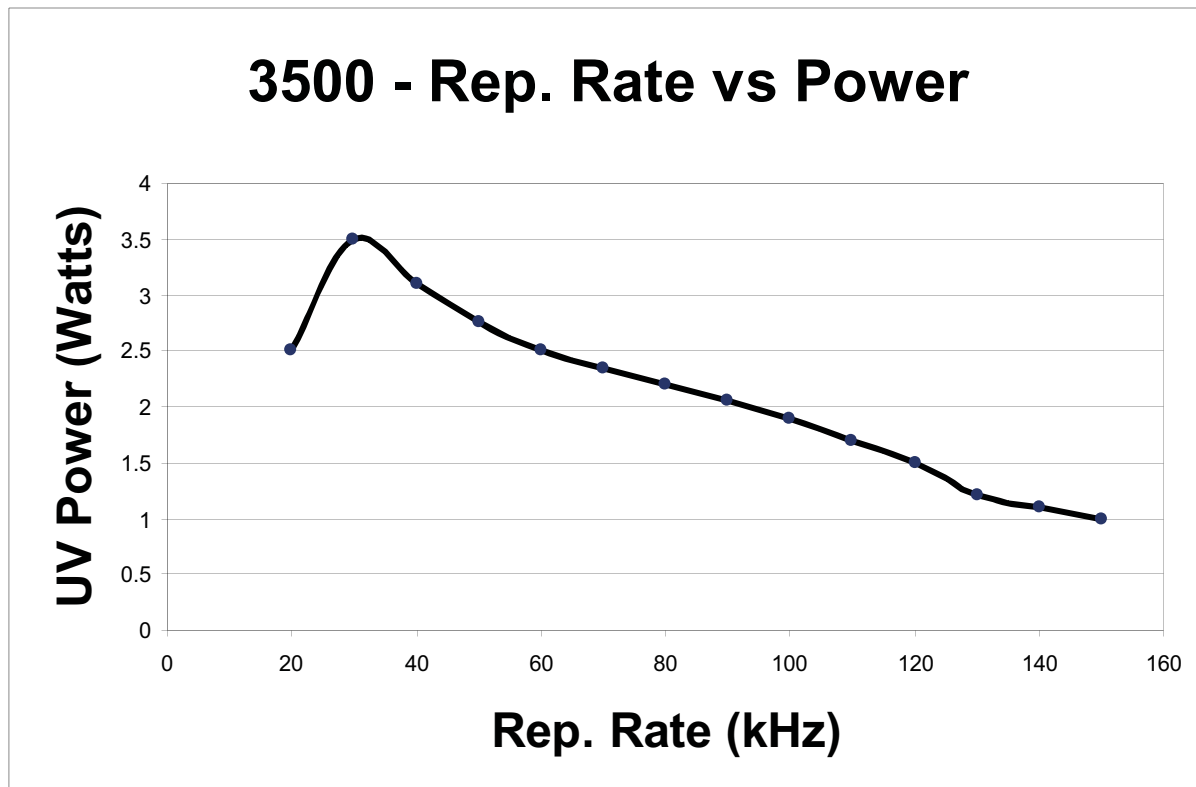


Series 3500 UV Laser - Power vs. Repetition Rate



DPSS Lasers Inc. specializes in the production of Diode Pumped, Solid State UV (355nm) laser systems. At the heart of our laser is a Nd:YVO₄ (Vanadate) crystal gain medium, which is particularly suited to operate at very high repetition rates. This crystal, in conjunction with our patented (#6,002,695) intra-cavity tripling process, allows DPSS Lasers Inc. to achieve high average power levels at 355nm, while maintaining very high rep rates.

Our DiSC (Directly Side Coupled) pumping geometry of the gain medium lends itself to all commercially available 808nm diode bars and enables us to easily scale the laser output with a simple diode replacement. As the 20 Watt diode bar is the most economical choice for our pump source, most customers choose this option. However, for those customers that require more power, 30 Watt pump diodes are available. The electronic package for the DPSS solid state laser has been designed to accommodate the power requirements of higher output systems, thus reducing the overall cost of our high power UV lasers.

The graph below represents UV output versus repetition rates of our DPSS laser systems when pumped with a 30 Watt diode bar. Here again, the high efficiency of our DiSC pumping geometry allows us to operate our diodes at levels far below the maximum in order to extend the operating lifetime of our diodes. For example, a 30 Watt diode bar operating at maximum power will produce 1.9 Watts of UV output at 100 kHz rep. rate. Consequently, DPSS Lasers will typically spec. 1.0 Watt at 100 kHz, thereby extending the lifetime of the laser diode and affording the customer substantial headroom in the UV output. As the graph shows, DPSS Lasers Inc. can accommodate almost any output and repetition rate combination your application may require.

Customers should use the above graph as a guide in determining which DPSS UV (355nm) laser system will meet their application needs. Please give DPSS Lasers Inc. a call to talk about your specific application and how we might be able to best serve you.