

DPSS vs. HeCd



Skylark 320 NX DPSS laser:
KEY ADVANTAGES over helium cadmium systems

High power
200 mW

Delivers up to 200 mW of efficient ultraviolet light at 320 nm, ensuring ample power margin for complex setups.

Clean beam
 $M^2 < 1.2$

Operates with a pure TEM₀₀ mode with ellipticity > 96%, delivering uniform spatial quality and low noise operation.

Stable output
 $< 5 \mu\text{rad}/^\circ\text{C}$

Ensures beam alignment and spectral precision for consistent performance across demanding optical applications.

Specifications

	Skylark NX	HeCd
Output power	up to 200 mW	up to 50 mW
Wavelength	320 nm	325 nm
Spatial mode	TEM ₀₀	TEM ₀₀
Beam quality (M^2)	< 1.2	Not specified
Beam pointing stability	$\leq 5 \mu\text{rad}/^\circ\text{C}$	$\leq 25 \mu\text{rad}/^\circ\text{C}$
Spectral linewidth	0.0005 GHz	1.0 GHz
Coherence length	$> 100 \text{ m}$	0.3 m
Power noise (30 kHz – 10 MHz)	$\leq 0.1 \%$ RMS	$\leq 4.0 \%$ RMS
Power stability	$\leq 2.0 \%$ (8 hours)	$\leq 2.0 \%$ (4 hours)

What do our customers say about Skylark 320 NX CW DPSS single frequency lasers?

“An excellent replacement for an Argon or HeCd laser: emission is spectrally pure, efficiency is much better, it provides better longevity with cheaper maintenance, and it is much smaller.”

SEMICONDUCTOR INSPECTION CUSTOMER

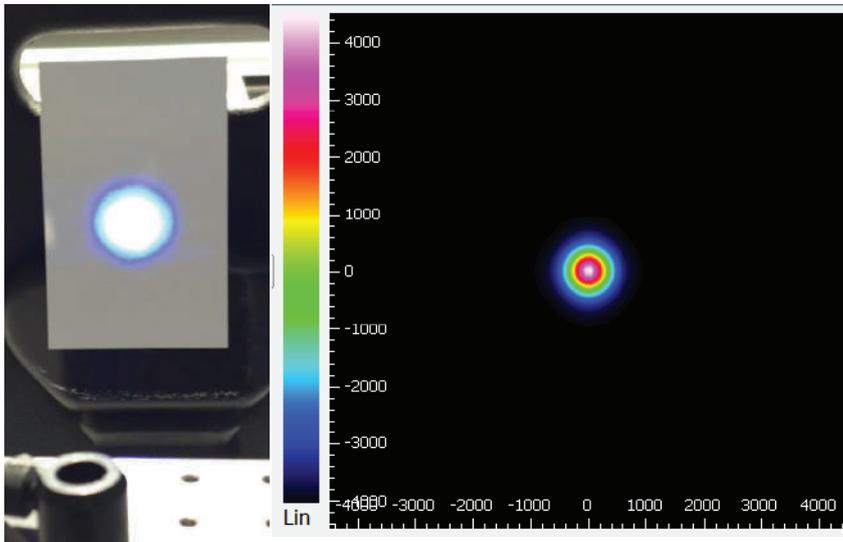
“It’s taken 15 years to find a suitable replacement for our HeCd laser. The clean mode enables us to manufacture high fidelity gratings with > 92% transmission efficiency (vs. 70% with HeCd)”

OPTICAL GRATING MANUFACTURER

“The Skylark 320 NX laser is an excellent, efficient source for laser interference lithography [techniques], a great improvement over gas systems, and with spectrally clean emission.”

SEMICONDUCTOR MATERIALS ANALYST

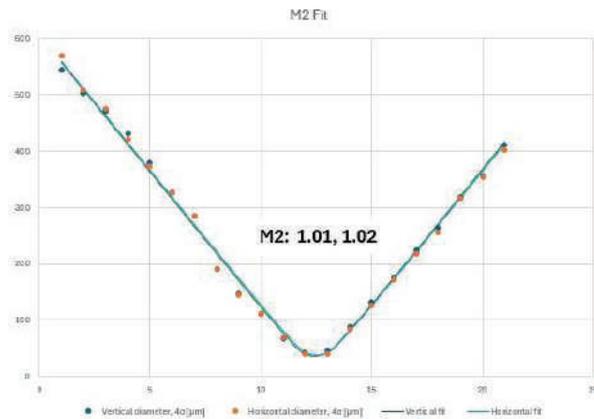
Beam profile



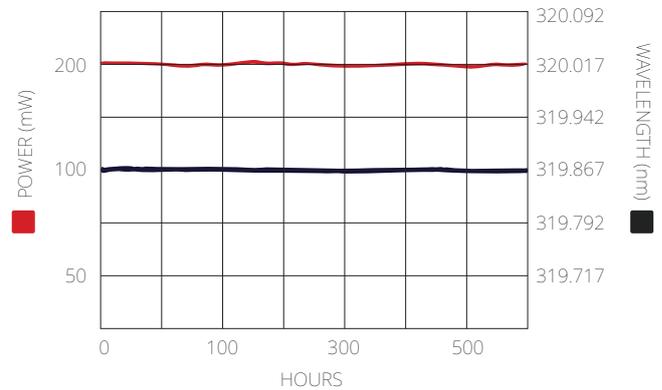
[1] Visual inspection of beam on detector card
 [2] Beam profile via analyser

Ellipticity	96.8%
Minor ellipse diameter (13.5%)	1035.0 μm
Major ellipse diameter (13.5%)	1069.0 μm
Beam width (4-sigma) X	1074.4 μm
Beam width (4-sigma) Y	1108.5 μm
Beam width clip X (13.5%)	1037.1 μm
Beam width clip Y (13.5%)	1040.9 μm

Test data



Skylark 320 NX
 M² value < 1.03



Skylark 320 NX
 power and wavelength stability over 500+ hours

Dimensions



Get in touch

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