/ INSTRUMENTATION



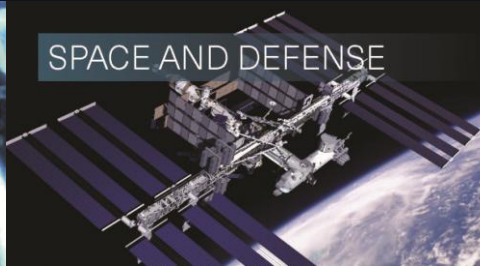
- Analytics
- Atom Cooling
- Communication
- Gesture Recognition
- LIDAR
- Material Processing
- Metrology
- Semiconductor Manufacturing
- Terahertz Generation

LIFE SCIENCE



- Analytics/
Sensing
- Dental
- Medical Instruments
- Microscopy

SPACE AND DEFENSE



- Aerospace
- LIDAR
- Satellite (LEO/GEO)
- Launcher
- Missile
- Active Protection

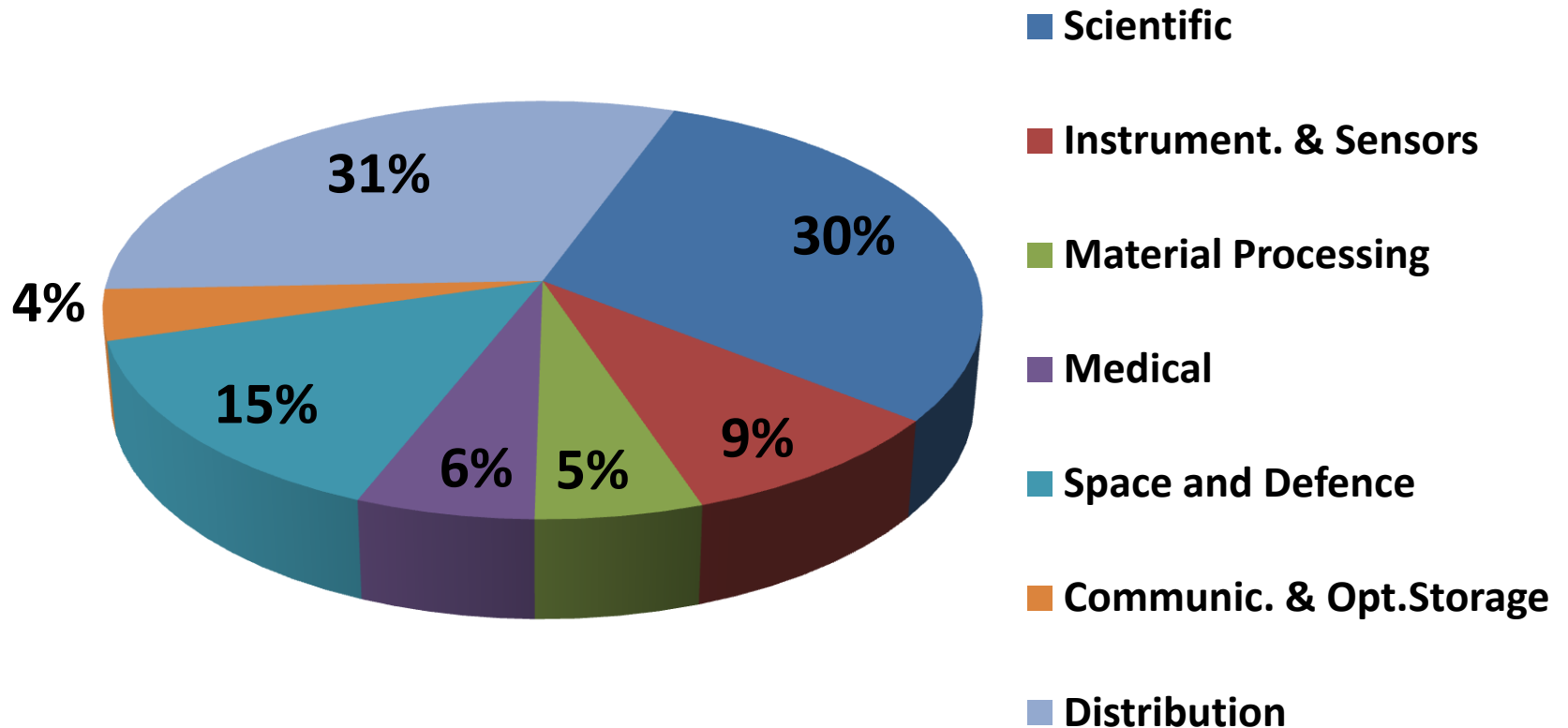
RESEARCH



- Atomic Clocks/
Atom Cooling
- Atom Spectroscopy
- Optical Tweezer
- Raman
- Terahertz Generation

