



m-oem

Enabling Solutions





m-oem – enabling solutions

WHO WE ARE AND WHAT WE CAN DO FOR YOU

m-oem is your partner for projects in applied spectroscopy, photonics, electrochemistry, and sensor systems. We provide off-the-shelf precision optical components, electrochemical and sensor instruments and assemblies, spectrometer engines, and custom-

built solutions, engineered and designed to meet your specific requirements.

m-oem is global brand representing the four companies Innovative Photonic Solutions (IPS), B&W Tek, DropSens, and Metroglas. Wherever you are, you can rely on our global distribution and availability of service and support. Contact us and let us help you make your project a success!

www.m-oem.com

Visit our web shop for off-the-shelf products and accessories, and please contact one of our experts for your next project.

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Innovative Photonic Solutions

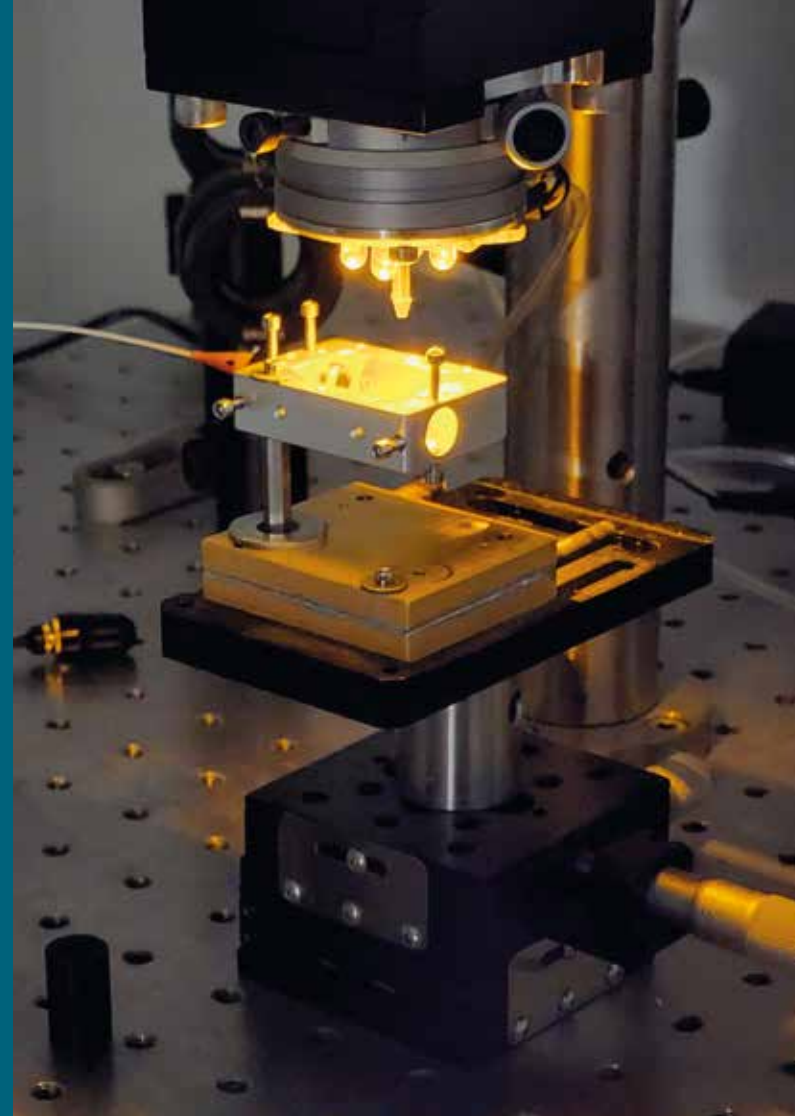
Give us your toughest problems ... we will give you Innovative Photonic Solutions

WHO WE ARE AND WHAT WE CAN DO FOR YOU

Innovative Photonic Solutions (IPS) is the world's number one supplier of stabilized semiconductor diode lasers for Raman spectroscopy. We are expanding our offerings to other technologies and markets such as speckle imaging, fluorescence and photoluminescent spectroscopy and imaging, THz spectroscopy, fiber laser seeding and pumping, flow cytometry, and atomic clocks.

Working ranges of our semiconductor lasers span from the UV to the infrared in single and multi-spatial mode options with free space illumination or fiber coupling. We offer our customers the capability to define the wavelength spectral bandwidth and output power in various packaging formats. Our proprietary Hybrid External Cavity Laser (HECL) technology effectively selects a specific "slice" of the spectrum.

