



ACS Material Equipment Series

Modulated Pulse Low-temperature Plasma Experimental

Power Supply

(CTP-2000K/L)

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Product Composition

1. Main Machine - 2000K/L

2. TDGC2-1 Contact Voltage Regulator

Rated input voltage: 220v | Rated capacity: 1kVA | Frequency: 50Hz | Output voltage range: (0-250) V
Rated output current: 4A | Number of phases: 1 | Weight: 6.5kg | Insulation heat class: F



Photo of Modulated Pulse Low-temperature Plasma Experimental Power Supply



Photo of Voltage Regulator

Product Features

- Used to drive Dielectric Barrier Discharge (DBD) devices of various sizes of discharge gaps under various atmospheres (Air, oxygen, nitrogen and other inert gases)
- Suitable for use under varying pressure
- Lower heat energy of the reactor
- Adjustable power over a wide range
- Includes interfaces for input power measurement, high-voltage output voltage, current detection and synchronization
- The efficiency of the power supply can reach above 90%

- Pulse frequency adjustment range: 1~1000Hz
- Duty cycle adjustment range: 1~99%

Product Specifications

Product Name	Modulated Pulse Low-temperature Plasma Experimental Power Supply
Model	CTP-2000K/L
Output voltage (KV)	0~3
*Center frequency (fo) (KHz)	10 (Customizable 1~100)
**DBD Discharge Gap	Generally discharged under low pressure, not necessarily for DBD structure
Frequency Range	Low-frequency
***Frequency (KHz)	0.5 fo~2 fo (Adjustable)
Fundamental Wave	Sine wave
Output Signals	Single high-voltage output. One connected to high voltage, one connected to ground.
Power (W)	0-500
Unit Dimensions W × D × H (mm)	250×250×360 (H)
Weight (kg)	8
Equipment Composition	1.Main Machine 2.Voltage Regulator

*~10KHz calibrated using our [50mm Diameter DBD reactor \(SKU#EPDBD050\)](#).

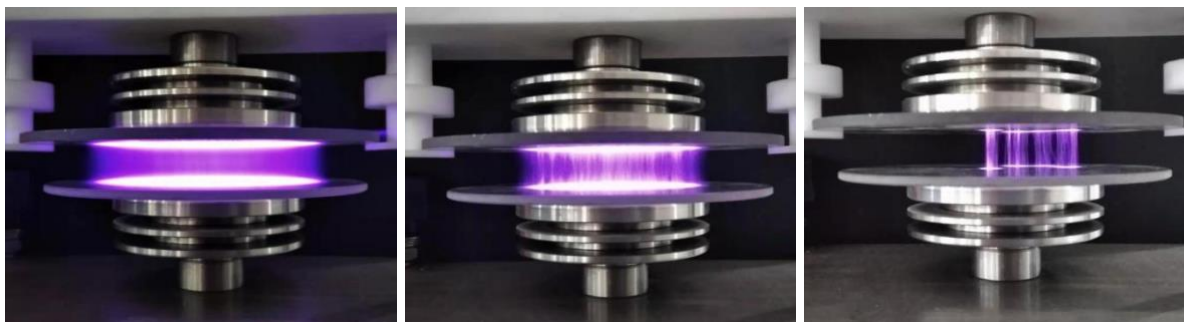
** DBD-50 only works with Models: [CTP-2000K](#), [CTP-2000K/P](#) and [CTP-2000K/L](#). For [CTP-2000K/S](#), this model will require a customized DBD reactor.

***The Center frequency of 1-40 khz has adjustable frequency range of 0.5 Fo~2 Fo; 40-70 khz has adjustable frequency range of 0.5 Fo~1.3 Fo; Above 75khz has adjustable range of 0.5 Fo~1.2 Fo.

Applications

1. Surface modification treatment of organic and inorganic materials
 - Enhance compatibility of different polymer surfaces
 - Enhance suitability of biological surfaces
 - Clad nanomaterials
2. Preparation of organic or inorganic nanoparticles
3. Cleaning and sterilization

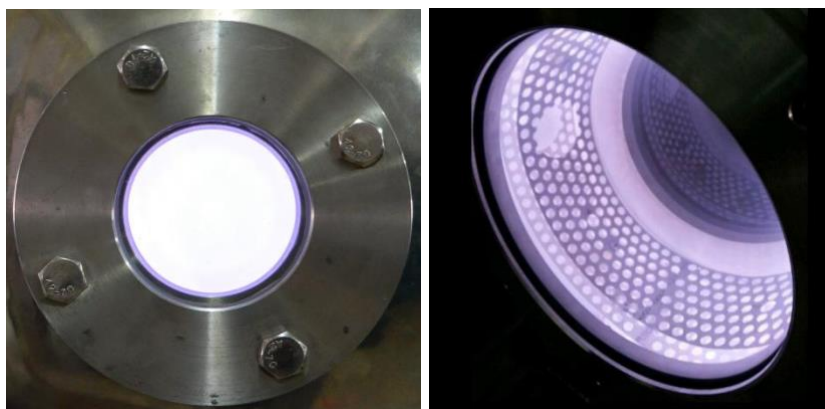
Application Examples:



(a)

(b)

(c)



(d)

(e)

Photo of Plasma Discharge

(a) DBD Strong Discharge (b) DBD Medium Intensity Discharge (c) DBD Weak Discharge

(d) Vacuum Argon Discharge (e) Vacuum Air Discharge

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