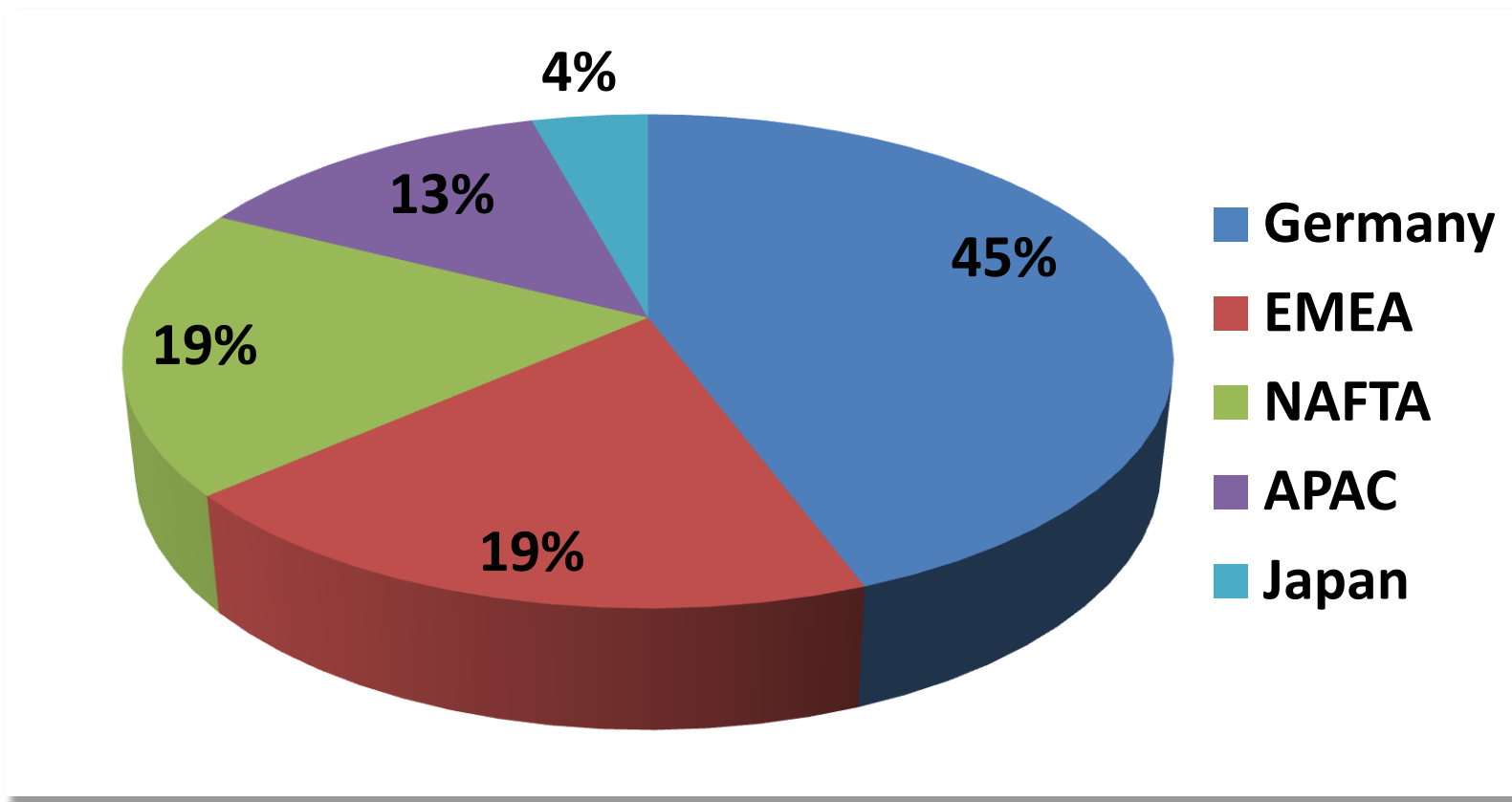
REVENUE BY APPLICATION – 2017

Leading Edge goes Industry.



