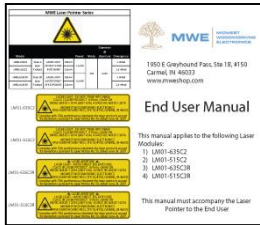
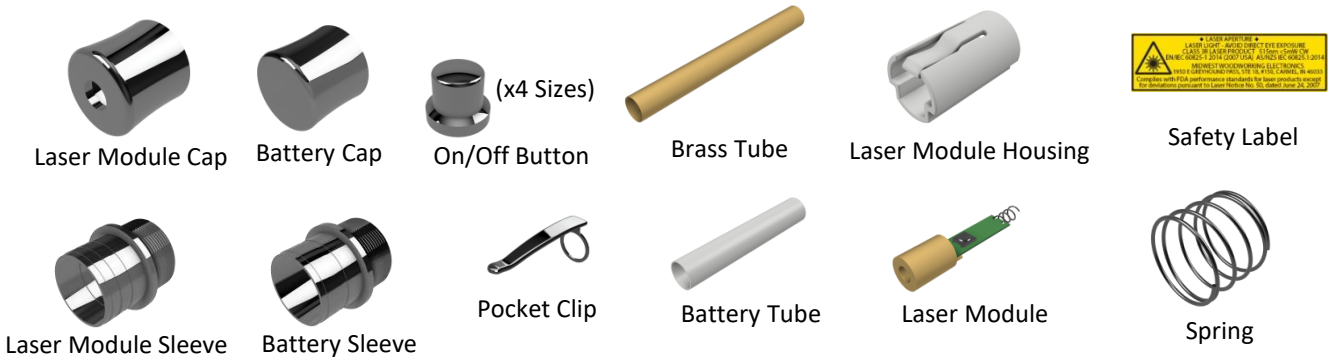


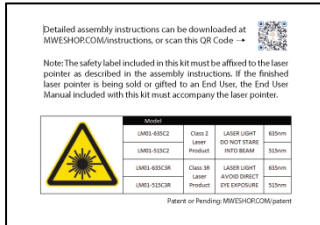


LASER POINTER ASSEMBLY INSTRUCTIONS

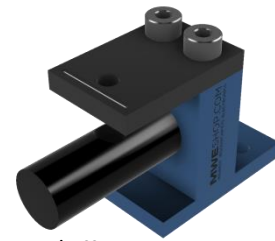
PARTS LIST:



User Manual



Product Information Card




On/Off Button Drill Jig
(Sold Separately)

TOOLS REQUIRED:

- 12.5mm Drill Bit
- 5/32" Drill Bit (Common Jobber Type 118° Point Angle or Similar, Brad Point Not Recommended)
- 12.5mm Barrel Trimmer
- Laser Pointer Bushings
- 7mm Mandrel
- Thick CA Glue, Polyurethane Glue or Epoxy
- On/Off Button Drill Jig (Recommended)
- Shop Tweezers (Recommended)

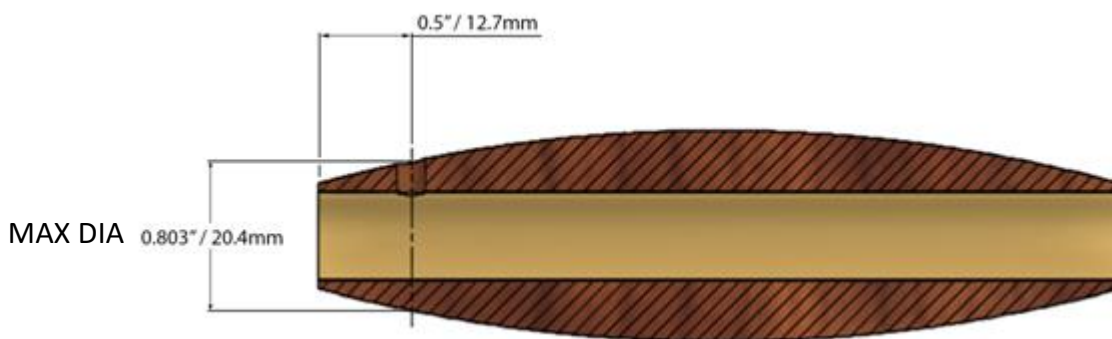


	Model			
	LM01-635C2	Class 2 Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm
LM01-515C2	Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	515nm	
LM01-635C3R	Class 3R Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	635nm	
LM01-515C3R	Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	515nm	



BLANK SELECTION

This laser pointer kit includes four On/Off Buttons of different heights. The button options allow for the flexibility to turn laser pointer bodies of varying shapes and sizes up to a diameter of 0.803" / 20.4mm at the On/Off Button hole. The size of the blank should be considered with this in mind. For a turned blank that is typical in size and shape, a 7/8" square blank is recommended. The blank must be at least 5" in length.



