

## Ibsen Photonics – Corporate Profile

Ibsen Photonics develops and manufactures transmission diffraction grating components and grating based spectrometer modules. Our grating components are used in a broad range of applications in diverse industries such as telecom, sensing, lasers and spectroscopy. Our spectrometer modules are used in sensor systems and spectroscopy applications such as absorption and fluorescence spectroscopy, Optical Coherence Tomography, Raman Spectroscopy, and Laser Induced Breakdown Spectroscopy.

### Inside Ibsen

The core expertise of Ibsen Photonics lies in the opto-mechanical design, grating technology and metrology. We master the cycle from optics and grating simulation and design, through optical and semiconductor production technologies, to high volume assembly, packaging and testing. Over the years we have developed many new designs, technologies and processes in these areas – a number of these have been granted patents.

Ibsen has worked extensively with customers all over the world on an OEM basis. Building the right solution for our customers with high quality and consistency in supply is vital for us. With a highly organized production process, we are able to help customers obtain smooth instrument production, low unit to unit variation, high level of right first time, no field returns, and a low level of rework.

Our grating production facilities are world-class, including class 10 cleanroom facilities that we designed and built in 2000/2001, in which all environmental parameters are under continuous surveillance.

Our spectrometers are produced under strict quality control in our assembly facility in Farum. We have been granted the ISO 9001 and ISO 13485, confirming Ibsen's' consistent capability to produce high quality products that meet market standards and regulatory requirements.

### Historic and Present Ownership of Ibsen Photonics

Ibsen Photonics originates back to Ibsen Micro Structures A/S that was founded in 1991. ADC Telecommunications Inc. acquired Ibsen Micro Structures A/S in May 2000 and changed the name to ADC Denmark. Ibsen Photonics was established as a management-led buy-out from ADC Denmark ApS on November 1, 2001, and is today privately held with FOSS A/S holding 85% and Ibsen management and employees holding the remaining 15% of the shares.

#### Headquarters

Ryttermarken 17  
3520 Farum, Denmark

#### Follow Us Online

Website: [www.ibsen.com](http://www.ibsen.com)  
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#### Contact Ibsen

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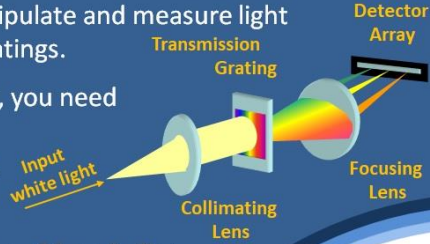


Ibsen  
photonics

OEM Spectrometers  
Transmission Gratings  
FBG Monitors

Ibsen's core technology is to manipulate and measure light using fused silica transmission gratings.

In order to fully characterize light, you need to measure the strength of its wavelength components (colors).



Ibsen separates (diffracts) the different colors by means of pieces of fused silica (very pure glass), onto which are placed a large number of very closely spaced, parallel grooves, produced with technologies similar to those used for making computer chips.

We produce and sell these gratings for a range of customer applications, and for use in our OEM spectrometer modules.

## Transmission Gratings

**Phase Masks**

FBG Writing

**Pulse Compression**

Lasers

**Polarization Insensitive**

Telecom, Spectroscopy

**Spectrometer Gratings**

Telecom, Spectroscopy

Ibsen Fused Silica Transmission Gratings are the ideal choice for applications ranging from high power lasers to telecom devices to compact spectrometers.

- ▾ High efficiency and broad bandwidth
- ▾ Thermally and environmentally stable
- ▾ High energy/power handling capability

**ROCK Spectrometer Platform**

**FREEDOM Spectrometer Platform**

**EAGLE OCT-S**

**Fluorescence Spectroscopy**

**Optical Coherence Tomography (OCT)**

Spectral Domain OCT Setup

**Raman Spectroscopy**

## OEM Spectrometers

Ibsen offers a wide range of robust, athermal, industrial grade OEM spectrometers that can be tailored to your exact needs.

- ▾ High sensitivity and optical throughput
- ▾ Proven, environmentally robust, and thermally stable
- ▾ Volume manufacturing with high quality

<p><b>PEBBLE</b> Ultra Compact</p> <p>Spectroscopy</p>	<p><b>FREEDOM</b> Compact</p> <p>Spectroscopy Raman, LIBS</p>	<p><b>ROCK</b> High Throughput</p> <p>Spectroscopy</p>	<p><b>EAGLE</b> High Resolution</p> <p>Spectroscopy Raman, OCT</p>	<p><b>I-MON</b> Wavelength Meas.</p> <p>Fiber Bragg Sensing</p>
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## From Concept to Volume Production