REVENUE BY TERRITORY – 2017

Acting globally.



PRODUCTS AND REFERENCES

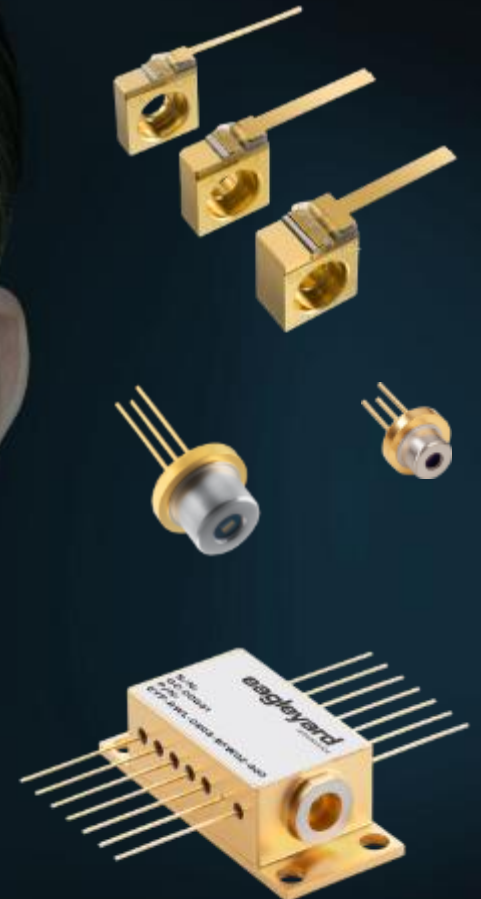
SINGLE MODE LASER DIODES

Straight forward Performance.

eagleyard
photonics



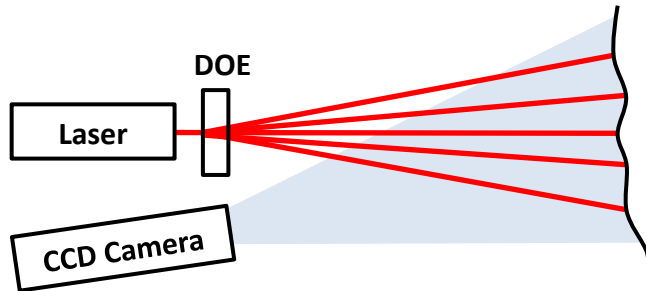
- Ridge Waveguide Laser
- Tapered Laser
- λ Range 780 nm – 1120 nm
- Up to 1 W cw.
- TEM₀₀



SINGLE MODE LASERS

808 nm RWL Laser – Reference Applications.

Surface Profiling by Diffractive Optical Element generated Patterns



Industries / Applications

- Automotive Industry
- Building/Construction Industry
- Quality Control
- Accident Reconstruction
- Forensics

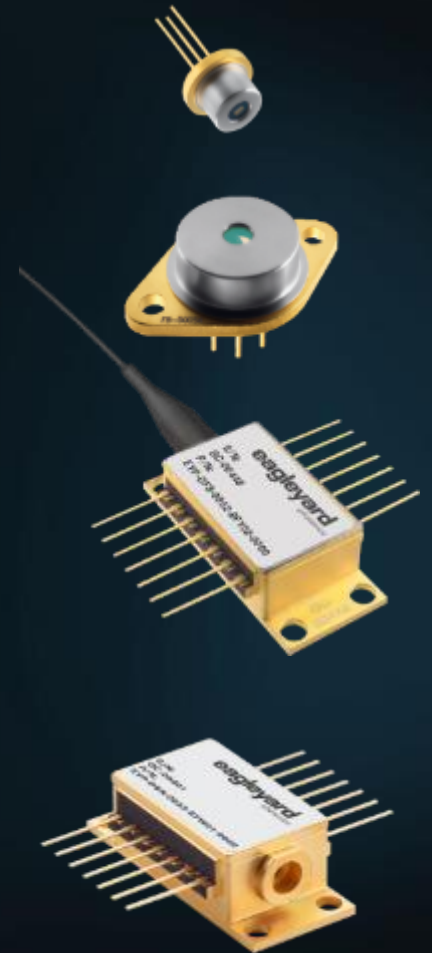
SINGLE FREQUENCY LASER DIODES

Durable Precision.

