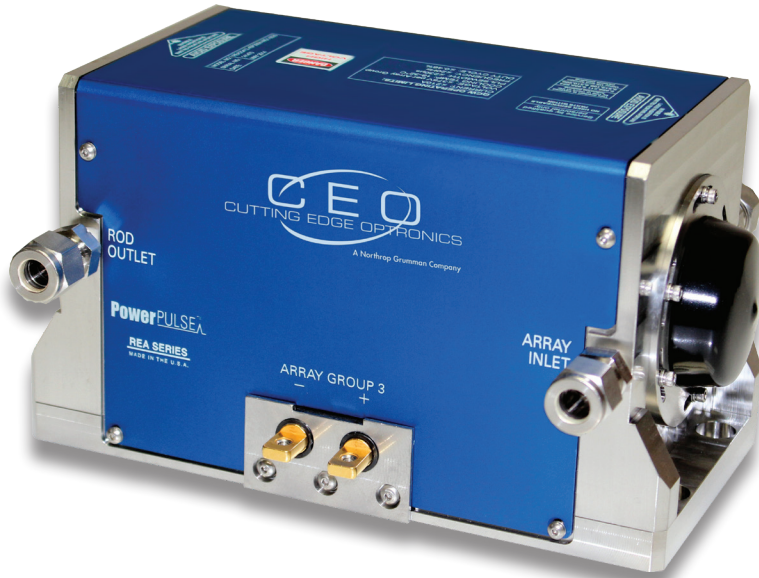


REA PowerPULSE™ Series

FEATURES AND BENEFITS

DIODE PUMPED LASER MODULE



- Small signal gain > 10
- Peak output energy > 9 J
- Stored energy > 7.5 J
- Excellent gain uniformity
- ≥ 20 Hz operation
- Features CTE matched 'hard solder' laser diode packaging technology for long lifetimes
- Compact design
- Easy to use

The REA PowerPULSE Series of DPSS laser module is ideally suited for high energy, high average power laser applications. This PowerPULSE module brings the reliability and performance of diode-pumping to high energy industrial and scientific laser systems, virtually eliminating the downtime experienced by older lamp-based laser technologies.

This 7.5 J amplifier is a pulsed pumped DPSS laser amplifier consisting of a 25.4 mm diameter Nd:YAG laser rod, which is radially side-pumped by 468 laser diodes rated at 300 W/bar. The laser diodes are packaged utilizing CEO's Golden Bullet™ CTE-matched hard solder packaging technology, and have an expected lifetime of more than 10 billion shots. The Nd:YAG laser amplifier outputs > 9 J and stores > 7.5 J of energy at 1064 nm. It has a small signal gain of > 10 and can operate at repetition rates greater than 20 Hz. The amplifier is cooled by re-circulating filtered water through a simple non-DI water chiller system.

This reliable and efficient laser module can be used as the "engine" in new DPSS laser system development and production, or can be used to convert your existing lamp-based designs to state-of-the-art diode pumping.

SPECIFICATIONS

Model	Rod Type	Output Energy ²	Operating Voltage ³	Peak Drive Current	Rep Rate
REA25412-45P300	25.4 mm, YAG ¹	> 9 J	930 VDC	210 A	20 Hz

(1) Rod length is 188 mm with flat/flat faces and 0.8% Nd doping.

