

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASML NETHERLANDS B.V., EXCELITAS TECHNOLOGIES CORP., AND
QIOPTIQ PHOTONICS GMBH & CO. KG,
Petitioners

v.

ENERGETIQ TECHNOLOGY, INC.,
Patent Owner

Case IPR2015-01375
U.S. Patent No. 9,048,000

**PATENT OWNER'S RESPONSE
UNDER 37 C.F.R. § 42.120**

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I. INTRODUCTION

This case is about an invention for a high brightness light source that was so much better than what preceded it, that it has essentially replaced the arc lamps previously used in semiconductor wafer inspection, lithography, and metrology tools.

Energetiq's invention solved a fundamental problem – how to generate a light brighter than arc lamps. Energetiq accomplished this after recognizing that – against the weight of scientific literature – using a *short* wavelength laser to generate, *and sustain* a plasma in a pressurized chamber worked better than a long wavelength laser. Petitioners concede that Energetiq was the first to do this – they cite no Section 102 art. Instead, they institute this proceeding based on an unusable device described in a 1985 patent application, and then say that the invention was nothing more than substituting – more than 20 years later – a short wavelength laser. But, what Energetiq did here was a classic invention – it took components that had been available for years, ignored the teachings away from a combination of those components, and discovered that using a short wavelength laser, when pressure is properly adjusted, will work better than anyone would have expected for sustaining a plasma.

The challenged claims cover this invention. There is no contention here that the claims do not recite a novel apparatus and method for illuminating features on

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