

Modular spectroscopy components

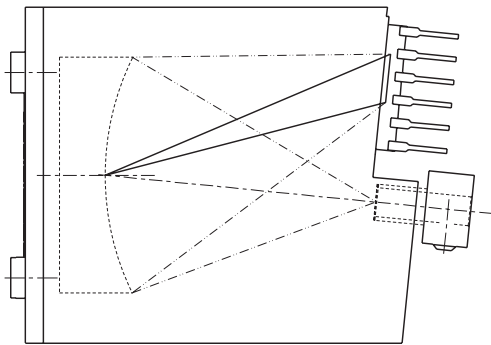
Miniature spectrographs - The CP family

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The family of miniature spectrographs CPXX has been developed for OEM applications. Each fits into a small, hand-held, portable instrument, or can take the place of larger spectrographs when space is at a premium.

These spectrographs include an aberration corrected concave holographic grating, an optical slit, an SMA connector, a choice of linear arrays and a USB electronic driver as an option.

The optical input is based on an SMA connector with an integrated slit. Different models of slits are offered depending on the resolution requirement. The basic model is supplied with a slit of 100 µm width and 500 µm height.



Features

- Compact, for hand-held instruments
- Low stray light
- Superb imaging properties
- Reliable
- Robust

Applications

- Color measurement
- Spectrophotometry
- Process monitoring
- Life science
- Etc.

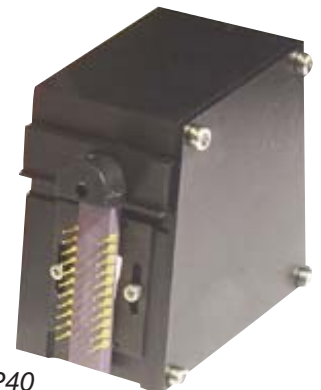
	CP20	CP30	CP40
optical design		flat field	
focal length (mm)	20	30	40
wavelength range (nm)	380-760		
average dispersions (nm/mm)	65	60	60
aperture (f/#)	2.7	1.5	1.5
entrance slit (µm)	50/100/250 wide slits or fiber		
fiber optic connector	SMA 905		
spectrum length (mm)	5.8	5.8	6.4
physical dimensions (mm)	22x35x14	37x51x35	55x59x52



CP20 with PDA detector



CP30



CP40

Slits and optional CMOS or NMOS detectors for the CP spectrograph family

Entrance slits

Different models of slits are offered depending on the resolution required by the application. The standard slits come in widths from 50 to 500 μm .

Detectors

The design of these spectrographs allows the use of a large choice of linear arrays as well as custom arrays for specific applications. The standard models are:

CMOS or NMOS Photodiode arrays (PDAs)

- CMOS PDA
S8377/ S8378-XXX
128 or 256 pixels with 25 or 50 μm pixel width and 500 μm height
- NMOS PDA
S3903/S3904 – XXX
128 or 256 pixels with 25 or 50 μm pixel width and 500 or 2500 μm height

CMOS low cost linear sensor arrays

TSLW-1401R from TAOS

The TSL1401R linear sensor array consists of a 128×1 array of photodiodes. The pixels measure 63.5 μm (H) by 55.5 μm (W) with 63.5 μm center-to-center spacing and 8 μm spacing between pixels. Operation is simplified by internal control logic that requires only a serial-input (SI) signal and a clock.

Optional Electronics for CP Spectrographs

High performance and compact electronic boards are available and feature:

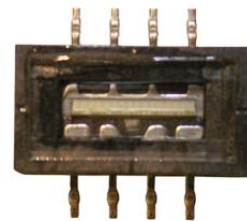
- 14 or 16 bit analog digital converter
- M16C624 controller with 256K internal flash
- trigger output
- a selection of interfaces: USB / Serial / Parallel..... (TTL level)
- power supply +5V (for RS232 interface)



entrance slit



CMOS and NMOS Photodiode arrays



TAOS CMOS TSLW-1401R series



USB SDC Board

COMPANY PROFILE

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Established in 1819, Jobin Yvon is part of the HORIBA Group which employs more than 4,500 people worldwide, with annual sales in excess of \$900,000,000.

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