eagleyard
photonics



- DFB Laser (Distributed Feedback)
- DBR Laser (Distributed Bragg Reflector)
- RWS Laser (Ridge Waveguide – stabilized)
- λ Range 633 nm – 1083 nm
- 150mW cw and 1000mW pulsed
- Line width 1- 2 MHz



SINGLE FREQUENCY LASER DIODES

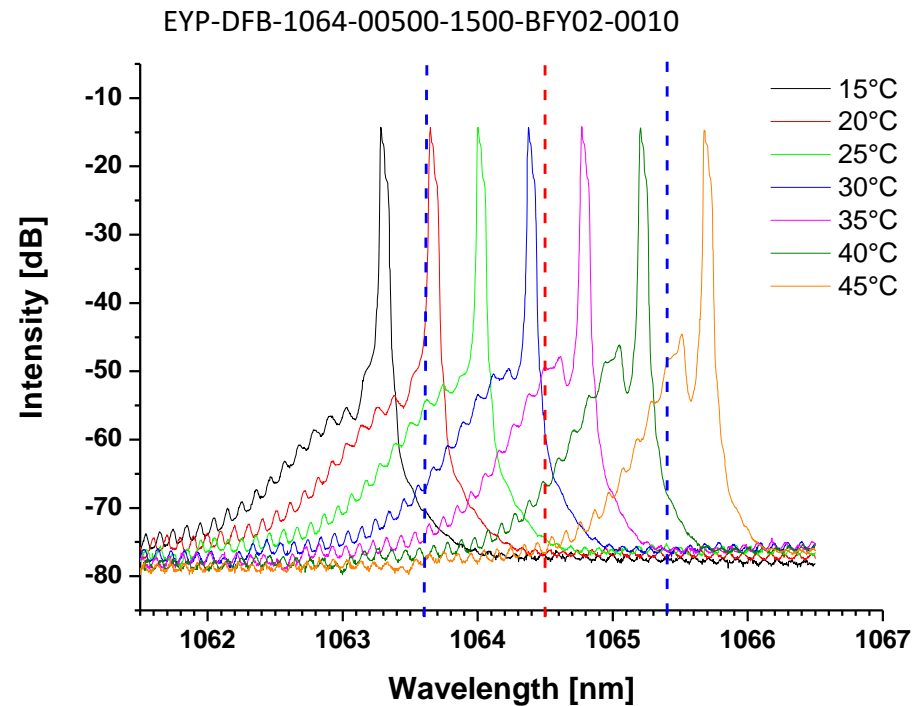
Special Variants: EYP-DFB-...-0010 for Pulse Mode Operation.

DFB laser cover a broad range of pulse regimes

- 1 to 50 ns pulse width
- up to 1 W peak power
- up to 1 MHz repetition rate
- SMSR > 35 dB

14 Pin Butterfly Package

- Single Mode PM Fiber

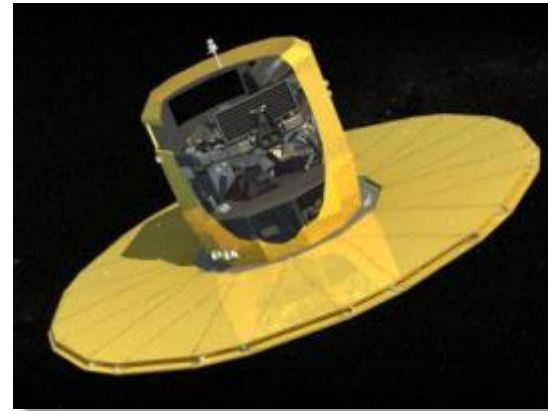


Single Frequency lasers

Launched 2013 and 2015.

