

VORTRAN LASER TECHNOLOGY, INC

STRADUS® FAMILY OF SMART LIGHT ENGINES™

- **Medical, Biomedical & Industrial**
- **Patented Sealed Optical Cavity**
- **Self-contained & Compact**
- **Excellent Beam Quality**
- **Low Noise**
- **USB or RS-232 Interface with GUI**
- **Analog & Digital Modulation**
- **OEM Head or End User Systems**



Specification	375	405	445	473	488	505	514	532 ⁷	561	633	637	642	660	685	705	730	785
Wavelength (nm) ¹	375 ±5	405 ±5	445 ±5	473 ±5	488 ±5	505 ±2	515 ±5	532 ±1	561 ±2	633 ±3	637 ±5	642 ±5	660 ±5	685 ±5	705 ±10	730 ±10	785 ±10
Power Output (mW, -0% +10%)	60, 160	100, 250	80	80	50, 150	70	60	40	50	80	140	110	100	100	30	30	80
RMS Noise % (10Hz to 10MHz)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.15	< 0.25	< 0.25	< 0.25	< 0.1	< 0.1	< 0.1	< 0.1	< 0.15	< 0.15	< 0.2	< 0.2	< 0.2
Small Beam (~mm, ~mrad) ²	N/A	1.0, 0.6	0.8, 1.0	0.8, 1.0	0.8, 1.0	0.9, 1.0	0.9, 1.0	0.8, 0.8	0.7, 1.0	1.0, 1.0	1.0, 1.0	1.0, 1.0	1.1, 1.0	1.1, 1.0	1.1, 1.0	1.1, 1.0	1.1, 1.0
Standard Beam (~mm, ~mrad)	1.2, 0.5	1.4, 0.5	1.1, 0.6	1.2, 0.6	1.3, 0.5	1.2, 0.6	1.2, 0.6	N/A	N/A	1.3, 0.7	1.3, 0.7	1.3, 0.7	1.4, 0.6	1.4, 0.6	1.4, 0.6	1.4, 0.6	1.4, 0.6
M ² (typical)	<1.25																
Beam Circularity	>90%																
Beam Centration (mm)	<0.5mm																
Beam Alignment (mrad)	<5mrad																
Pointing Stability	<5 μrad/°C																
Power Stability (24 hours)	<0.5%																
Polarization Orientation	Vertical ±5°																
Polarization Extinction Ratio ³	>100:1																
Digital Modulation ⁴	200 MHz (<2ns rise time)								N/A				200 MHz (<2ns rise time)				
Modulation Depth	Full Extinction								N/A				Full Extinction				
Analog Modulation ⁵	500 kHz (<0.7 μs rise time)								N/A ⁶				500 kHz (<0.7 μs rise time)				

All measurements made at 1/e².

Specifications guaranteed at full power.

¹ Wavelength selection available

² Small beam optimized for SM fiber coupling

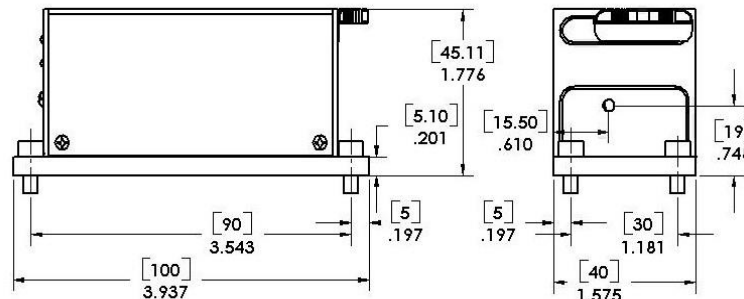
³ Higher PER available upon request

⁴ Firmware selectable 50Ω or 1kΩ input impedance

⁵ Analog can be combined with Digital to vary pulse amplitude

⁶ 561 & 532 Limited Analog power control

⁷ Green laser (532) beam exits ~center at 18.40mm from left side
NOT 15.50mm as drawn.



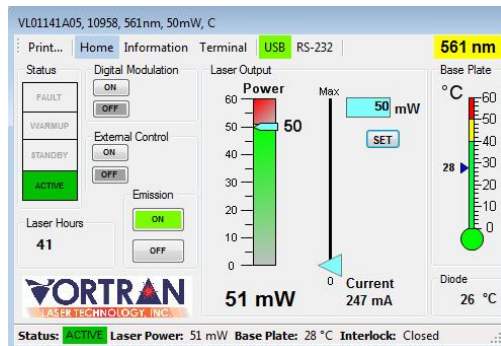
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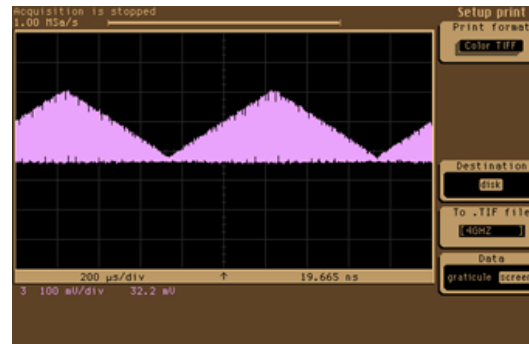
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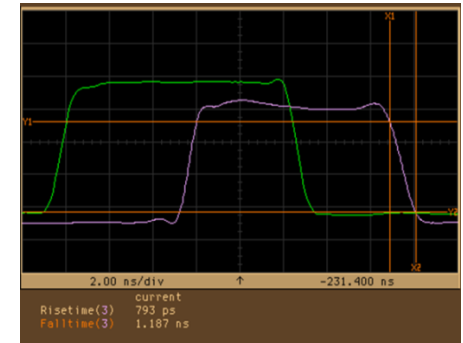
**Graphical
User
Interface
(GUI)
Software**



