

SUPER HIGH TEMPERATURE XENON TYPE

Optical floating zone furnace

Model : FZ-T-12000-X-VIII-VPO-PC



Optical floating zone furnace

Crystal Systems Corporation

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Specifications

Model		FZ-T-12000-X-VIII-VPO-PC			
Type of lamp		Xenon			
Number of lamp		4 pieces			
Number of mirror		4 pieces			
Max. atmosphere	Pressure	0.95 MPa			
	Vacuum	6.7×10^{-3} Pa (5×10^{-5} Torr)			
Chamber (Quartz tube)	Normal pressure	ϕ 50mm / 395 mm long / 2 mm thick			
	High pressure	ϕ 50mm / 395 mm long / 5 mm thick			
Sealing		Shafts and Quartz tube sealed with O-Ring			
Max. temperature		3,000 °C			
Temperature in normal use		2,800 °C			
Lamp power		12,000W (3,000W \times 4 lamps)			
Max. difference of temperature around the rod surface		< 50°C			
Lamp cooling		Air			
Mirror cooling		Air			
Quartz tube seal cooling		Water			
Shaft moving		Upper/Lower shafts transfer vertically			
Max. crystal length (mm)		150			
Max. feed length (mm)		150			
Growth rate slow move		0.01 ~ 300mm/hr			
Growth rate fast move		6 ~ 150mm/min			
Shaft rotation rate		5 ~ 100 rpm			
Monitoring		CCD camera and LCD			
Operation (handling)		Computer	Windows 10 / LabVIEW with remote control function		
		Manual	Hand-control-box		
Atmosphere gas flow control		① Ar 5 L/min Float flow meter *1&2 ② O ₂ 500cc/min Float flow meter ③ Air 10L/min Float flow meter			
Output voltage stability		Less than $\pm 0.4\%$ against $\pm 10\%$ of source			
Utility	Electricity	3-phase / 200V / 100A			
	Water	5L / min			
Size	(mm)	Main body	Control box	Power box	
		Width	1,020	605	800
		Depth	760	760	700
		Height	2,250	1,640	1,800

Remarks:

1. Above specifications may be changed without announcement.
2. *1. It's possible to change another type of gas and flow rate.
3. *2. It's possible to change to MFC from flow meter with additional charge.

Attachments

- 1) Xenon lamp max. power 3000W ----- 8 pieces
- 2) Quartz tube (Normal pressure) ----- 2 pieces
 (High pressure) ----- 2 pieces
- 3) O-ring (P-50,V-50 for quartz tube) ----- each 4 pieces
- 4) Seed holding jig ----- 2 pieces
- 5) Feed holding jig ----- 2 pieces
- 6) Tool box ----- 1 box

Warranty

Crystal Systems Corporation warrants for one (1) year from the date of installation, except for abnormal use. However, glassware such as (1) lamp (2) mirror and (3) quartz tube are out of warranty.