

# High performance in a compact package

The latest evolution of CMOS  
spectrometers from ZEISS



**CYGUS® from ZEISS**



# Overview

CYGUS® is the latest evolution of high-performance, compact and fiber-coupled spectrometer systems from ZEISS covering the 190 – 1100 nm spectral range. The dedicated optical design is based on ZEISS aberration-corrected, flat-field holographic gratings with an

integrated order-sorting filter minimizing stray light effects while guaranteeing superior imaging over the entire spectral range.

The CYGUS® spectrometer family offers great versatility in CMOS detector op-

tions with configurations for the highest resolution, high sensitivity and fast readout.

CYGUS® is available as an OEM version with metal housing for system integration as well as in tabletop form.

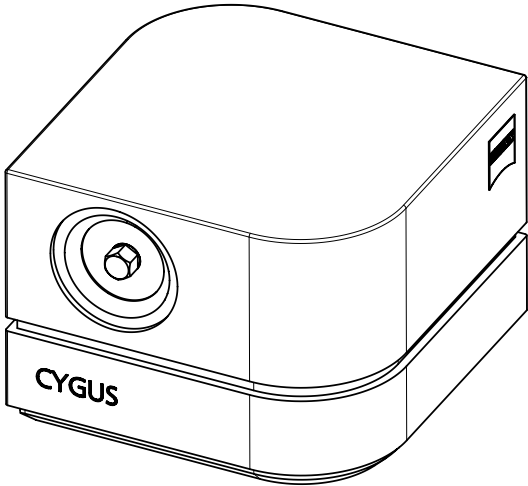
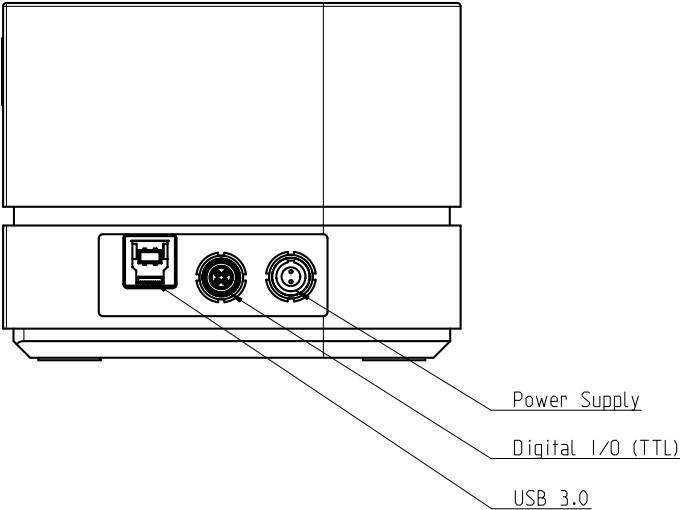
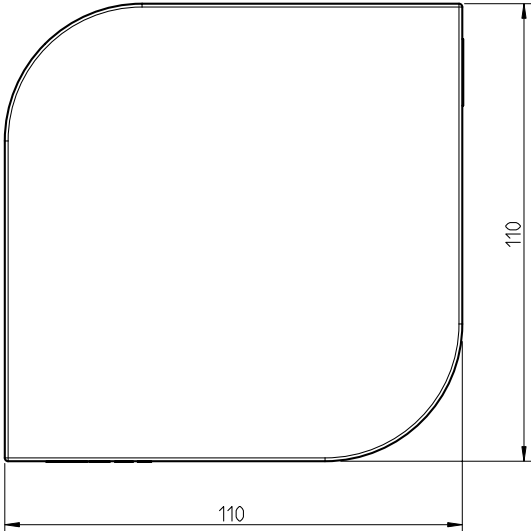
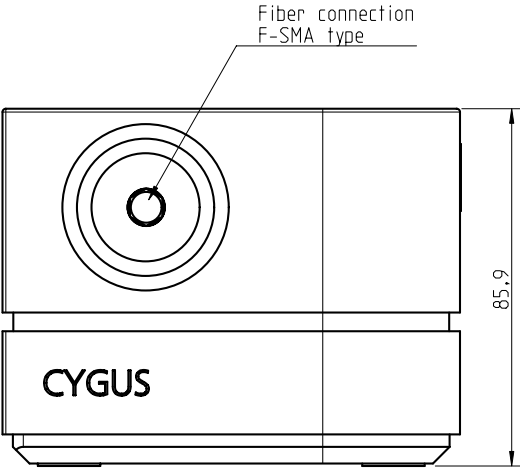