TURNING THE LASER POINTER BODY

1. Drill the blank with a 12.5mm drill bit.
2. Rough up the surface of the Brass Tube with sandpaper prior to gluing the Brass Tube in the laser pointer blank. This will improve the glue bond between the Brass Tube and the laser pointer blank.
3. Glue the brass tube into the laser pointer blank with a thick CA glue, polyurethane glue or epoxy. Be careful to avoid glue inside the Brass Tube that will interfere with the sleeves during assembly.

Model				
LM01-635C2	Class 2 Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm	
LM01-515C2			515nm	
LM01-635C3R	Class 3R Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	635nm	
LM01-515C3R			515nm	



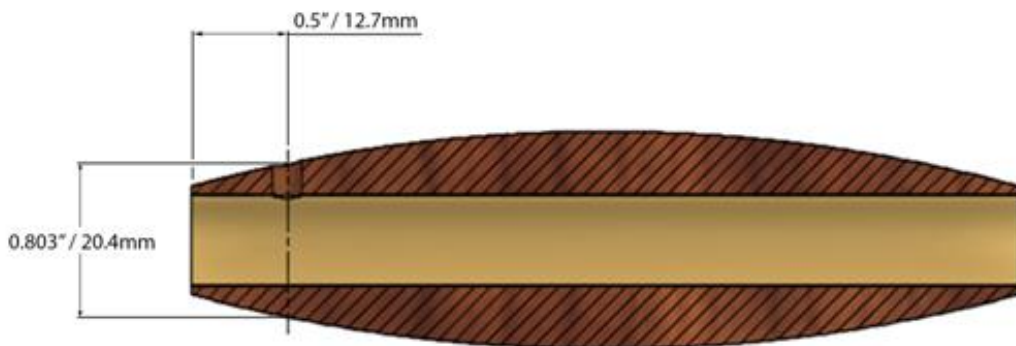


TURNING THE LASER POINTER BODY CONTINUED

4. Square the ends of the blank to be turned with a barrel trimmer, or by sanding, so the ends of the blank are perpendicular and flush with the brass tube. This is an important step to ensure that the Laser Module and Battery Sleeves are flush with the body of the Laser Pointer after assembly. Use caution while trimming the ends to avoid shortening the length of the Brass Tube. This could cause assembly issues if the length of the laser pointer body is shortened significantly.
5. Using a mandrel and bushings, chuck the laser pointer blank on the lathe. Avoid applying excessive pressure to the mandrel with the lathe tail stock. Too much pressure can cause the mandrel to flex, distorting the shape of the laser pointer body when turned.



6. Turn the blank to the desired form. The final laser pointer body can be a maximum of 0.803" / 20.4mm in diameter at the on/off button hole which is located 0.5" / 12.7mm from the front end of the laser pointer body.



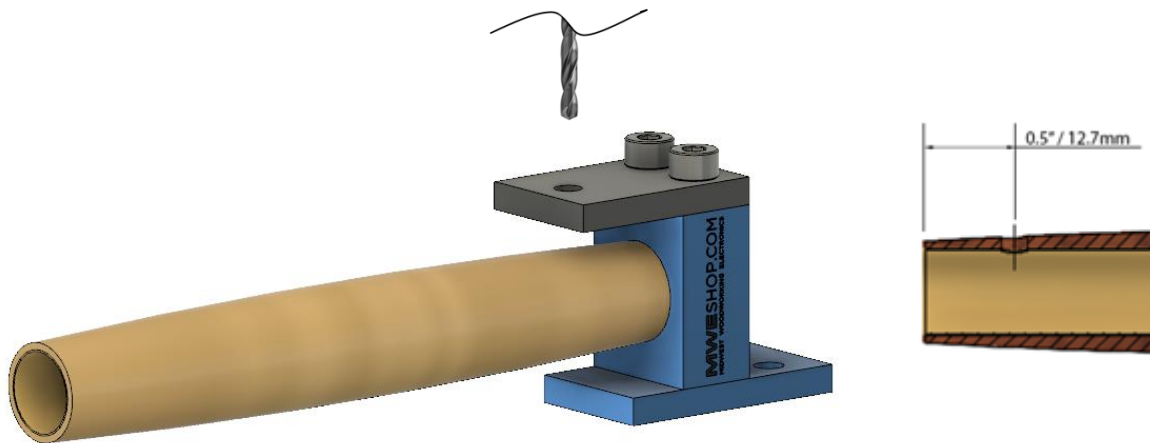
Model	Class	Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm
LM01-635C2	Class 2	Laser Product	AVOID DIRECT EYE EXPOSURE	515nm
LM01-515C2	Class 2	Laser Product	AVOID DIRECT EYE EXPOSURE	635nm
LM01-635C3R	Class 3R	Laser Product	AVOID DIRECT EYE EXPOSURE	515nm
LM01-515C3R	Class 3R	Laser Product	AVOID DIRECT EYE EXPOSURE	635nm





