

PROCEEDINGS OF SPIE

High-Power Diode Laser Technology and Applications XI

Mark S. Zediker
Editor

3–5 February 2013
San Francisco, California, United States

Sponsored and Published by
SPIE

Volume 8605

Proceedings of SPIE 0277-786X, V.8605

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

High-Power Diode Laser Technology and Applications XI, edited by Mark S. Zediker,
Proc. of SPIE Vol. 8605, 860501 · © 2013 SPIE · CCC code: 0277-786X/13/\$18 · doi: 10.1117/12.2025047

Proc. of SPIE Vol. 8605 860501-1

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Please use the following format to cite material from this book:

Author(s), "Title of Paper," in *High-Power Diode Laser Technology and Applications XI*, edited by Mark S. Zediker, Proceedings of SPIE Vol. 8605 (SPIE, Bellingham, WA, 2013) Article CID Number.

ISSN: 0277-786X

ISBN: 9780819493743

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA

Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445

SPIE.org

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Printed in the United States of America.

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Introduction

It has been over 10 years since the start of this conference, "High-Power Diode Laser Technology and Applications." During that time, we have seen a steady progression of the average power per bar, with 20% fill factor bars moving from 40 watts per bar to 100 watts per bar, and the average efficiency improving from 45% to 65%. This has been remarkable progress for this field. This conference discusses many of the recent advances in this area that have led to an improvement in power, efficiency and reliability.

As we move forward, the ultimate goal is to achieve the same brightness at high power levels as the fiber laser and the disk lasers. This is a very ambitious goal, with many researchers in the field. Wavelength beam combining can certainly go a long way toward achieving this brightness level, but a new technology will ultimately be needed to achieve the same cost/performance of the more conventional high-power industrial lasers. We would like to encourage a discussion about these new technologies, and how a competitive product can be developed with new advanced technology.

This conference is a great forum for sharing the technical progress in these areas. We want to encourage researchers and engineers to open up the discussions about many of the technical challenges faced today in achieving these goals. In the future, we look forward to hearing about the developments on higher brightness, higher-power direct diode laser systems, and applications of these new technologies.

Mark S. Zediker

