

DF-800 Full Spectrum OES



Introduction

- 1) Double Czerny-Turner optical system is applied for a better plane CCD collection for all elemental wavelength that falls into 120-850nm.
- 2) DF-800 is an innovative full spectrum OES equipped with a double Czerny-Turner optical structure which is able to collect all elemental wavelength range between 120nm and 850nm.
- 3) Several matrices can be analyzed such as Fe, Cu, Al, Zn, Ni, Sn, Ti, etc. (including N element)
- 4) 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.
- 5) 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.

6) The DF II-E digital-controlled light source broadens elemental analytical range which covers trace elements, macro elements and elements with super high content.

7) 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.

8) A whole new gas way; spark stand with cleaning function; adjustable master-slave gas ways equipped with a sealing device which prevents the argon leakage. Quicker argon fulfillment.

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	double Czerny-Turner
	curvature radius	350mm/273mm
	grating I: IV holographic grating with aberration correction function Grating II: rowland grating	Grating I: 2400 ruled lines/mm Grating II: 3600 ruled lines/mm
	wavelength range	120-850nm
	pixel resolution	@200nm:7pm @150nm:2.4pm
	vacuum optical chamber with auto thermostatic system	30 \pm 0.2 $^{\circ}\text{C}$ vacuum range: 1.2-2.5 Pa
	light source system	light source
control technique		PWM
discharge current		10-400A
excitation frequency		100-1000Hz
discharge duration		10-10000 μs
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	
	real-time control on temperature and vacuum state	
	ethernet	
others	matrices	Fe, Cu, Al, Ni, Zn, Sn, Ti, etc.
	channel configuration	multiple matrices and channels (including N element)
	dimensions(mm)	850*570*520
	environmental requirement	T 10°C-35°C H 20%-80%
	weight	60Kg (net weight) 100Kg (gross weight)
	V/F	AC220V±10%/50Hz
	power	max 800VA standby 100VA
	argon	purity≥99.999% press≥0.4MPa