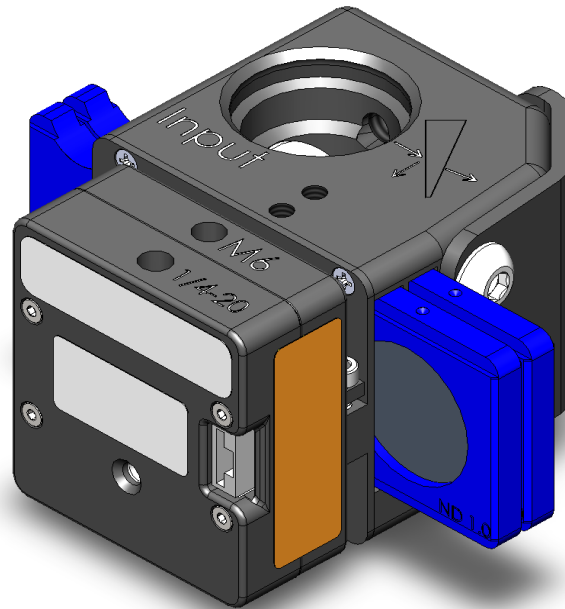




# LBS-300s-CAL Beam Sampler

## User Notes

CAMERA: SP928, LT665



### For Sales, Service, or Technical Support

Phone: (435) 753-3729

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Service Email

[service@us.ophiropt.com](mailto:service@us.ophiropt.com)

Sales Email

[sales@us.ophiropt.com](mailto:sales@us.ophiropt.com)