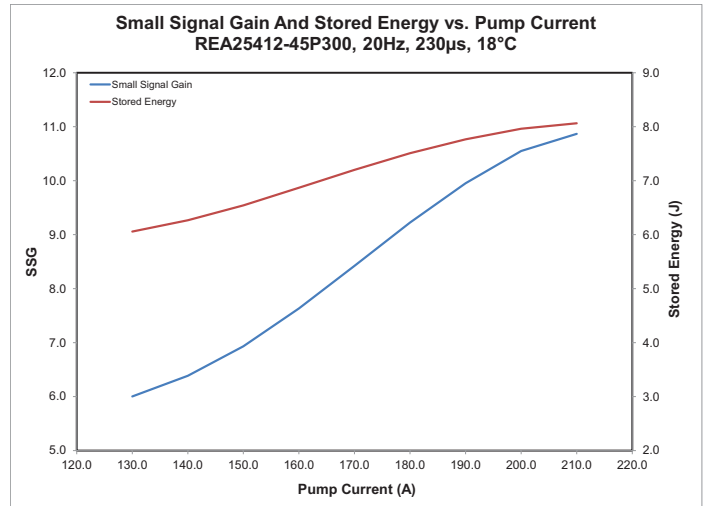
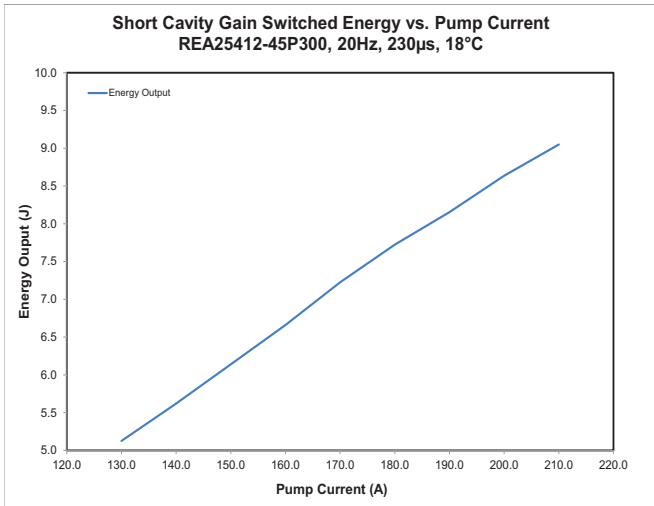
(2) Minimum IR (1064 nm) multi-mode energy in short cavity (280 ± 5 mm, 0.75mCC HR/flat 50% R OC) CW oscillator arrangement at 20 Hz.

(3) Required voltage at the pump head stated w/o consideration for inefficiencies in the electrical system.

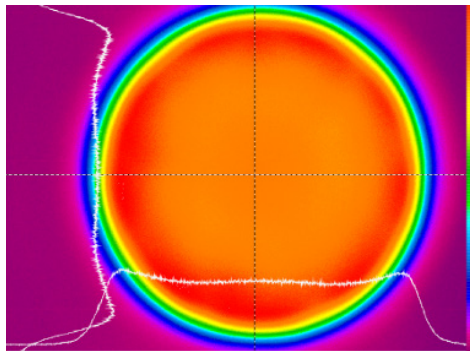
Your DC power supply should be oversized by 30% to allow for these inefficiencies.

(4) YLF version available

REA PowerPULSE™ Series



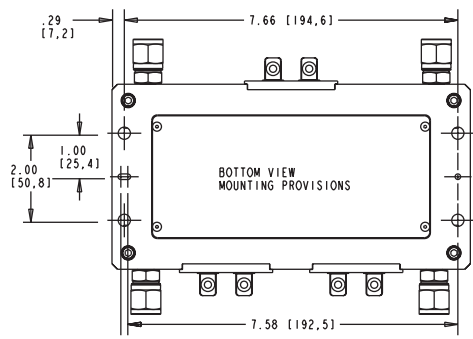
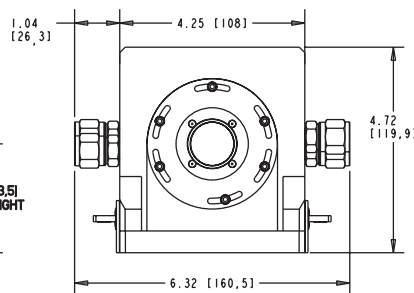
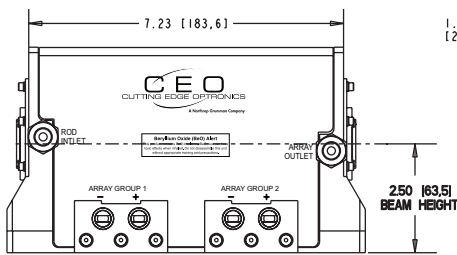
Flourescence Profile



Nd:YAG Rod Diameter 25.4 mm
Uniformity - less than 10% edge-to-center



U.S. Quarter Dollar 24.26 mm



Dimension in Inches [cm]

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This Product is covered by one or more of the following Patents: 5,898,211 5,985,684 5,913,108 6,310,900 Other US and Foreign Patents Pending.

DANGER

INVISIBLE LASER RADIATION

AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION

* Diode laser
SW & up, 790-1550nm
CLASS IV

WARNING

ELECTROSTATIC DISCHARGE SENSITIVE DEVICE REQUIRING SPECIAL HANDLING

ISO 9001:2008 REGISTERED Rev. A 01/15 15-0137 1/26/2015