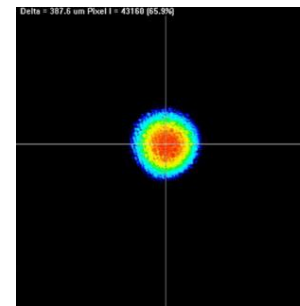
Digital Modulation with Analog Amplitude Control



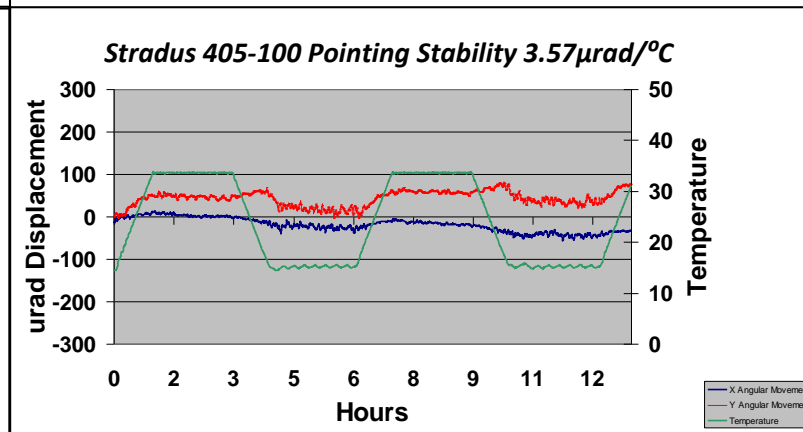
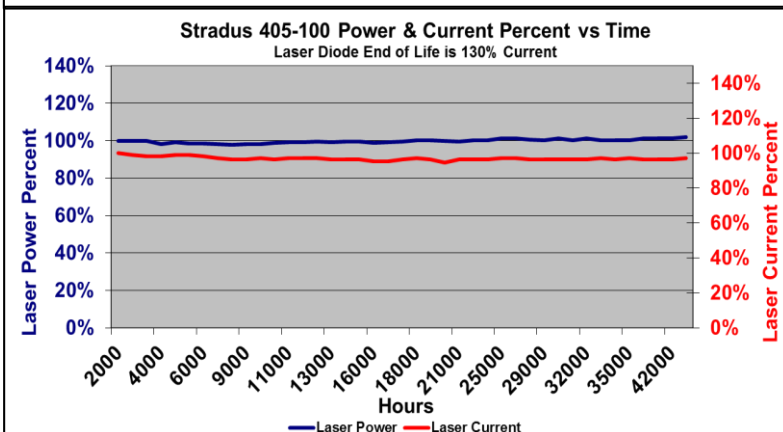
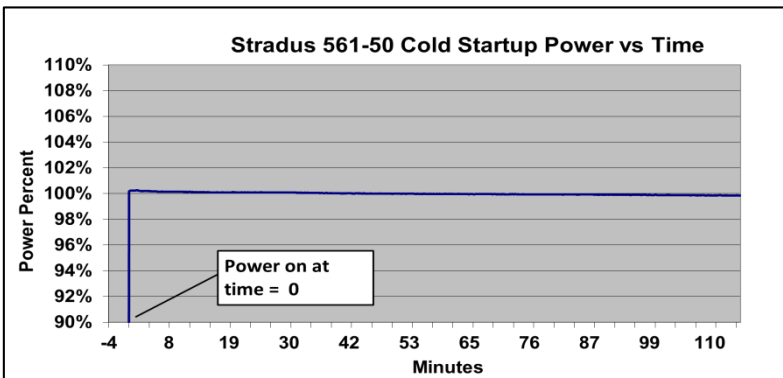
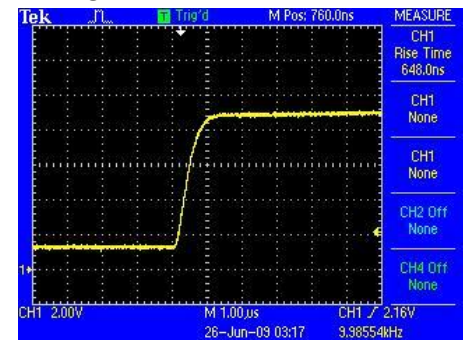
Digital Modulation rise time 1.187ns



Excellent Beam Quality, $M^2 < 1.25$



Analog Modulation rise time 648.0ns



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