Ophir-Spiricon, LLC

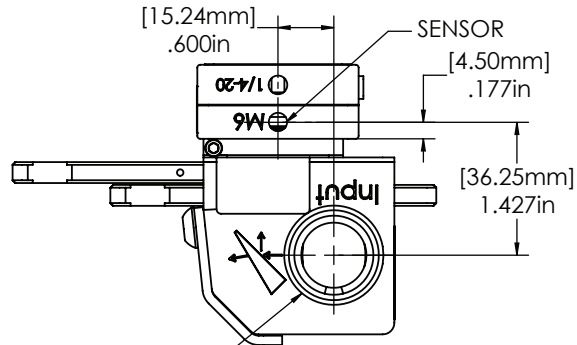
3050 North 300 West

N. Logan, Utah 84341

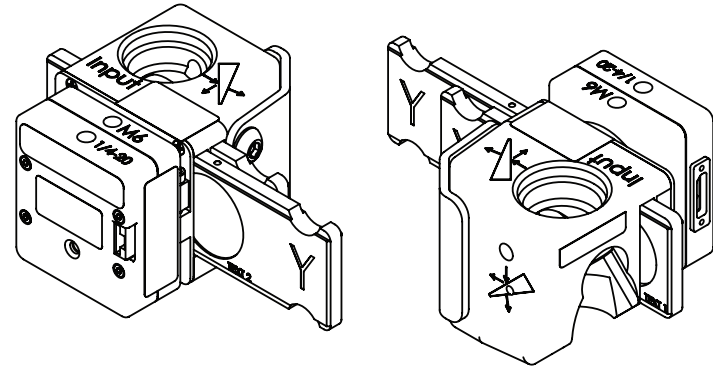
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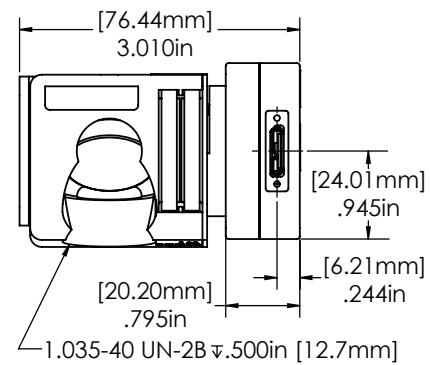
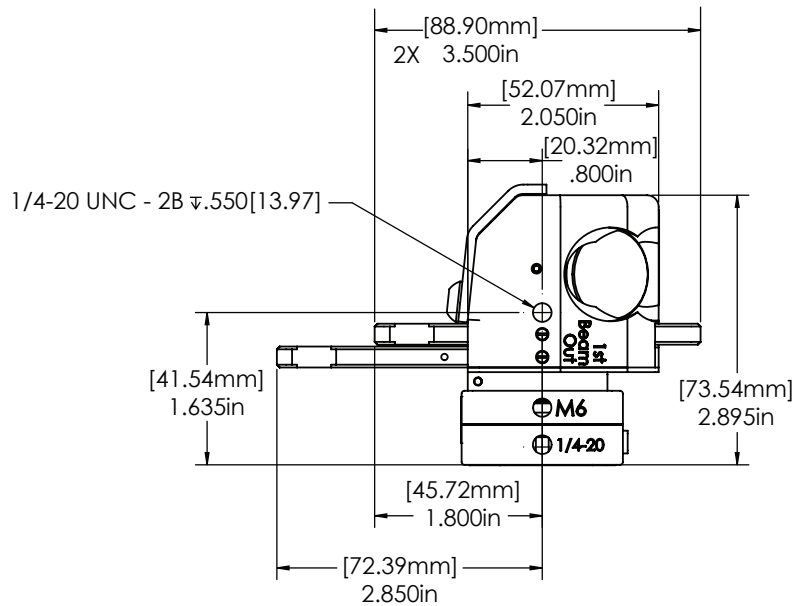
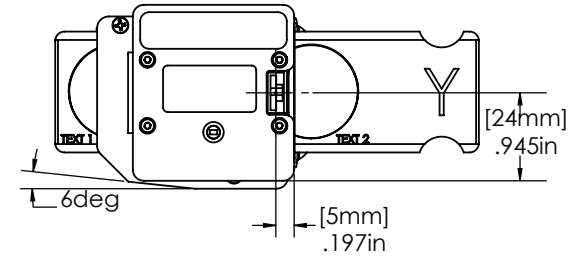
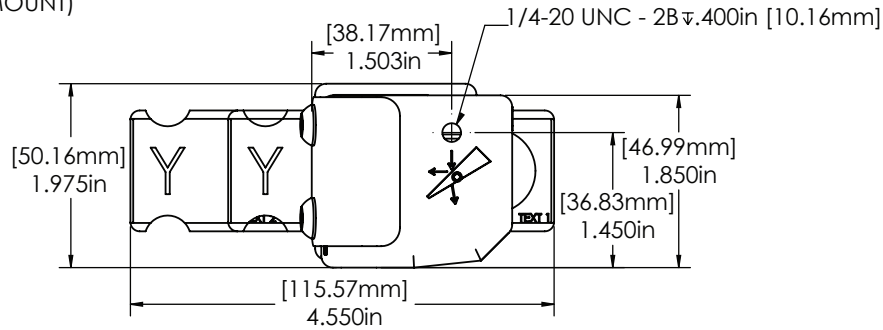
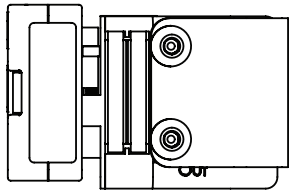
# Dimensions SP928



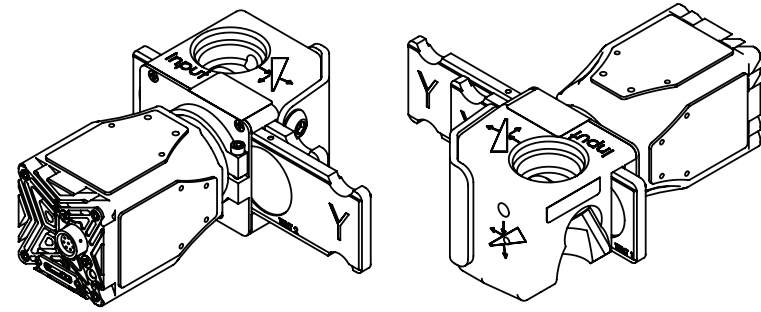
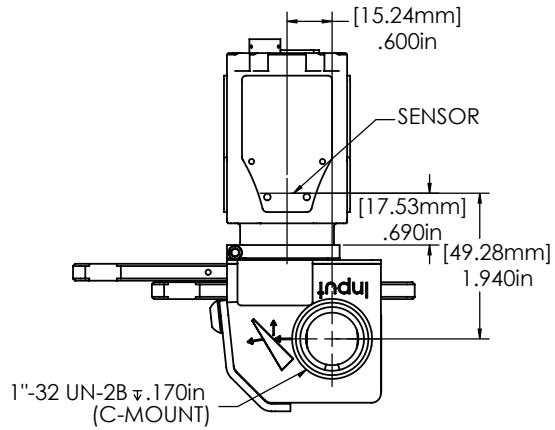
1"-32 UN-2B  $\varnothing$ .170in  
(C-MOUNT)



