

Plasma Modulator Procurement



AI Overview

Plasma modulators, including optical and low-temperature plasma systems, can be procured through specialized research suppliers or institutional procurement channels, depending on application and power requirements.

Types of Plasma Modulators

Plasma optical modulators are designed to modulate high-power laser beams, achieving ultrafast modulation speeds and broad bandwidths. These devices operate by using a drive laser to excite an electron plasma wave, which then modulates a carrier laser beam, enabling applications in high-field physics and advanced laser systems. They are suitable for intensities up to 10^{16} W/cm² and can produce extremely broad spectral outputs. Low-temperature plasma modulators or experimental plasma power supplies, such as the CTP-2000K series, are used for dielectric barrier discharge (DBD) and jet plasma applications. These systems allow adjustable frequency ranges (1–75 kHz and above) and voltage control, making them suitable for surface modification, nanoparticle preparation, and sterilization processes.

Procurement Channels

Commercial Suppliers: Companies like ACS Material LLC provide plasma power supplies and experimental plasma systems. These products often include warranties, remote maintenance support, and technical documentation for safe operation.

Research Institutions: National laboratories, such as the Princeton Plasma Physics Laboratory (PPPL), offer procurement opportunities for specialized plasma equipment through formal vendor registration and contracting processes. Engaging with such institutions may provide access to advanced plasma modulators for research purposes.

Market Considerations: The RF plasma generator market is growing, with increasing demand in semiconductor manufacturing, medical sterilization, and display processing. Suppliers compete on frequency agility, power efficiency, and integration of self-diagnostic software, which may influence procurement decisions for high-precision applications.

Key Considerations for Procurement

Article Content

Acousto-Optic Modulators

Paragraph 1: Argonne National Laboratory is seeking to procure acousto-optic modulators and related components. The key items include 3 each of a fixed frequency driver, 3 each of a fiber pigtailed AO

Plasma-based polarization modulator for high-intensity

Manipulation of laser pulses at high intensities is an important yet challenging issue. New types of plasma-based optical devices are promising

Plasma modulator for high-power intense lasers.

It is illustrated via theory and simulation that a high-power sub-relativistic laser pulse can be self-modulated to a broad bandwidth over 100% after it passes through a tenuous plasma. A type of

Paper Title (use style: paper title)

Modulators in LCLS utilize hydrogen-filled thyratrons as switches because of their fast recovery, but recently several deuterium-filled thyratrons have been installed because of their more stable recovery

All-optical plasma modulation by the plasma channel induced in the ...

Yu et al. illustrated a novel application of plasma as a unique optical modulator for intense lasers with intensities up to $10^{16} \text{ W cm}^{-2}$. In our previous work, we demonstrated theoretic

75th Procurement Arrangement signed

The power supplies provide a high regulation of the applied voltages to actively control delivered power to the plasma based on the plasma

Electro-optic Modulators - Buyer's Guide & Suppliers

Use this guide from the leading photonics information portal to compare major types, define selection criteria, find suppliers and arrive at defensible purchasing

Global RF Plasma Generator Market Size, Share, and Industry Trends ...

Semiconductor fabricators in East Asia are expanding RF plasma generator procurement for advanced node production. REACH compliance in Europe and stricter EPA emissions guidelines in the US are

Plasma optical modulators for intense lasers

In this article, we show a novel ultrafast all-optical plasma-based modulator that can directly modulate the spectrum of intense laser pulses to an extreme broad bandwidth, with a

Plasma modulator for high-power intense lasers

A type of plasma-based optical modulator is proposed for the generation of broadband high-power laser pulses. Compared with normal optical components, plasma-based optical components can sustain

Plasma Power Supply

ACS Material supplies advance chemicals and high quality nanomaterial and graphene products like CVD graphene, carbon nanotubes and many others worldwide.

Silicon photonics plasma-modulators with advanced transmission line ...

Silicon photonics plasma-modulators with advanced transmission line design Merget, Florian (Corresponding author) ; Sharif Azadeh, Saeed ; Mueller, Juliana ; Shen, Bin ; Nezhad,

Procurement Division

To support the Princeton Plasma Physics Laboratory (PPPL) mission, the Procurement Division purchases a wide variety of goods and services, ranging from: Commercial Products and Services

Procurement Division

Princeton Plasma Physics Laboratory Mail: P.O. Box 451 Princeton, NJ 08542-0451
GPS: 100 Stellarator Road Princeton, NJ, 08540-0451 (609) 243-2000 GENERAL INQUIRIES:

Silicon optical modulators

CMOS-compatible silicon optical modulators with high modulation speeds, large bandwidths, small footprints, low losses and ultralow power

Exploring the Dynamics of Pulse Modulator Market: Key ...

Delve into detailed insights on the Pulse Modulator Market, forecasted to expand from USD 450 million in 2024 to USD 850 million by 2033 at a CAGR of 7.5%.

RF Plasma Generator Market Size, Share & 2030

These incentives compress the procurement window into a 24-to-30-month span, inflating near-term RF plasma generator market revenue visibility.

Altair & Mira 1.5 kW Microwave Plasma Sources | Radom

RADOM Corporation's product portfolio meets the pressing needs of research laboratories and universities by providing a compact, simple-to-use, reliable, and affordable plasma solution for

Large-Bandwidth Optical Modulator

A direct contract with a single supplier, without competition. This procedure can be used for procurements below the relevant contract value threshold.

CTP-2000K/P Modulated Pulse Plasma Power Supply

Browse the full line: Plasma Power Supply series, including CTP power supplies, DBD reactors, parametric supplies, plasma-jet generators, and plasma-torch

High-efficiency Plasma Modulator Proposed for High Power Intense

Recently, a research team from the Shanghai Institute of Optics and Fine Mechanics of the Chinese Academy of Sciences proposed a scheme that high-power intense lasers can be self-modulated in

Procurement of a Quadrupole Inductively Coupled Plasma Mass ...

Japan Atomic Energy Agency - Notice of Procurement (Goods & Services)
Procurement of a Quadrupole Inductively Coupled Plasma Mass Spectrometer for Plutonium Forensic Technology

A New High-Power Density Tailored Waveform Modulator for Plasma ...

A narrow plasma ion energy distribution (IED) is an important for improving the precision of plasma processes in semiconductor manufacturing. The tailored voltage waveform (TVW) based plasma

29--MODULATOR ASSEMBLY,

Proposed procurement for NSN 2920150273111 MODULATOR ASSEMBLY,: Line 0001 Qty 23 UI EA Deliver To: W1A8 DLA DISTRIBUTION By: 0090 DAYS ADO All responsible sources ma

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