

DF-700 Full Spectrum OES



Introduction

- 1) Argon fulfillment optical chamber occupies smaller space with less energy consumption.
- 2) Czerny-Turner optical system is applied for a better plane CCD collection for all

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elemental wavelength that falls into 140-750nm.

- 3) Self-developed DF-IV collection device for spectral lines is available for wavelength range between 140nm and 750nm.
- 4) Several matrices can be analyzed such as Fe, Cu, Al, etc.
- 5) Module design for independent light collection, data processing and data optimization. With the help of high-performance ARM processor and real-time operational system, analytical time is largely shortened and accuracy is further improved.
- 6) 3G thermostatic system improves the energy efficiency to a great extent. The temperature fluctuation range of $\pm 0.2^{\circ}\text{C}$ makes the DF-400 perform more stable.
- 7) The DF II-S digital-controlled light source increases the elemental analytical range and accuracy.
- 8) Plane grating allows smaller number of CCD, further improving the accuracy and stability. It also occupies smaller space and makes set-up and movement a lot easier.
- 9) The multipurpose operational software can meet various needs by displaying elemental data in a flexible way and supporting various printing formats.

Specifications

optical system	structure	Czerny-Turner
	curvature radius	400mm
	IV holographic original grating with aberration correction function	2400 ruled lines/mm
	wavelength range	140-750nm
	pixel resolution	@200nm:10pm
	vacuum optical chamber with auto thermostatic system	30 \pm 0.2 $^{\circ}$ C argon fulfillment optical chamber
light source system	light source	digital controlled spark pulse
	control technique	PWM
	discharge current	10-400A
	excitation frequency	100-800Hz
	discharge duration	10-10000 μ s
spark stand	excitation chamber with minimum argon use	
	easily-changeable foundation(lid)	
	mobile hold-down pin	
data collection and control system	CCD detector with high resolution	
	linear CCD: Toshiba	
	high-speed 16-bit A/D conversion	

	resolution: 3648 pixel	
	ethernet	
others	matrices	Fe, Cu, Al, Ni, etc.
	dimensions(mm)	940*360*530
	environmental requirement	T 10°C-35°C H 20%-80%
	weight	50Kg (net weight) 70Kg (gross weight)
	V/F	AC220V±10%/50Hz
	power	max 300VA standby 100VA
	argon	purity≥99.994%, press≥0.3MPa