

# LCX-553S

DPSS laser

## Optical characteristics \*

Emission wavelength	553.0 nm ( $\pm 0.4$ nm tolerance)
Spectral linewidth, FWHM	$\leq 1$ MHz
Wavelength stability over 8 hours, temperature within $\pm 3^\circ\text{C}$	$\leq 1$ pm
Coherence length	$\geq 100$ m
Side mode suppression ratio	$\geq 30$ dB

## Optical power

Part number	Free space output	Fiber-coupled output	
		Single mode	Multi mode fiber
LBX-553S-50-CSB-(OE/PPF)	50 mW	35mW	40 mW
LBX-553S-100-CSB-(OE/PPF)	100 mW	70 mW	80 mW
LBX-553S-150-CSB-(OE/PPF)	150 mW	105 mW	120 mW

Power stability over 8 hour, temperature within $\pm 3^\circ\text{C}$	$\pm 1\%$
Control modes	Automatic Current Control (ACC)
Optical noise 10 Hz-20 MHz bandwidth	$\leq 0.2\%$ rms

## External modulation

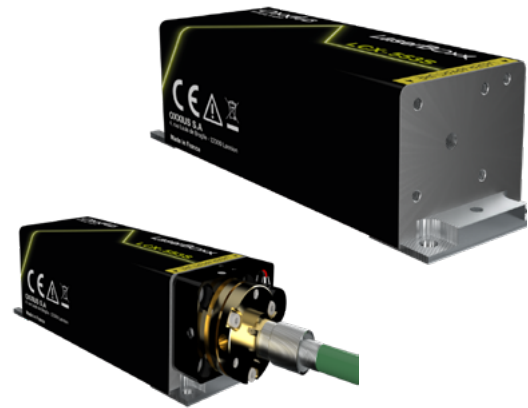
	L1C-MPA option	L1C-AOM option
Analog Modulation		
Rise / fall time	$\leq 1$ s	$\leq 300$ ns
-3dB modulation bandwidth	-	$\geq 3$ MHz
Digital Modulation		
Rise / fall time	$\leq 30$ ms	$\leq 300$ ns
-3dB modulation bandwidth	-	$\geq 3$ MHz

## Transverse singlemode free-space beam

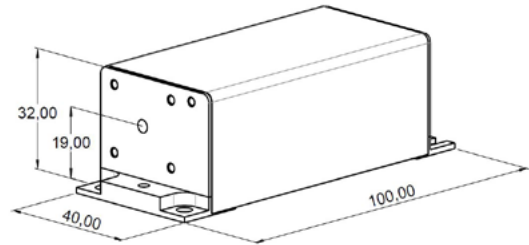
Beam diameter (typ) at $1/e^2$ , 5 cm from the beam aperture	0.7 mm
Beam divergence at $1/e^2$ full beam, in far field	1 mrad
Beam quality factor	$M^2 \leq 1.1$
Beam circularity, in far field	$\geq 90\%$
Polarization state	Linear, vertical at $\pm 5^\circ$
Polarization	$> 1000 : 1$

## General specifications

	Plug and Play version	OEM version
Compliance	CE FDA 21 CFR 1040.10/1040.1	FDA 21 CFR 1040.10 / 1040.11
Operating temperature	10 to 38°C ambient air with optional heat sink	20 to 35°C baseplate
Power consumption	20 W max.	
Storage temperature	0 to 60°C	
Humidity	Up to 90%RH, non-condensing	
Supply voltage	100 to 240 VAC external power supply	5 to 12 VDC
Warm-up time	$\leq 10$ minutes	
Interfaces	USB ControlBoxx controller	USB, RS-232, electronic interface



## Mechanical drawings



## Plug and Play version provide with:

- RemoteBoxx controller
- Manual shutter
- DC power supply

## Available options

- ACX-HTSK-1 Heat sink for operation in ambient air up to 38°C
- OPT-SHTE-LCX Electro-mechanical shutter
- L1C-MPA for power adjustment
- L1C-AOM for high speed modulation

## Fiber coupling options \*\*

	ACX-FCSMUV or ACX-FCPM	ACX-FCMM-R50
Power stability over 8 hours and within $\pm 3k$	$\pm 2.0\%$	$\pm 2.0\%$
Fiber optical characteristics	3.5µm core diameter 0.11 N.A	50µm core diameter 0.22 N.A
Polarization extinction ratio (ACX-FCPM only)	$> 1000 : 1$	n/a
Fiber output connector	FC/APC	FC/APC
Fiber length	2 m	2 m

Warranty : 18 months from shipment date

\*Specifications at nominal power

\*\* Variant are available on demand



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