DFB Laser for Space Application

- Metrology
 - Interferometric measurements of the telescope alignment
- Sensing
 - Seed laser for a LIDAR system



Space Programs

- ESA
 - GAIA Mission
- NASA
 - ISS CATS



MULTIMODE LASER DIODES

Bright Power.



- Broad Area Laser
- λ Range 670 nm – 1064nm
- 18W cw and 100W pulsed
- Hermetically sealed
- Fast/Slow Axis Collimation



MULTIMODE EMITTER

Characteristics.



Spectral Width

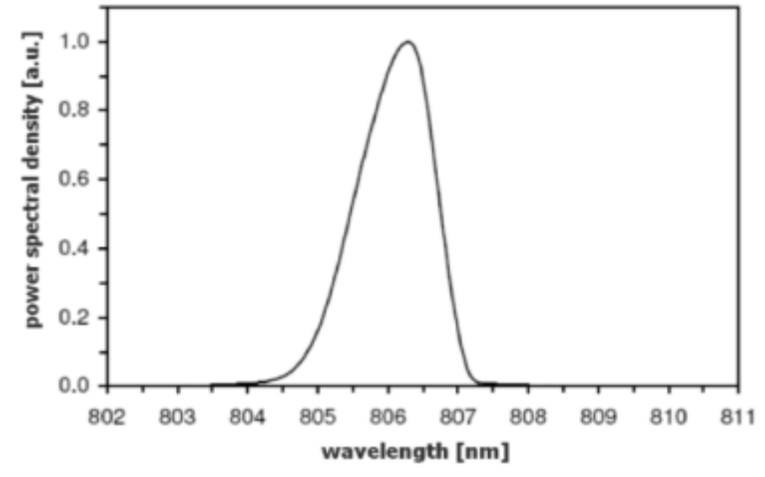
- Typ. 3 - 5 nm

