

# LCX-946S DPSS laser

## Optical characteristics \*

<b>Emission wavelength</b>	946 nm ( $\pm 0.3$ nm tolerance)
<b>Spectral linewidth, FWHM</b>	$\leq 1$ MHz
<b>Wavelength stability</b> over 8 hours, temperature within $\pm 3^{\circ}\text{C}$	$\leq 1$ pm
<b>Coherence length</b>	$\geq 100$ m
<b>Side mode suppression ratio</b>	$\geq 30$ dB

## — Optical power

Part number	Free space output	Fiber-coupled output	
		Single mode	Multi mode fiber
LBX-946S-50-CSB-(OE/PPF)	50 mW	35mW	40 mW

<b>Power stability</b> over 8 hour, temperature within $\pm 3^{\circ}\text{C}$	$\pm 1\%$
<b>Control modes</b>	Automatic Power Control (APC)
<b>Optical noise</b> 10 Hz-20 MHz bandwidth	$\leq 0.8\%$ rms

## — External modulation

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

## — Transverse singlemode free-space beam

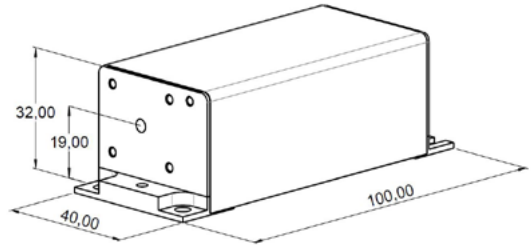
<b>Beam diameter (typ)</b> at $1/e^2$ , 5 cm from the beam aperture	0.7 mm
<b>Beam divergence</b> at $1/e^2$ full beam, in far field	1.9 mrad
<b>Beam quality factor</b>	$M^2 \leq 1.1$
<b>Beam circularity</b> , in far field	$\geq 90\%$
<b>Polarization state</b>	Linear, vertical at $\pm 5^{\circ}$
<b>Polarization</b>	$> 300: 1$

## General specifications

	Plug and Play version	OEM version
<b>Compliance</b>	CE FDA 21 CFR 1040.10/1040.1	FDA 21 CFR 1040.10 / 1040.11
<b>Operating temperature</b>	10 to 38°C ambient air with optional heat sink	20 to 35°C baseplate
<b>Power consumption</b>	20 W max.	
<b>Storage temperature</b>	0 to 60°C	
<b>Humidity</b>	Up to 90%RH, non-condensing	
<b>Supply voltage</b>	100 to 240 VAC external power supply	5 to 12 VDC
<b>Warm-up time</b>	$\leq 10$ minutes	
<b>Interfaces</b>	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-FCSM or ACX-FCPM	ACX-FCMM-R50
<b>Power stability</b> over 8 hours and within $\pm 3k$	$\pm 2.0\%$	$\pm 2.0\%$
<b>Fiber optical characteristics</b>	3.5 $\mu\text{m}$ core diameter 0.11 N.A	50 $\mu\text{m}$ core diameter 0.22 N.A
<b>Polarization extinction ratio</b> (ACX-FCPM only)	$> 300 : 1$	n/a
<b>Fiber output connector</b>	FC/APC	FC/APC
<b>Fiber length</b>	2 m	2 m

Warranty : 18 months from shipment date

\*Specifications at nominal power

\*\* Variant are available on demand



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