IPS offers superior customer support and on-time delivery. We are partnering with clients to offer custom and semi-custom solutions. Because we design and manufacture "in-house" and products are modular by design, we have highest flexibility and can offer this support on many different levels.



Our product portfolio for laser technology – an overview

OEM LASER DIODES

Our off-the-shelf OEM diode lasers come in butterfly, TO-Can, and TO-Can GUTS packages to match the form-fit-function of your final build. They are available in a wide selection of precise, and highly stabilized wavelengths, output powers, highly Gaussian and multi-mode irradiance distributions, with a variety of electronic functionality.



OEM LASER DIODE MODULES

Sharing the same technology and specifications as our single element laser diodes, our laser modules save on back-end engineering with TE and electronic control built into the system.



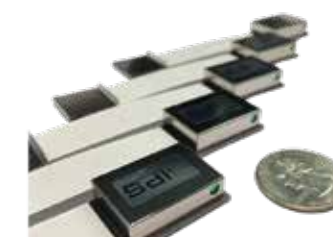
DIGITAL TURNKEY LASERS

Laser control and temperature stabilization is brought to another level with automatic current (power) control with photodiode monitoring and feedback via graphical user interface (GUI) on your PC.



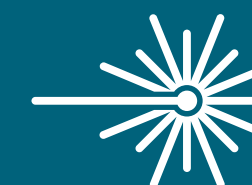
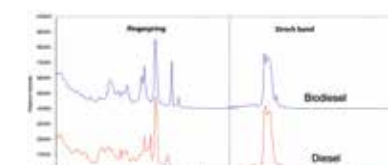
CUSTOM BUILT LASERS

We are collaborating with our customers to supply the right solution. Whether you need a custom laser diode or a turnkey laser, we have the experience and dedication.



CONCATENATION FOR RAMAN

With the patented Raman concatenation system we can enable fluorescence free collection of Raman spectra in the SWIR region while sequentially exciting with two NIR Lasers, with a spectral range from 65 cm^{-1} to 4000 cm^{-1} .



B&W Tek

Powering up your spectroscopy needs



WHO WE ARE AND WHAT WE CAN DO FOR YOU

B&W Tek is a manufacturer of spectrometer engines, lasers and software development kits (SDKs) for system integrators. The optical working range spans from the ultraviolet to the near-infrared and includes various sensations of photonic measurement such as absorption and transmission spectroscopy, reflectance spectroscopy (UV-VIS-NIR), Raman spectroscopy and fluorescence. Our simplified SDKs include low level firmware commands to top-level GUIs, and chemometric modeling options for identification, verification, and quantitative analysis. Vertical integration is complete with B&W Tek diode lasers (Class IIIb and IV) diode-pumped solid-state lasers (DPSS) and other fiber lasers.

B&W Tek has upgraded to a new state-of-the-art 56,000 ft² facility with multiple research and development laboratories for spectrometer and laser production processes. If your status is early

stage or looking for another supplier, B&W Tek offers the integration expertise spanning from our optical components, sub-assemblies, to fully loaded modules.

We have over 10,000 installations and our partners and customers have incorporated our systems into biomedical labs, dermatology labs, clinical pharmacies, gem and mineral labs, and point-of-care testing.

B&W TEK
Your Spectroscopy Partner

Our product portfolio for spectroscopy – an overview

SPECTROMETERS

Pick from a large selection of compact spectrometers in a variety of sizes and price/performance levels for integration into your device. We have a broad range of CCD array configurations (Si) for UV/VIS/ NIR and PDA (InGaAs) for NIR measurements.



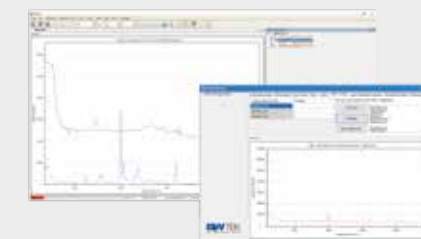
RAMAN SPECTROSCOPY

Build it yourself from green to infrared excitation and define the measurement parameters for your samples with the DIY Raman. Choose from the large variety of our components to manufacture your system or select one of our pre-configured Raman modules.



SOFTWARE

Our software offerings vary from simple firmware command sets, to GUI's, and chemometric packages.



CUSTOM BUILD RAMAN

We are collaborating with our customers to supply the right solution. Whether you need a custom configured laser or a specialized Raman system, we have the experience and dedication.