TURNING THE LASER POINTER BODY CONTINUED

- Once the laser pointer body has been turned, sand the laser pointer body to the desired finish depending on the material of the laser pointer body.
- Remove the laser pointer body from the mandrel and remove the bushings. Drill the on/off button hole on the end of the laser pointer body that will receive the On/Off Button. For best results use a standard 5/32" drill bit in a drill press, drilling slowly at a higher RPM. Masking tape can be applied to the laser pointer blank where the hole will be drilled as an added precaution to avoid tear out. MWE offers an optional jig to precisely place the on/off button hole at the correct location on the laser pointer body, however you might prefer building your own jig to perform this task. Dimensions to build your own jig can be found on the MWE website instruction page (m weshop.com/instructions).



- After the on/off button hole is drilled, return the laser pointer body to the lathe for final sanding and finishing. Most finishes won't impede installation of the On/Off Button. For finishes such as CA glue that layer and interfere with the On/Off Button installation, it's recommended to gently file the On/Off Button hole area with a round needle file using a downward stroke.

Model	Class	Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm
LM01-635C2	Class 2	Product	AVOID DIRECT EYE EXPOSURE	515nm
LM01-515C2	Class 3R	Product	AVOID DIRECT EYE EXPOSURE	635nm
LM01-635C3R	Class 3R	Product	AVOID DIRECT EYE EXPOSURE	515nm
LM01-515C3R	Class 3R	Product	AVOID DIRECT EYE EXPOSURE	635nm



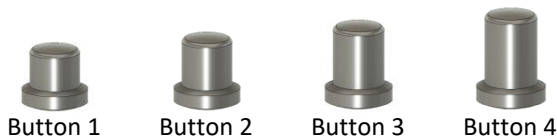


LASER POINTER ASSEMBLY

There are 4 on/off buttons included in this kit that vary in height to provide an aesthetically pleasing look to the completed laser pointer. Buttons are included to accommodate laser pointer body diameters ranging from a flat body of 0.626" / 14.4mm to a max of 0.803" / 20.4mm at the on/off button hole. You can trial fit the buttons to determine which button suits the finished look you are going for; however, there are button height recommendations in the table below that guide you toward finding the smallest functional button possible.

NOTE: The button must extend 0.059"/1.5mm above the laser pointer body. This clearance offers an adequate button height to actuate the switch on the Laser Module. Once assembled, the On/Off Button is locked in place with the sleeves that are pressed into the brass tube. Changing the button after assembly isn't recommended because it requires removal of the Battery Sleeve which can damage the Battery Sleeve or the Brass Tube.

Recommended Button Heights for Laser Pointer Body			
	Max Diameter		
	(fractional in)	(decimal in)	(mm)
Button 1	5/8	0.625	15.9
Button 2	11/16	0.688	17.5
Button 3	3/4	0.750	19.1
Button 4	13/16	0.813	20.7



NOTE: The diameters above are referenced from the center of the On/Off Button hole. These recommendations are intended to provide the smallest possible button, but you may prefer a larger button. The key thing to confirm is that the button extends 0.059"/1.5mm above the turned body so the laser pointer functions. Otherwise you have the creative freedom to choose the button you prefer.