Stripe Widths

- 60 μm / 100 μm / 200 μm / 400 μm

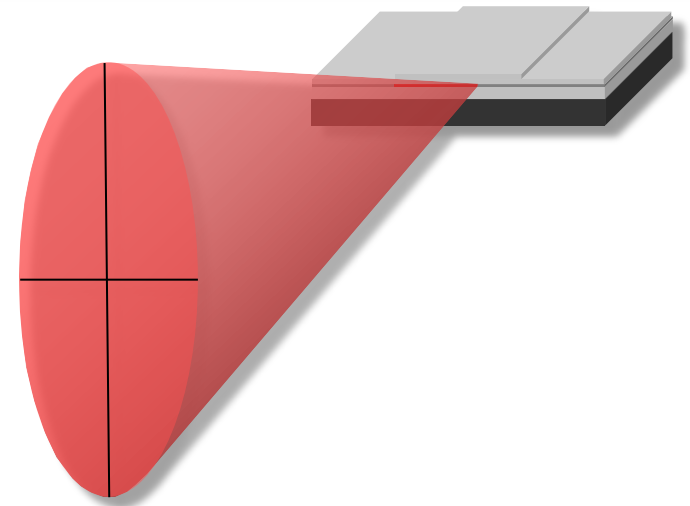
Chip Lengths

- 1 mm to 4 mm



Beam Divergence

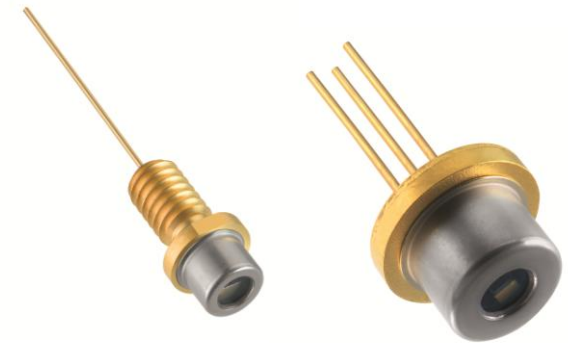
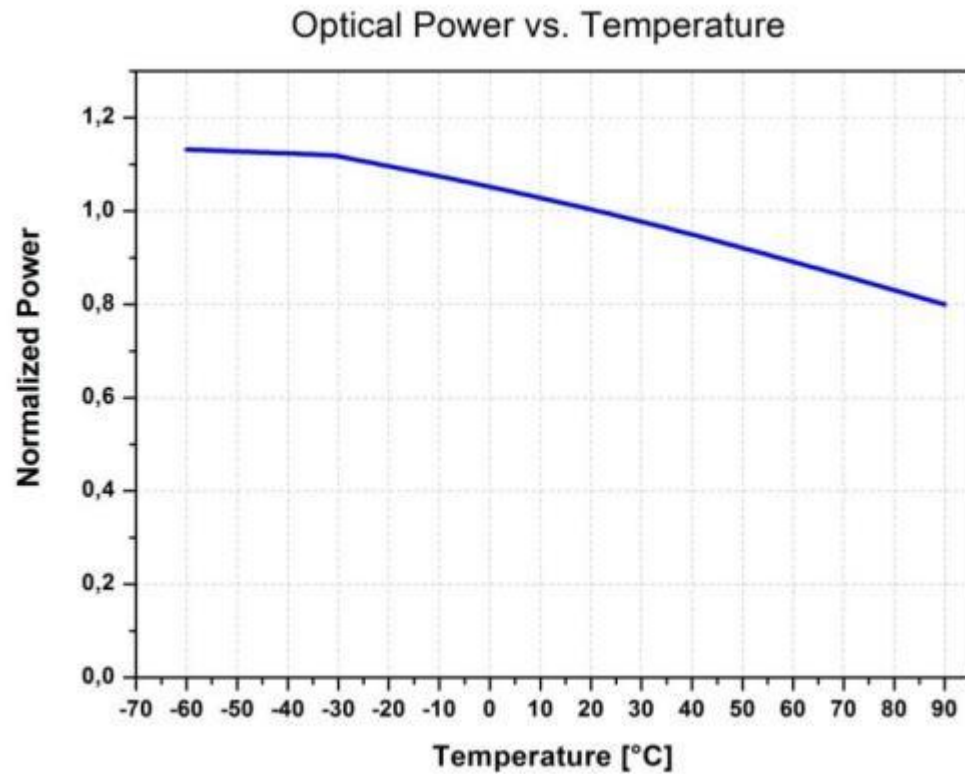
- parallel (slow axis): 10° (FWHM)
- perpendicular (fast axis): 30° (FWHM)



QUALIFIED FOR THE EXTREMES

P vs. Temperature

- Extreme operating temperature range -60° to $+90^{\circ}$



TO packages

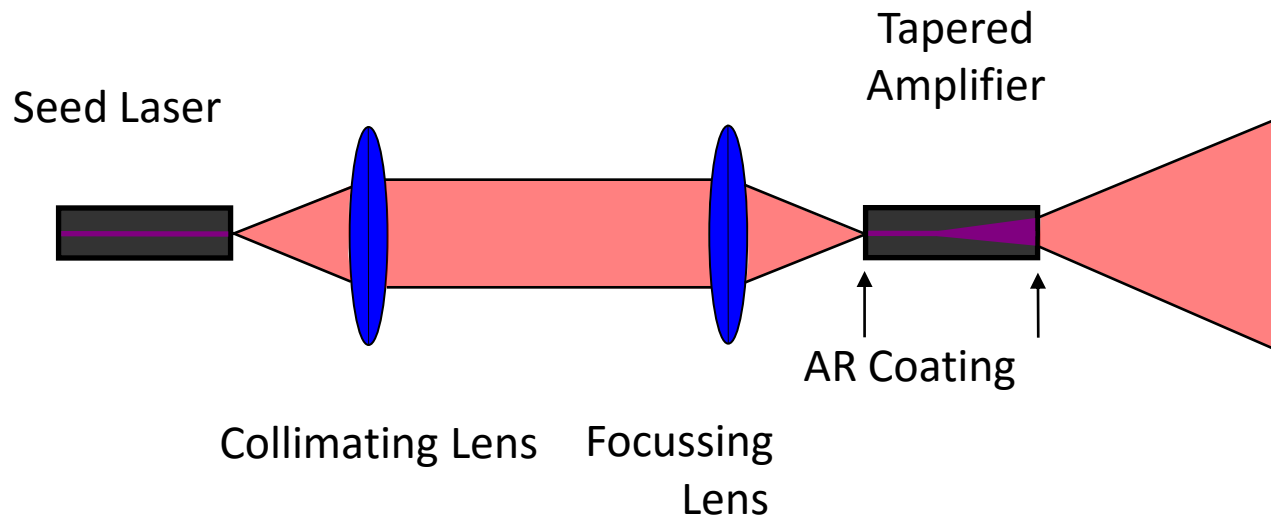
TAPERED AMPLIFIERS

Power Upgrade.