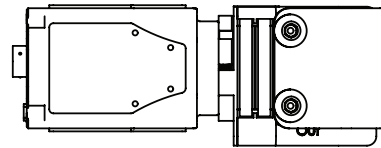
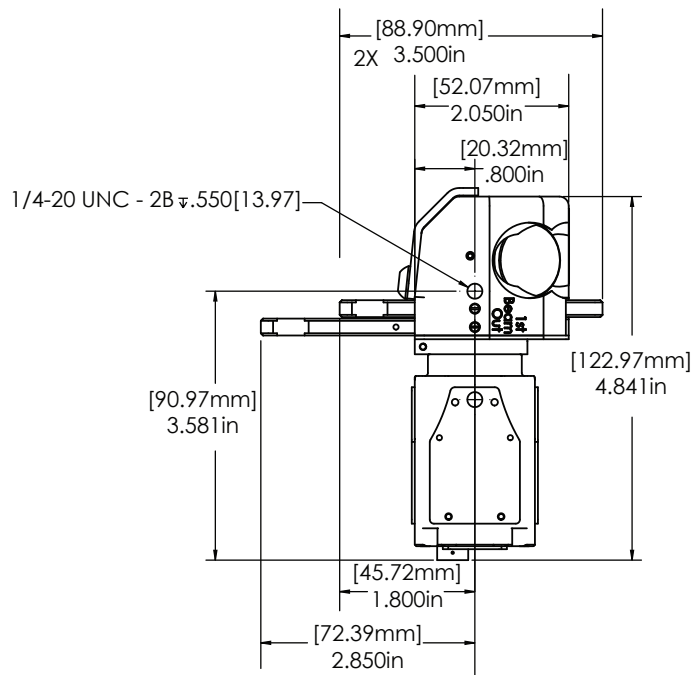
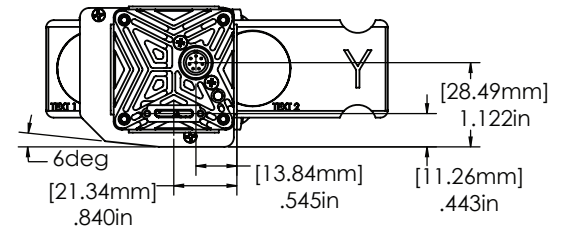
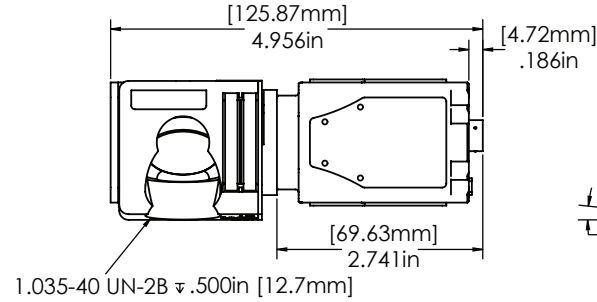
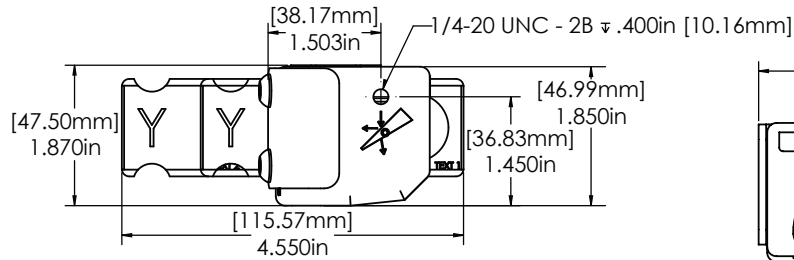
NOMINAL BEAM PATH = 2.847in [72.32mm]



# Dimensions LT665



NOMINAL BEAM PATH = 3.360in [85.34mm]



# Introduction

Thank you for your purchase of the LBS-300s-CAL Beam sampler. This unit is compatible with the SP928 camera as well as the LT665 camera. The images used in this guide represent the SP928, but the concepts apply to both cameras. This guide is intended to introduce you to the unique features of this product. For a more descriptive breakdown of power requirements, beam sizes, and additional information please refer to the “LBS-300 Beam Sampler for C-mount Cameras User Notes” that was also provided.

