

Our pupillometry wheel set-up requires five custom parts made from Aluminum 304 and Aluminum 6061-T6. These components fit securely to the optical posts we purchased from Thorlabs. We ordered them from eMachineShop, using the following files:

- Heading.STEP
- HeadPlateTop.STEP
- RotaryEncoderAdapter.STEP
- HeadPlateHolderthreaded.STEP
- HeadPlateBottomthreaded.STEP

	Material	L x W x H (Inches)	Tolerance (Inches)
Rotary Encoder	Aluminum 304	0.590" x 0.157" x 2.559"	+/- 0.005"
Head Plate Holder		1.184" x 0.595" x 0.667"	
Head Plate Holder Top		2.755" x 0.118" x 1.181"	
Head Plate Holder Bottom		4.330" x 0.118" x 1.181"	
Head Ring	Aluminum 6061-T6	0.475" x 0.472" x 0.130"	

Table 1. The dimensions of each machined component in inches.

	Material	L x W x H (Centimeters)	Tolerance (Centimeters)
Rotary Encoder	Aluminum 304	1.498 x 0.398 x 6.50	+/- 0.0127
Head Plate Holder		3.007 x 1.511 x 1.694	
Head Plate Holder Top		6.997 x 0.299 x 2.999	
Head Plate Holder Bottom		10.998 x 0.299 x 2.999	
Head Ring	Aluminum 6061-T6	1.206 x 1.198 x 0.330	

Table 2. The dimensions of each machined component in centimeters.

	Itemized Cost
Rotary Encoder	\$28.43
Head Plate Holder (Set of 2)	\$60.44
Head Plate Holder Top	\$39.14
Head Plate Holder Bottom	\$51.01
Head Ring	\$5.16

Table 3. The eMachineShop quotes for the five custom components, obtained in June 2023.