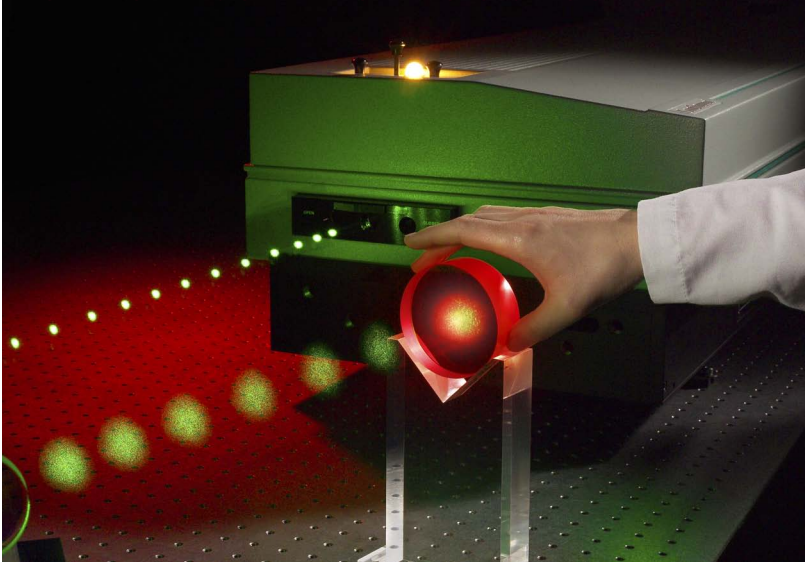


Powerlite™ DLS 2 Joules



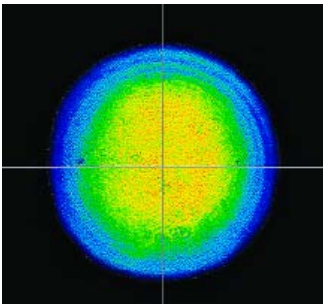
Powerlite DLS 2 J - Energy and Beam Quality

The Powerlite is an ideal solution when higher levels of green energy are required for the pumping of Ti:Sapphire laser systems.

High energy, high repetition rate Ti:Sapphire systems are using multiplexed standard lasers as the amplifier pump source. When more energy is required, more lasers are needed.

Powerlite 2 J is the only alternative to the complex relay imaging systems delivering the multitude of beams to the amplifier crystal. At 2 Joules at 532 nm, the Powerlite Plus is the industry leader in terms of energy and beam quality. This is made possible by the implementation of the Faraday Isolator between the oscillator and amplifier, which allows the amplifier to run at its peak performance.

For dollars per Joule, the Powerlite Plus 2 J makes economic sense.



Powerlite DLS 2J Beam Quality -
2 J at 532 nm

High Energy Nd:YAG
High Energy Nd:YAG
High Energy Nd:YAG
High Energy Nd:YAG

Distributed intelligence, with microprocessors in both the laser head and power supply for more precise system control

Rack mounted and modular components for easier maintenance and service

New cooling group with active digital control for accurate temperature monitoring and improved thermal management

Standard, powerful Windows®-based Graphical User Interface for complete control of all system functionality

LabView drivers available

Powerlite DLS 2 J Specifications

Description	2 J
Repetition Rate (Hz)	10
Energy (mJ)	
1064 nm	3500
532 ¹ nm	2000
Pulsewidth ² (nsec)	
532 nm	4-8
Linewidth ³ (cm ⁻¹)	
Standard	1
Injection Seeded, SLM	0.003
Divergence ⁴ (mrad)	0.45
Beam Pointing Stability ⁵ (±μrad)	30
Beam Diameter (mm)	12
Jitter ⁶ (±ns)	
Unseeded	0.5
Seeded	1.0
Energy Stability ⁷ (±%)	
532 nm	3.0;1.0
Power Drift ⁸ (±%)	
532 nm	6.0
Beam Spatial Profile (Fit to Gaussian) ⁹	
Near Field (<1m)	0.7
Far Field (∞)	0.95
Max Deviation from fitted Gaussian ¹⁰ (±%)	
Near Field (<1m)	40
Service Requirements	
208-240 VAC, single Φ	30A
Water GPM at 10-40 PSI	1-2
Polarization	
1064, 355, 266 nm	Horizontal
532 nm	Vertical



Notes

- Using Type II doubler
- FWHM full width half max
- FWHM (1cm⁻¹ = 30 GHz)
- Full angle for 86% (1/e²)
- 99.9% shots will be <±30 μrads with ΔT_{room} <±3°C
- With respect to external trigger
- The first value represents shot-to-shot for 99.9% of pulses, the second value represents RMS
- Average for 8 hours with ΔT±3°C
- A least squares fit to a Gaussian profile. A perfect fit would have a coefficient of 1.
- Within FWHM points near field at 1 meter.

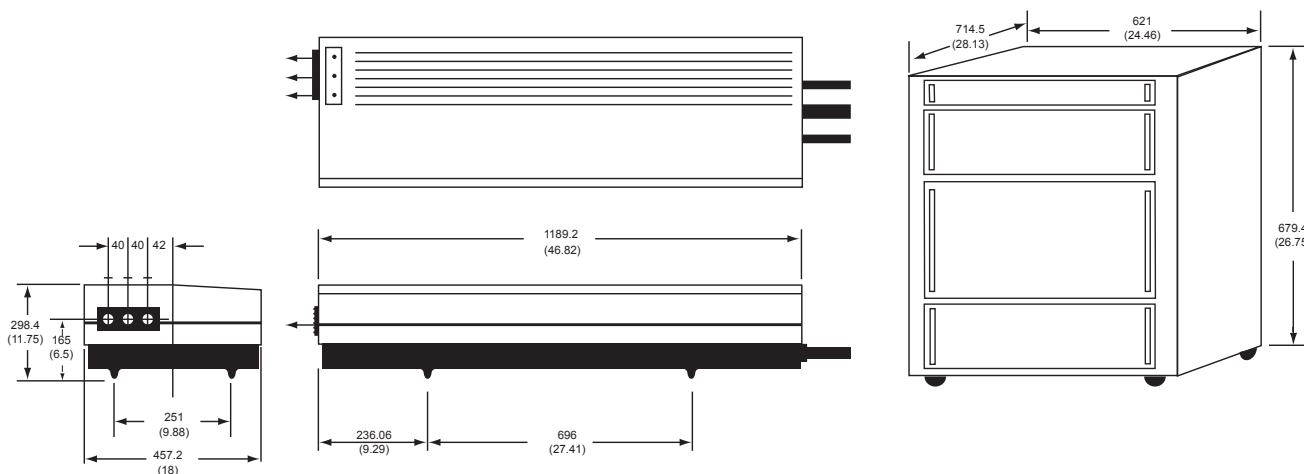
All specifications at 1064 nm unless otherwise noted. As a part of our continuous improvement program, all specifications are subject to change without notice.

Powerlite DLS 2 J System Requirements

Size	Optical Head (LxWxH)	1189.2 x 457.2 x 298.4 mm (46.82" x 18" x 11.75")
	Power Supply (LxWxH)	714.5 x 621 x 679.4 mm (28.13" x 24.46" x 26.75")
Water	Service	1-2 GPM (gallons/minute) at 10 - 40 PSI pressure drop
	Temperature	<22° C / 70° F (higher flow rate for higher temperature)
Electrical Service		208 - 240 VAC, single ϕ
Room Temperature		18 to 30° C / 65 to 87° F
Umbilical Length		5 m (16.4 ft)

Powerlite DLS 2 J Physical Layout

All dimensions are in mm (inches)



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