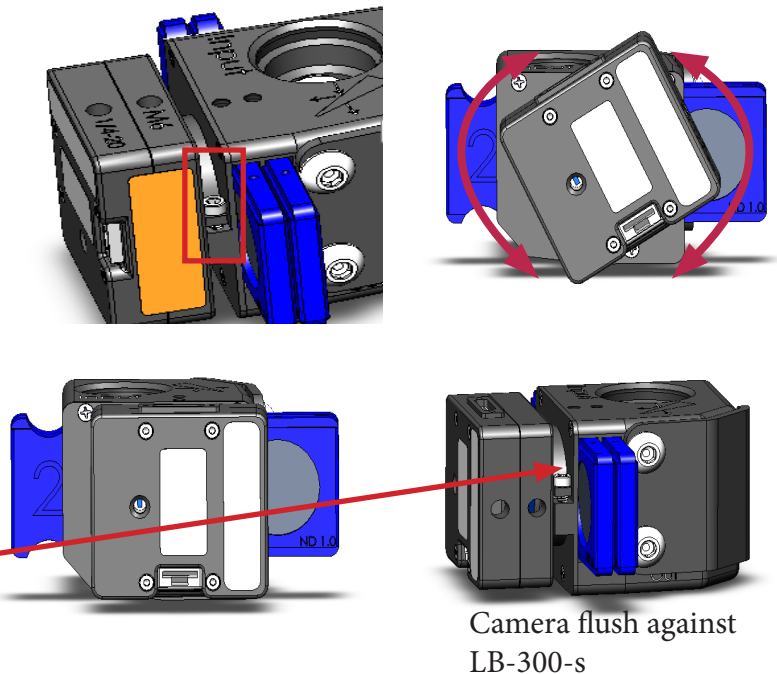
# Calibration

Your Beam Sampler and camera come pre-calibrated from the factory. A detailed explanation of this calibration is provided on page 3.

The camera can be easily rotated to fit the needs of your beam.

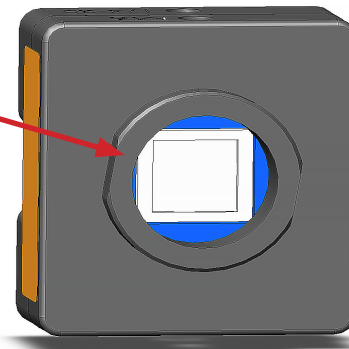
1. Use the provided hex key to loosen the screw securing the camera.
2. Rotate the camera as needed.
3. Re-secure the screw to tighten the camera in place.

**Note:** Make sure that the camera is flush with the LBS-300s before tightening the screw to maintain the calibration distance.