	Model			
	LM01-635C2	Class 2 Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm
	LM01-515C2	Class 2 Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	515nm
	LM01-635C3R	Class 3R Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	635nm
	LM01-515C3R	Class 3R Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	515nm

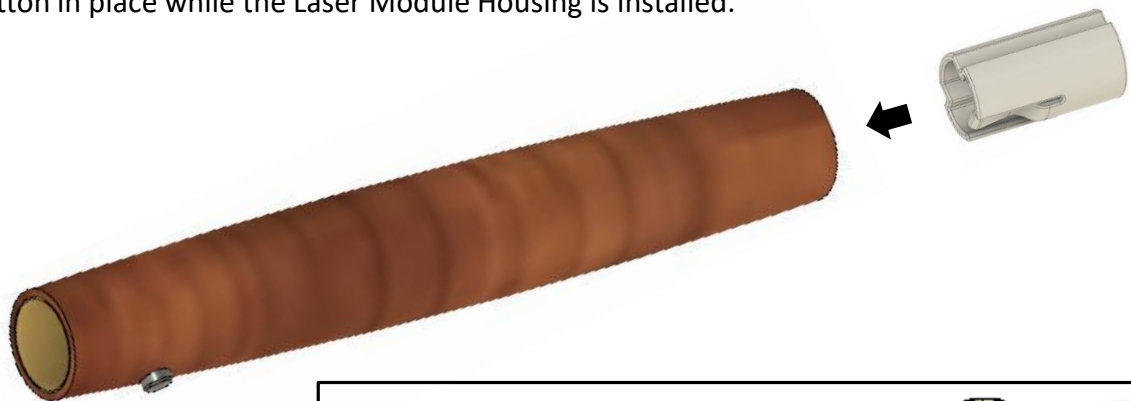


LASER POINTER ASSEMBLY

1. Once the laser pointer body has been finished, it's time for assembly. Start by installing the On/Off Button in the laser pointer body. A pair of shop tweezers or thin needle nose pliers are recommended. It's easiest to hold the laser pointer body upside down so gravity holds the On/Off Button in place until step #3 below is completed.



2. Once the desired On/Off Button is selected and installed in the laser pointer body, insert the Laser Module Housing into the back end of the Brass Tube oriented as shown below. Using a long and thin tool such as a screw driver or a pin punch, slide the Laser Module Housing up to the On/Off Button, aligning the On/Off Button with the button channel in the Laser Module Housing. Hold the assembly upside down during this step so gravity holds the On/Off Button in place while the Laser Module Housing is installed.



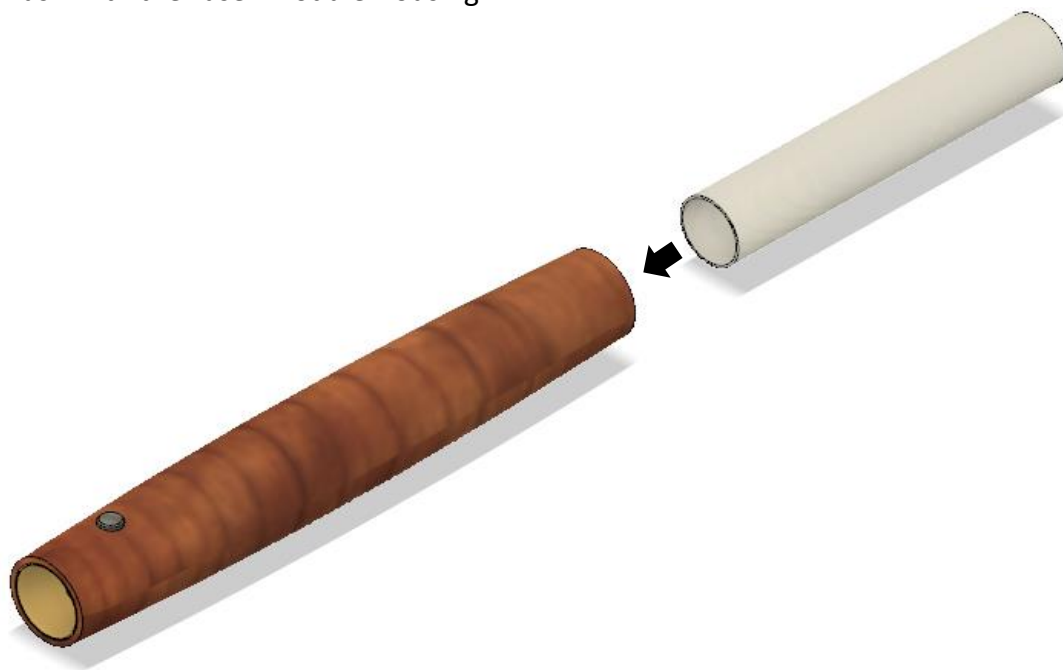
Once the Laser Module Housing is installed over the On/Off Button, the button is secure and will no longer fall out of the button hole.

