
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

**Pursuant to Section 13 or 15(d) of
the Securities Exchange Act of 1934**

**Date of Report (date of earliest event reported):
January 3, 2006**

MONOLITHIC POWER SYSTEMS, INC.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

000-51026
(Commission File Number)

77-0466789
(I.R.S. Employer
Identification Number)

**983 University Avenue, Building A
Los Gatos, California 95032**
(Address of principal executive offices) (Zip Code)

(408) 357-6600
(Registrant's telephone number, including area code)

(former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 1.01 Entry into a Material Definitive Agreement

(a) On January 3, 2006, Monolithic Power Systems, Inc. (the “**Company**”) agreed to purchase certain fabrication equipment from ASM America Inc. (“**ASM**”) located in Arizona. The purchase price for this equipment is approximately \$1.5 million. The Company has no material relationship with ASM.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: January 9, 2006

By: _____ /s/ C. Richard Neely Jr.

C. Richard Neely Jr.
Chief Financial Officer
(Principal Financial and Accounting Officer and Duly
Authorized Officer)