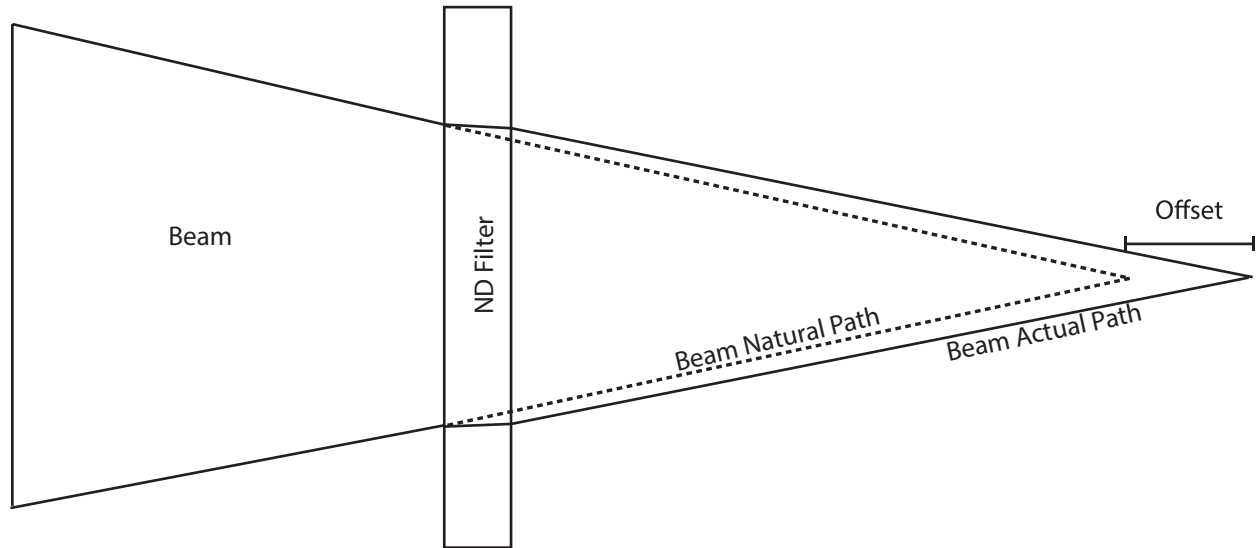
**Warning:** Do not remove the ring from the camera. Doing so will interfere with the calibration of the system.

**Note:** We do not recommend removing the camera when rotating. There is no window protecting the camera sensor and removing it will make it more susceptible to damage.



# Beam Offset Factor

With the beam traveling through the ND filters, there is an inherent offset that occurs. This offset must be taken into account when determining the actual beam path distance.



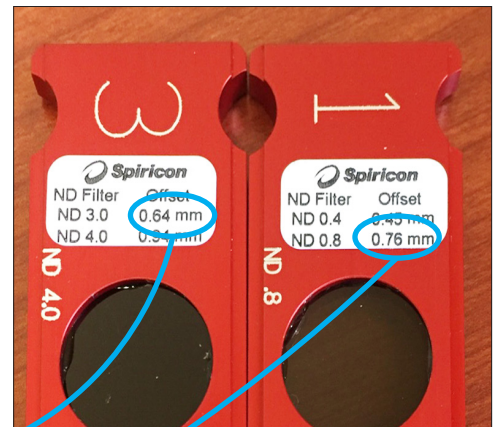
Each LBS-300s-CAL and ND Filter holder has its own calibrated dimensions printed and placed on the unit. To calculate the total path length we need to look at all of the variables.

$$\text{Total path length} = [\text{calibrated path}] + [\text{Filter offset}_a] + [\text{Filter offset}_b]$$

**Note:** The calibrated path is the internal distance from the top surface of the LBS-300s to the camera sensor, and is found on the LBS-300-CAL label with the serial number.

## Example:

In this example we are using an LBS-300s-CAL with ND 3.0 and 0.8 for attenuation. To fill out the equation we will need to look at the Path Length Offset found on the labels for ND filter 3.0 and ND filter 0.8 as shown below.

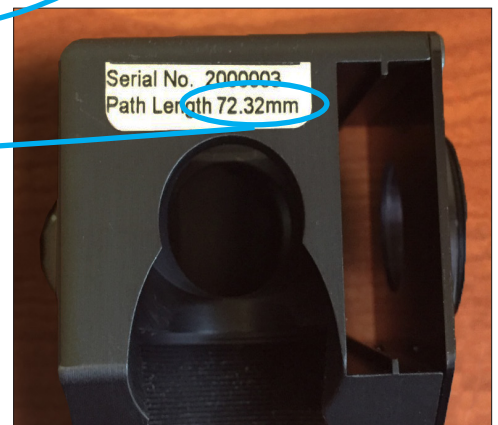


Our equation becomes:

$$\text{Total path length} = 72.32\text{mm} + 0.64\text{mm} + 0.76\text{mm} = \underline{73.72\text{mm}}$$

The total path length then needs to be added to the distance the beam travels from the source to where it enters the LBS-300s-CAL to give the actual travel length of the beam.

Remember, filter offset values are wavelength dependent. A color code system for the filter holders notes which application it should be used in; blue is measured at 308nm, green 532nm, and red 1064nm. For help in getting more accurate measurements contact Customer Service.







## Notice

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