Model	Class	Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm
LM01-635C2	Class 2	Laser Product	AVOID DIRECT EYE EXPOSURE	515nm
LM01-515C2	Class 2	Laser Product	AVOID DIRECT EYE EXPOSURE	635nm
LM01-635C3R	Class 3R	Laser Product	AVOID DIRECT EYE EXPOSURE	515nm
LM01-515C3R	Class 3R	Laser Product	AVOID DIRECT EYE EXPOSURE	635nm

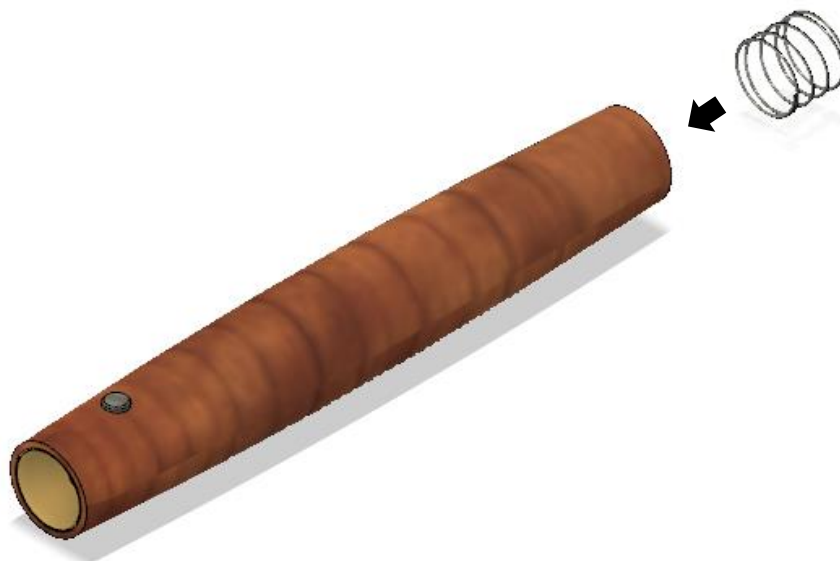


LASER POINTER ASSEMBLY CONTINUED

3. Insert the Battery Tube into the back end of the Brass Tube, sliding it up the Brass Tube until it's flush with the Laser Module Housing.



4. Insert the Spring into the back end of the Brass Tube, sliding it up the Brass Tube until it's flush with the Battery Tube.

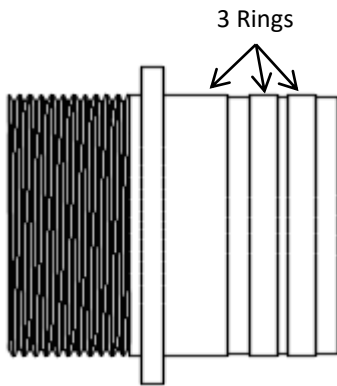


Model			
LM01-635C2	Class 2 Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm
LM01-515C2	Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	515nm
LM01-635C3R	Class 3R Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	635nm
LM01-515C3R	Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	515nm

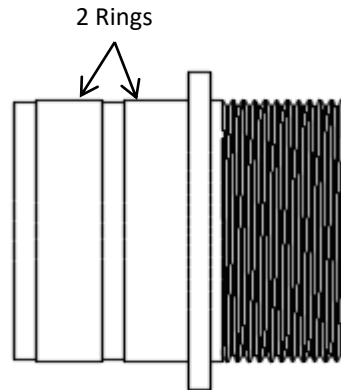


LASER POINTER ASSEMBLY CONTINUED

NOTE: Prior to step 6, clearly identify the Laser Module Sleeve from the Battery Sleeve. The Laser Module Sleeve has a retainer ring inside that holds the Laser Module in place. The Laser Module Sleeve must be installed in the front end of the laser pointer body, which is the end closest to the On/Off Button.



The Laser Module Sleeve has a retaining ring inside. There are three ring grooves on the outside of the Laser Module Sleeve to help with identification.



The Battery Sleeve looks very similar to the Laser Module Sleeve. There are two ring grooves on the Battery Sleeve.

NOTE: An optional Pocket Clip is included with the kit. If using the Pocket Clip, remember to install the Pocket Clip on the Battery Sleeve prior to pressing the Battery Sleeve into the Brass Tube.