SPECTROSCOPY ACCESSORIES

Free-space to fiber optic transition of light is optional, and we offer a variety of sampling accessories for gases, liquids and solids with configurations for transmission, reflectance and scattering measurements.



DropSens

Everything can be measured!



WHO WE ARE AND WHAT WE CAN DO FOR YOU

At DropSens we design and manufacture Screen-printed electrodes (SPEs) and potentiostat instruments for electrochemistry and spectroelectrochemistry.

We transform your idea or prototype into a certified and best-in-class solution that meets your individual requirements. Partnering with us, you benefit from our mass-production capabilities to meet your economy of scale milestones and reduce the time-to-market. We can assist you in the development and production of your sensor regardless of your industry or sensor application, in the fields of environmental, agricultural, food, clinical, biotechnology, defense and security.

- We are an experienced partner to consult and work with
- We develop a custom sensor solution

- Due to our mass-production capabilities there are no limits to manufacturing
- All our solutions comply with ISO 9001 and ISO 13485 (qualifying our manufacturing of sensors for medical devices)
- You can rely on our global service and support

DROPSSENS

Our product portfolio for electrochemistry – an overview

POTENTIOSTAT PCBS

Let us know your requirements and we will focus you on the most adequate electronics for your application.



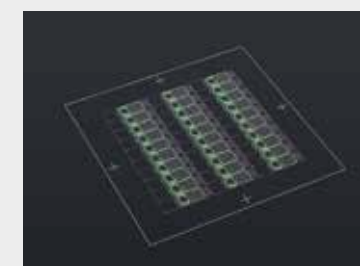
PRIVATE LABEL POTENTIOSTAT

We can label any of our electrochemical devices and software with your brand to be directly used for your application.



CUSTOM BUILD ELECTRODES

Use your own electrodic design or choose from the multiple customization options we offer to build your electrochemical sensor.



PRIVATE LABEL ELECTRODES

We can label any of our standard SPEs with your brand and mass-produce it for your application.



ELECTROCHEMISTRY ACCESSORIES

If your sensor requires any accessory to make the measurement easier, we can provide you with the right solution for your need.



Metroglas

Your partner for
electrochemical
and optical sensors



WHO WE ARE AND WHAT WE CAN DO FOR YOU

Metroglas was founded in 1990. The backbone of our potentiometric and electrochemical sensors is our proprietary glass membrane manufacturing. Depending on the application, we produce glass membranes in high volumes with our automated thermoforming and robotic assembly, or in the traditional art of manual glass blowing. These membranes and metal electrodes are then fused into the final electrode product before delivery to our customers.

Metroglas offers sensors for pH, dissolved oxygen, dissolved CO₂ and conductivity for medical, laboratory and process applications, based on a broad experience. Our sensors are available as single use and multiple use versions. Built on an existing platform, our sensors are customized to meet the requirements of our OEM customers.



Our product portfolio for Sensor Technology – an overview

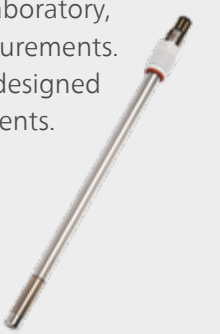
pH SENSOR

We design accurate and robust OEM combined pH sensors for aqueous measurements in laboratory, automation and process analytics with integrated temperature sensors and standard connector options. We offer suitable electrodes for inline pH measurements for the chemical industry, Pharma and Biotech applications.



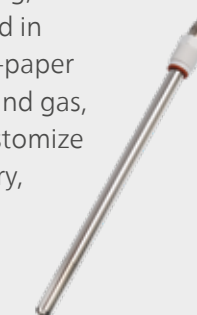
DISSOLVED OXYGEN SENSOR

Electrochemical dissolved oxygen sensors are the most widely used sensors because they can be employed *in situ* for laboratory, automation and online measurements. Our custom dO₂ sensors are designed for rapid aqueous measurements.



DISSOLVED CO₂ SENSOR

CO₂ is commonly measured in fermentation broths such as beer, wine, anti-biotics to optimize yield, purification, flavoring, and production time. It is also measured in industrial waters such as pulp-and-paper and CO₂ injection in upstream oil and gas, and refining processes. We can customize our OEM dCO₂ sensor for laboratory, portable and process applications.



SENSORS FOR PAT (PROCESS ANALYTICAL TECHNOLOGY)

m-oem provides OEM process probes for process measurements in batch and continuous process streams. The probes tackle the most extreme environmental process conditions with high alkalinity glass, and positive sealed meeting up to 4 bar of process pressure.



