



## ACS Material Equipment Series

### Modulated Pulse Low-temperature Plasma Experimental

#### Power Supply

(CTP-2000K/P)

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## Product Composition

### 1. Main Machine - 2000K/P

### 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

### 3. Digital Pulse Modulator Pane

Frequency adjustment range: 10Hz ~ 1000Hz. Duty cycle adjustment: 1% to 99%.



Photo of Modulated Pulse Low-temperature Plasma Experimental Power Supply



Photo of Voltage Regulator



Photo of Digital Pulse Modulator Panel

## 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/P
Output voltage (KV)	0~30
*Center frequency (fo) (KHz)	10 (Customizable 1~100)
**Frequency (KHz)	0.5 fo~2 fo (Adjustable)
***DBD discharge gap	Within 12mm
Frequency Range	Medium frequency
Output Signals	Single high-voltage output. Once connected to high voltage, one connected to ground.
Fundamental Wave	Modulated Pulse
Power (W)	0-500
Unit Dimensions W × D × H (mm)	250×250×360 (H)
Weight (kg)	9
Equipment Composition	1.Main Machine 2.Digital Pulse Modulator Panel 3.Voltage Regulator

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

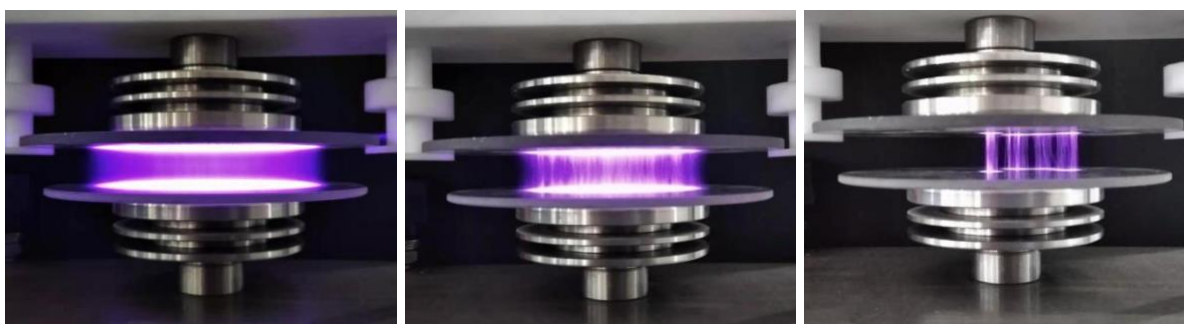
\*\*The Center frequency of 1-40 khz has adjustable frequency range of 0.5 Fo~2 Fo; 40-70 khz has adjustable frequency range of 0.5 Fo~1.3 Fo; Above 75khz has adjustable range of 0.5 Fo~1.2 Fo.

\*\*\* 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.

## 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

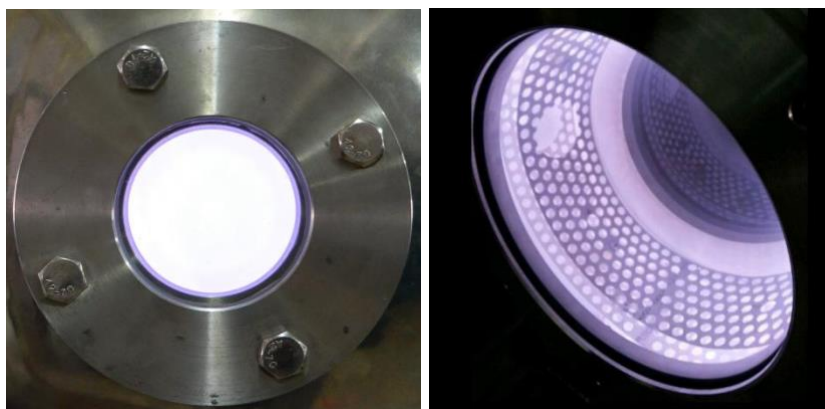
## Application Examples:



(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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