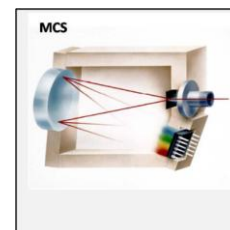


MCS 多通道式光谱感应器-卡尔蔡司 MCS 系光纤光谱感应器

MCS 多通道式光谱感应器(spectralsensor)系列, 适用光谱波长范围: 190-1100nm, 型号包括 MCSUV/VIS/NIR, 适用于各种应用光谱仪器感或设备内, 符合各行各业的要求。MCS 光谱感应器系列的弹性的设计, 使仪器符合不同的应用。使用者可按测量的理论、应用的范围、或被分析材料来选择你需要的型号。MCS 光谱感应器模块使用平面横切转换器作光学输入, 用 SMA 式连接器连接至光纤线, 圆型输入头是对光源环境比较合适。无论如何, MCS 系列最重要设计是防震、光线灵敏及工作环境的影响较微。光谱感应器的内部是蔡司专利设计把陶瓷结构与检定的全息凹面光栅结合、光学入口是光纤平面横切转换器或机械生产狭缝及二极管阵列元件。

仪器的特点:

- 稳健及高温稳定
- 高敏感性
- 适合多样化工作
- 厂预设, 无须调较



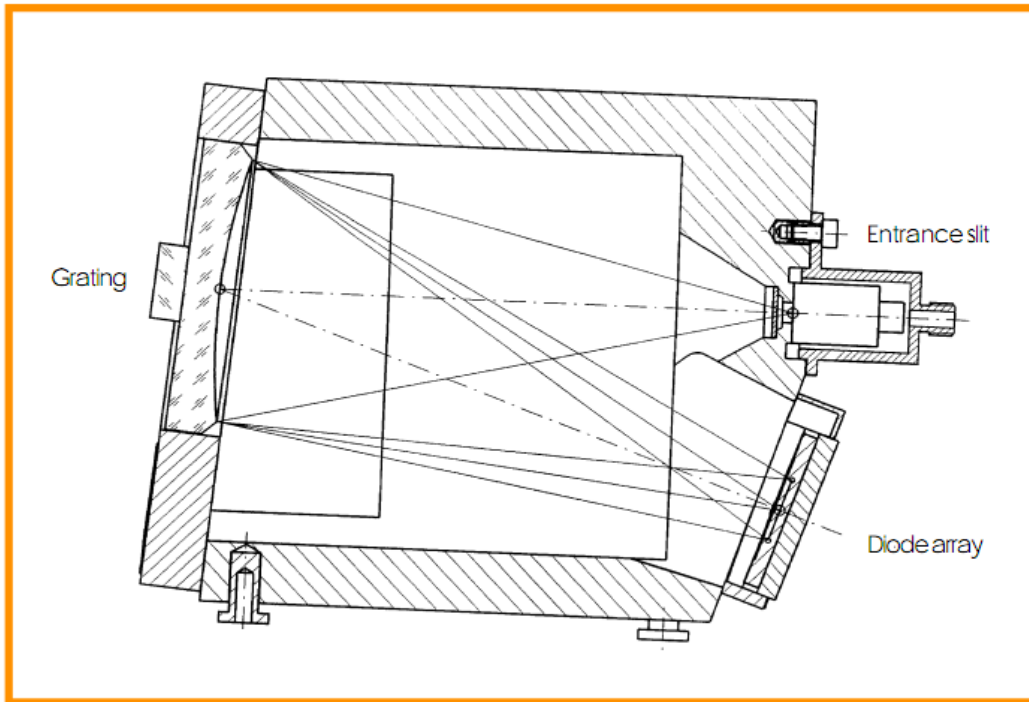
规格 SPECIFICATION

Model	MCS UV-NIR	MCS UV-VIS	MCS UV-VIS	MCS VIS	MCS NIR
Part No.	224036-9001.000	224024-9001.000	224028-9001.000	224020-9001.000	224032-9001.000
Wavelength Range	190-1015 nm	200-620 nm	300-720 nm	360-780 nm	695-1100 nm
Optical Entrance					
input round	cross section converter, diameter: 0.5mm, NA = 0.2, mounted in SMA-coupling, dismantable				
output linear	50 μm x 2500 μm				
Grating	Flat-field correction, 248 l/mm (center), blazed for approx. 250nm UV- version, 450nm VISversion, 750 nm for NIR - version)				
Wavelength accuracy absolute	< 0.3 nm				
Reproducibility	< 0.1 nm				
Temperature - induced drift	< 0.005 nm/ k				
Spectral distance of pixel	$\Delta\lambda_{\text{Pixel}} \approx 0.8 \text{ nm}$				
Resolution	$\Delta\lambda \text{ Rayleigh} \approx 2.4 \text{ nm} (\gg 3 \text{ nm UV-NIR version})$				
Sensitivity	$\approx 1011\text{-}1012 \text{ Counts/Ws}$				
Stray light	0,1% measured at 240 nm with Deuterium lamp and 10 mm 5% NaJO solution				
Dimensions					
total (with case)	140 x 105 x 75 mm ³				
Diode Array					
Brand	Hamamatsu				
Number of pixels	1024	512			
Dimensions of pixels	25 x 2500 μm ²				
Maximum clock - rate	2 MHz(without preamplifier)				
System data					
Realized with	14-Bit-AD-conversion, integration time 10 ms, clock - rate 100 KHz and 50 cycles averaging				
Dynamic range	2 ¹⁵ without averaging				
Noise	1-2 counts standard deviation				

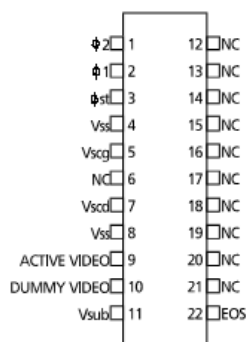
Diode array

Producer:	Hamamatsu
Type:	S 3904 - 512Q , S 3904-1024Q, (S 4874-1024Q or S 4874-512Q on request)
Number of pixels:	512 or 1024
Dimensions of pixels:	25 x 2500 μm^2
Maximum clock-rate :	2 MHz

Blocking filter for the second order is directly coated on the diode array



Interface



- 1 - $\phi 2$ - Clock 2
 - 2 - $\phi 1$ - Clock 1
 - 3 - ϕst - Start Pulse
 - 4 - V_{ss} - Passive Node (GND)
 - 5 - V_{acg} - Saturation Control Gate Voltage
 - 7 - V_{sod} - Saturation Control Drain Voltage
 - 8 - V_{ss} - Passive Node (GND)
 - 9 - Active Video Signal
 - 10 - Dummy Video Signal
 - 11 - V_{aub} - Passive Node (GND)
 - 12 - EOS - End of Scan
- NC : No connection - not used (GND)

Preamplifier with MMS style interface available.

System data

Realised with:	16 - Bit - AD - conversion, integration time 10 ms
Dynamic range:	100 KHz and 50 -cycles averaging $\approx 2^{15}$
Noise:	1...2 count standard deviation