# ACS Material Equipment Series

# Microsecond Pulse Low-Temperature Plasma Experimental Power Supply

# (CTP-2000KM)




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Revision: 021325

## Product Composition

1. **Main Machine – 2000KM**

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%

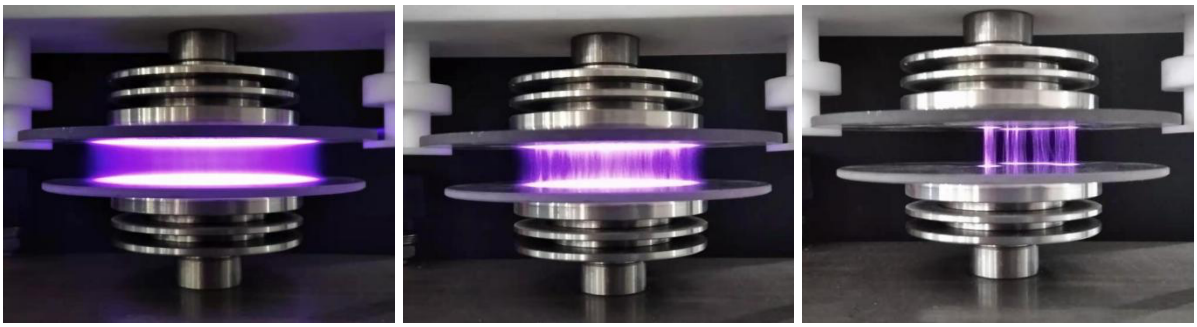
## Product Specifications

| | |
|---|---|
| Product Name | Microsecond Pulse Low-Temperature Plasma Experimental Power Supply |
| Model | CTP-2000KM |
| Output voltage (KV) | ~20 |
| Center frequency (KHz) | ~10 |
| Adjustable Frequency Range (KHz) | 7~15 |
| DBD discharge gap | Within 8mm |
| Rise Time (μs) | ~4 |
| Pulse Width (μs) | ~10 |
| Monitoring and Detection | Output voltage detection (internal 1000:1 capacitive divider), instantaneous current detection, integral current detection |
| Waveform Parameter | Pulse (Selectable Pulse Polarity) |
| Power (W) | 0-500 |
| Unit Dimensions W × D × H (mm) | 250×250×360 (H) |
| Weight (kg) | 9 |
| Equipment Composition | 1.Main Machine<br>2. Voltage Regulator |

## 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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