- Tapered Amplifier
- λ Range 650 nm – 980nm
- Up to 3W cw
- Excellent beam properties

Master-Oscillator Power Amplifier (MOPA)



GAIN CHIPS

Engine to Single Frequency.

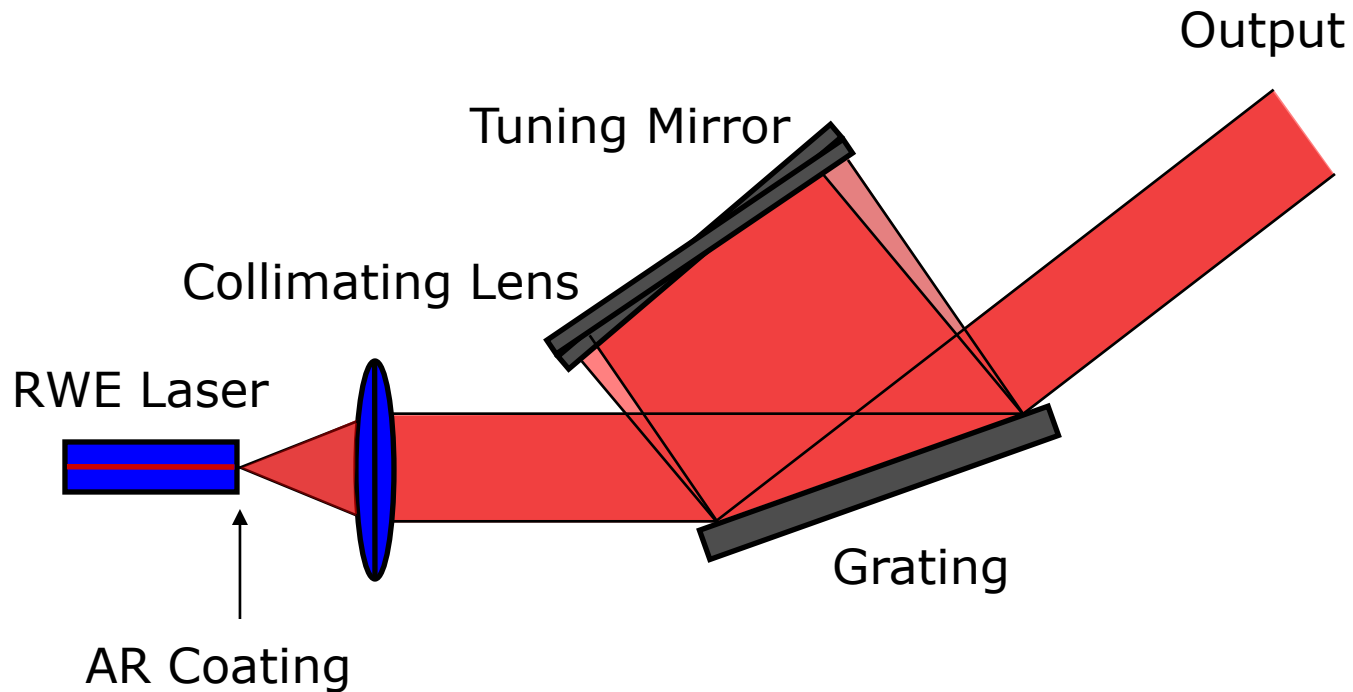


- AR coated gain chips (RWE)
- λ Range 650 nm – 1120nm
- Broad tunability
- Line width down to sub-100kHz

Gain chips

Common ECDL Configurations.

Littman-Metcalf Configuration



Engineering and beyond.

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THANK YOU

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