Skylark Lasers

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 TEM_{00} mode with ellipticity > 97%, delivering uniform spatial quality and low noise operation.

Stable output
< 5 µrad/°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	≤ 5 µrad/°C	≤ 25 µrad/°C
Spectral linewidth	0.0005 GHz	1.0 GHz
Coherence length	> 100 m	0.3 m
Power noise (30 kHz – 10 MHz)	≤ 0.1 % RMS	≤ 4.0 % RMS
Power stability	≤ 2.0 % (8 hours)	≤ 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

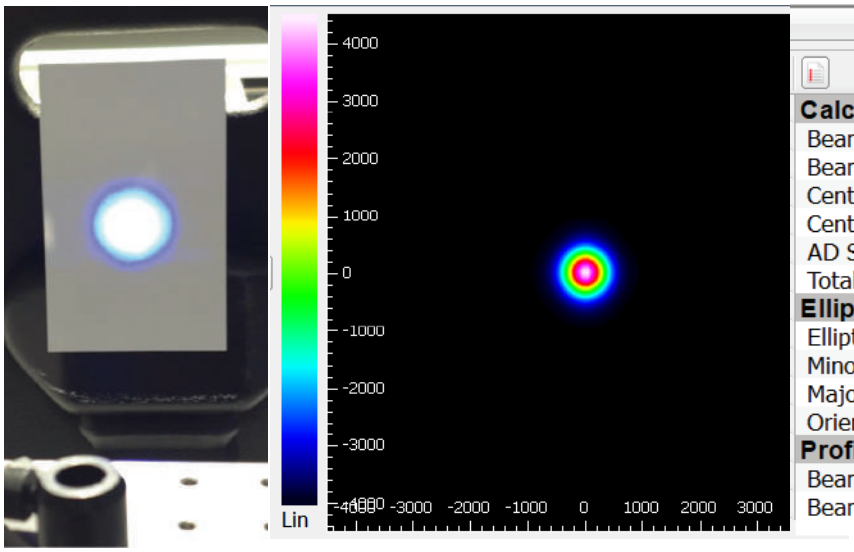
"It's taken 15 years to find a suitable replacement for our HeCd laser. The clean mode enables us to manufacture high fidelity gratings with > 92% transmission efficiency (vs. 70% with HeCd)"

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

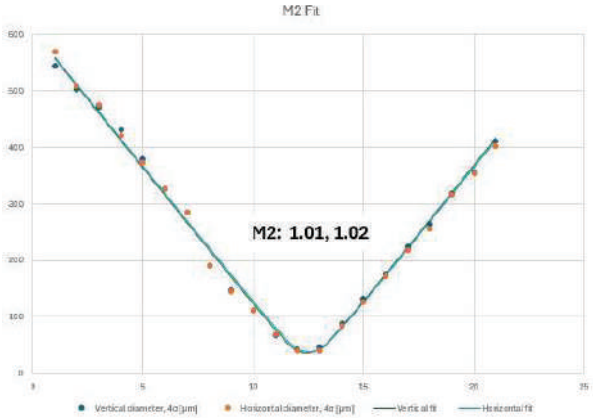


Calculation Results

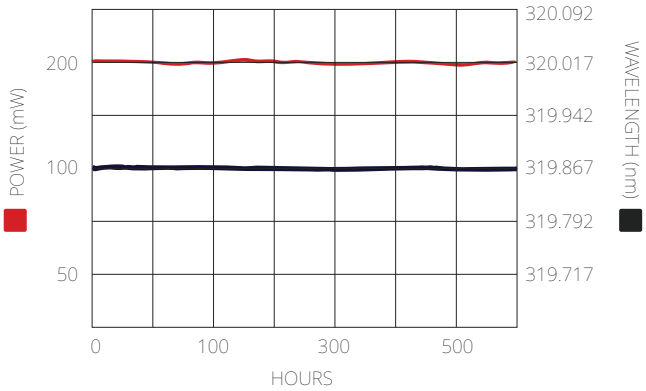
Parameter	Value	Unit
Calculations Derived from Raw Data		
Beam Width (4-Sigma) X	1074.4	µm
Beam Width (4-Sigma) Y	1108.5	µm
Centroid Position X	68.1	µm
Centroid Position Y	-62.1	µm
AD Saturation	91.0	%
Total Power	174.25	mW
Ellipse (fitted)		
Ellipticity	96.8	%
Minor Ellipse Diameter (13.5%)	1035.0	µm
Major Ellipse Diameter (13.5%)	1069.0	µm
Orientation	90.0	deg
Profile Measurement		
Beam Width Clip X (13.5%)	1037.1	µm
Beam Width Clip Y (13.5%)	1040.9	µm

[1] Visual inspection of beam on detection card, [2] Beam profile, ellipticity > 96%

Test data



M^2 value < 1.03



320 NX power and wavelength stability over 500+ hours

Dimensions

Get in touch

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