# Applications

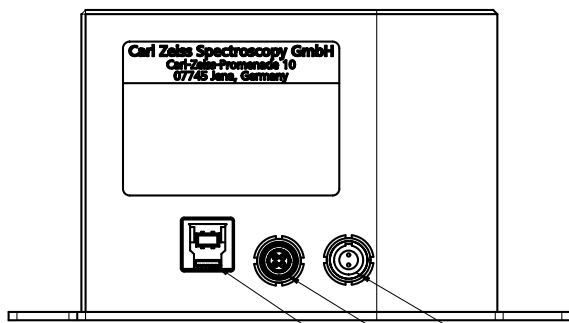
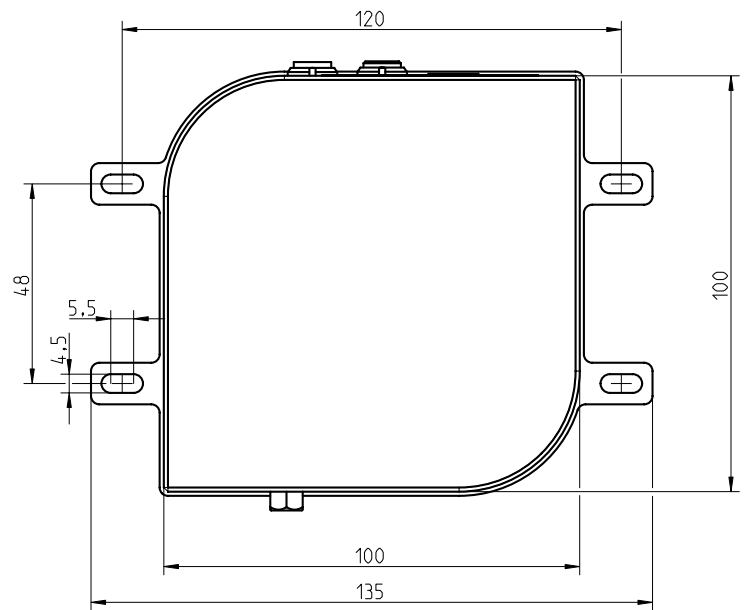
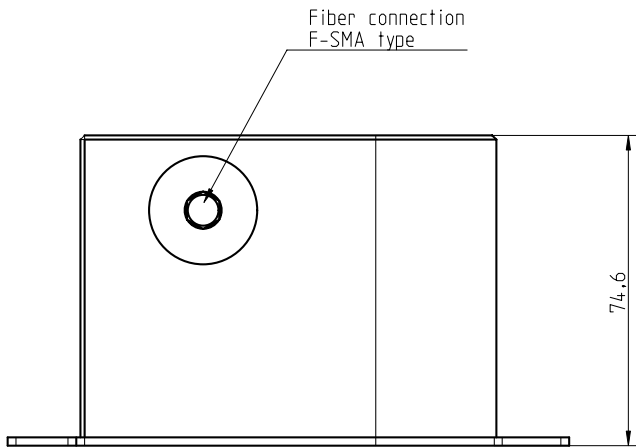
CYGUS® is ideally suited for low-light applications, such as fluorescence, emission, absorbance and reflectance measurement – whether in the lab or as an OEM industrial product. Applications include:

- Semiconductor Process Control (OES, Spectral Ellipsometry)
- Thickness Measurement
- HPLC Detectors
- Emission Spectroscopy
- Colorimetry/LED Testing
- Pharma & Healthcare

# Dimensional Drawing CYGUS® Demo-Kit



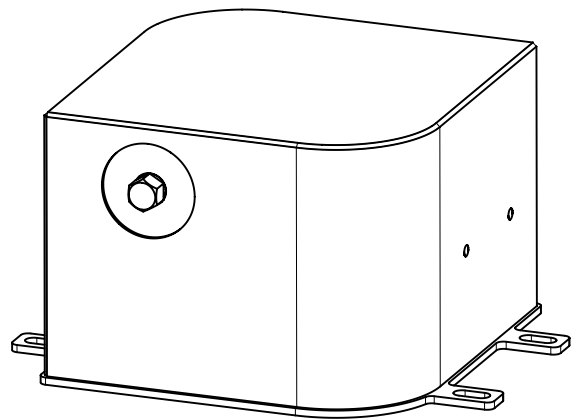
# Dimensional Drawing CYGUS® OEM-Kit



Power Supply

Digital I/O (TTL)

USB 3.0



# Technical Data

<b>Spectral range</b>	190 – 1100 nm	
<b>Resolution (FWHM)</b>	1.1...2.5 nm (depending on slit size and sensor type) 2.5 nm (typ.)	
<b>Optical entrance</b>	SMA connector 43 µm optical slit (custom slit sizes available) NA = 0.22	
<b>Blaze wavelength</b>	240 nm	
<b>Straylight</b>	< 0.1 %	
<b>Integration time</b>	> 100 µs	
<b>Detector</b>	Hamamatsu CMOS detector	
<b>ADC</b>	16-bit, 1-10 MPixel/s	
<b>Interfaces</b>	USB 3.0 Digital I/O: 1x Trigger In and Out (TTL)	
<b>Power Supply</b>	24 V DC, 200 mA	
<b>Dimensions L x W x H</b>	OEM-Kit: 100 x 100 x 75 mm <sup>3</sup> Demo-Kit: 110 x 110 x 86 mm <sup>3</sup>	
<b>Environmental</b>	Operating temperature	0 °C to +40 °C
	Relative humidity	< 90% (non-condensing)
	Storage temperature	-40 °C to +65 °C

## Detector Options and Specifications

<b>Spectral range</b>	<b>No of pixels</b>	<b>Spectral Pixel Dispersion</b>	<b>Frame-Rate</b>
High Resolution S13496	4096	0.25 nm/px (mean)	2.38 kHz
High Sensitivity S11639	2048	0.50 nm/px (mean)	4.63 kHz

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