Pulse xenon lamp energy storage capacitor

Can a pulse xenon lamp be used in a laser inertial confinement fusion device?
In this paper, a main discharge circuit of the pulsed power supply with capacitance energy storage, using the principle of the modular integrated, is designed for the requirements of the pulse xenon lamp in the laser inertial confinement fusion device.

Can xenon flash-lamp pump optically a pulsed solid-state laser?
This article reports the development of a power supply of xenon flash-lamp which is used to pump optically a pulsed solid-state laser. The developed pulsed-power supply comprises the three parts to supply the flash-tube.

What is a capacitive pulsed power supply?
In order to study the adaptation of the semiconductors for the special power supply application,a capacitive pulsed power supply is designed by using the pulse thyristors. The modular integrated method is adopted to redesign the main circuit of the power supply.

What is a pulsed power supply?
Practical operation indicates that the pulse power supply can provide specific required pulse current and energy for the pulsed xenon lamp. The design method of the pulsed power supply can provide a reference for the design of the pulsed power supply, and lay a foundation for the higher capacitive energy storage application. 1. Introduction

How to measure voltage and current of a pulsed xenon lamp branch?
The voltage and current of a pulsed xenon lamp branch is measured by Tektronix P6015A and Pearson 2093 current monitor. The power waveform obtained from the product of current and voltage,two measurement results and a calculation result are shown in Fig. 13. Fig. 13. Voltage,current and power waveforms of a pulsed xenon lamp branch.

What is a pulsed xenon flash-lamp?
Pulsed Xenon flash-lamps are ga s-discharge devices designed to produce a pulsed radiation. They convert an electrical energy to an optical radiation . This intense pulse of radiant energy is used in many applications. In our case they are used for pumping solid-state lasers.

The invention relates to a power supply for a pump laser of a pulse xenon lamp, in particular to a method and circuit for charging an energy-storage capacitor of a power supply for a...

Xenon flash-lamp is a device that emit large amounts of spectral energy in short duration pulses. When an accumulated energy in a storage capacitor is released and dissipated, it forms highly ...

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The pulse xenon lamp setup is composed of a pulse xenon light, a boost module, a trigger module and a storage capacitor. It converts the electric energy into radiant energy ...

storage parameters An energy storage capacitor and pulse xenon lamp technology, which is applied to battery circuit devices, circuit devices, current collectors, etc., can solve the ...

A technology of energy storage capacitors and pulsed xenon lamps, applied in battery circuit devices, circuit devices, collectors, etc., can solve the problems of affecting the current stability ...

TL;DR: In this paper, the authors developed a pulsed xenon lamp power supply with a high-voltage pulse synchronous trigger function, a DC charging voltage of 1kV-3kV, an output pulse ...

Abstract. On-board xenon lamp (HID) has a series of advantages such as high luminous efficiency, high brightness, low energy consumption, high reliability, being not affected by on ...

The pulse xenon lamp setup is composed of a pulse xenon light, a boost module, a trigger module and a storage capacitor. It converts the electric energy into radiant energy and emits pulsed ...

The gas normally employed in Heimann flash tubes is Xenon because this gas gives the most efficient conversion of electrical energy into light (photon energy) in the visible spectrum. ...

An energy storage capacitor and pulse xenon lamp technology, which is applied to battery circuit devices, circuit devices, current collectors, etc., can solve the problems of affecting the current ...

The Heimann flash tube is a gas discharge device designed to produce pulses of short duration but of high intensity. The peak intensities achievable with flash tubes are much higher than are ...

Problems solved by technology [0003] At present, the light source of the pulsed solar simulator usually adopts a high-power pulsed xenon lamp. In practical applications, since the high-power ...

The invention provides a constant light control circuit for a high power pulse xenon lamp with ultralong pulse width. During charging preparation, a direct current charging/discharging power ...

The invention relates to a pulse xenon lamp pump laser power supply, in particular to a charging method and a charging circuit for an energy storage capacitor of the pulse xenon lamp power ...

A nanosecond pulse laser power supply hardware circuit is disclosed. In order to light a pulse xenon lamp, a trigger circuit of a xenon lamp, a charging circuit of an energy storage capacitor ...

According to the characteristics of pulsed xenon lamp discharge, the energy stored in the storage capacitor is

released by the discharge of the xenon lamp, so the energy of a single pulse is ...

ABSTRACT: Xenon flash-lamp is a device that emit large amounts of spectral energy in short duration pulses. When an accumulated energy in a storage ...

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Energy storage capacitor banks supply pulsed power in all manner of high-current applications, including shockless compression and ...

Electrical Characteristics of Flash lamps All electrical discharges in gaseous media, including flashlamps and arc lamps, have common characteristics; The impedance characteristics of a ...

The document describes the development of a power supply for a xenon flash-lamp used to optically pump a pulsed solid-state laser. The power supply consists of three parts: 1) an ...

The pulsed xenon lamp device can operate in a short time (10 ~ 100 u s) High peak power can be generated by converting the electric energy stored in the ...

The invention relates to a power supply for a pump laser of a pulse xenon lamp, in particular to a method and circuit for charging an energy-storage capacitor of a power supply for a pulse ...

Practical operation indicates that the pulse power supply can provide specific required pulse current and energy for the pulsed xenon lamp. The design method of the pulsed ...

A pulsed xenon lamp discharge device with good performance can excite the xenon lamp to obtain stable illuminance, and it can accurately control the discharge process of the xenon ...

1. a multifunctional pulsed xenon lamp power supply based on PLC control is characterized in that, comprising charger, programmable logic controller, energy storage capacitor, continuous ...

When a high voltage is applied across the anode and cathode, the xenon gas ionizes, allowing current to flow and producing a bright flash of light. The intensity and duration ...

The utility model provides a constant light control circuit for a high-power pulse xenon lamp with an ultra-large pulse width. At a charging preparation period, a direct-current charging and ...

Energy storage capacitor banks supply pulsed power in all manner of high-current applications, including shockless compression and fusion. As the technology behind ...

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According to the characteristics of pulsed xenon lamp discharge, the energy stored in the storage capacitor is released by the discharge of the xenon lamp, so the energy ...

The invention relates to a control circuit of a pulse xenon lamp power supply, which comprises: the charging control circuit is used for controlling the energy storage circuit to charge; the ...

Inside the tube, two electrodes are positioned at either end. The lamp is part of an electrical circuit that includes a power source as well as ...

A major restriction on the light energy delivered by a xenon pulse is the size of the electrolytic 330V storage capacitor. In this article we show the results of light power over time for: - Three ...

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