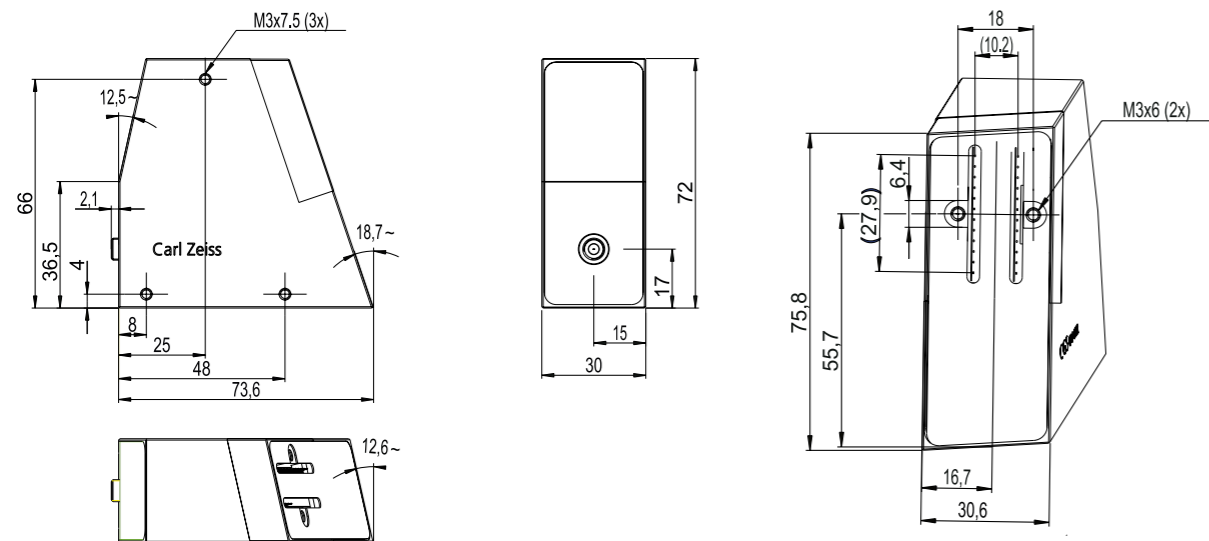


Technical Data (preliminary)

	CGS UV-NIR
Optical entrance	SMA-coupling 50 µm optical slit (can be varied upon request) NA = 0.22 (homogeneous illumination of the acceptance angle) 600 µm mono-fiber interface recommended for customer
Grating	Flat-field, 534 l/mm (center) blazed for approx. 230 nm
Spectral range	190 – 1000 nm
Resolution (half width at 10 %) with 50µm slit	UV-VIS ~ 2 – 2.5 nm NIR 3 – 4 nm
Straylight (ASTM 387-04)	2.5 – 3.5 AU at 240 nm with deuterium lamp (absorption A_{10} of NaI)
Integration time (depending from operation electronics)	min. 30 µs
Diode array	Hamamatsu S11156, Back-thinned CCD, 2048 pixel Height of element: 1 mm Pixel pitch: 14 µm
Dimensions L x W x H	74 x 30 x 76 mm ³

Dimensional drawing CGS



CGS UV-NIR

More than meets the Eye



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Compact Grating Spectrometer
from Carl Zeiss



We make it visible.

CGS UV-NIR Spectrometer module

CGS UV-NIR (190 – 1000 nm)



CGS - The new Compact Spectrometer Module from Carl Zeiss for Industrial Applications in the UV-NIR Wavelength Range

The new CGS uv-NIR (Compact Grating Spectrometer) is in a class all of its own. Extremely compact, it is totally in its element when top performance is needed. If you want to measure with maximum quality and optimum efficiency, the CGS uv-NIR from Carl Zeiss is the right solution for you.

The CGS comprises an imaging grating, an optical port and an uncooled CCD detector. The CCD detector has an electric shutter function that enables minimal integration times. The core of the spectrometers is a blazed, flat-field grating for light dispersion and imaging. The overall configuration results in a spectral pixel pitch of 0.4 nm/ pixel, enabling spectral resolution of better than 3 nm in accordance with the Rayleigh criterion. The optical port is an optical slit on the module side and an SMA connector on the customer side. All optical components are mounted to a housing made of aluminum.

The spectrometer modules are compact and thermally stable, making them ideal for industrial applications. Their excellent thermal stability and very low amount of stray light ensure reliable measuring results even in rough environments. The CGS spectrometers supplement the product lines of the MMS and MCS spectrometer modules.

The new CGS spectrometer unites the benefits of the MMS and MCS spectrometers:

- ✓ High resolution
- ✓ High sensitivity
- ✓ Very good signal-to-noise ratio
- ✓ High dynamic range
- ✓ Small size



The flexible design of the Carl Zeiss spectrometer modules makes them suitable for use in many applications. They can be classified according to the measurement principles used, the fields of use or the materials to be analyzed. However, the most important benefit is the compactness and the insensitivity to external influences. This allows them to be directly integrated into processes. In most of the applications mentioned below, on-line inspection possibility is possible.

Applications	Measurement principles
■ HPLC Detectors	■ Emission
■ Thickness Measurement	■ Diffuse reflection
■ Color Measurement	■ Reflection
■ Fluorescence Measurement	■ Transmission – absorption
■ Emission Spectroscopy	■ White Light interference