Pocket Clip (Optional)

Model	Class	Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm
LM01-635C2	Class 2	Laser Product	AVOID DIRECT EYE EXPOSURE	515nm
LM01-635C3R	Class 3R	Laser Product	AVOID DIRECT EYE EXPOSURE	635nm
LM01-515C3R	Class 3R	Laser Product	AVOID DIRECT EYE EXPOSURE	515nm

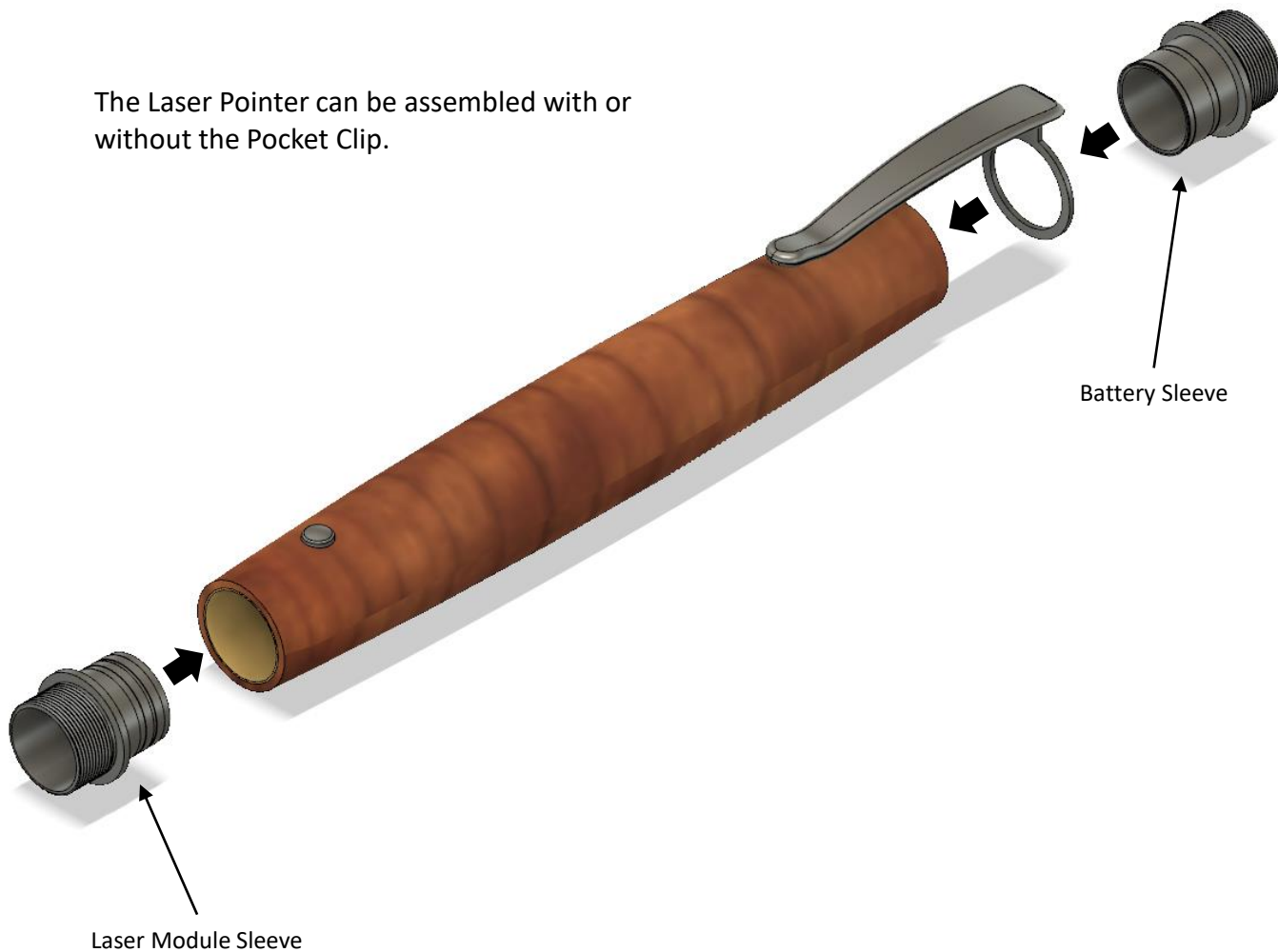





LASER POINTER ASSEMBLY CONTINUED

- Using a press or vise, press the Laser Module and Battery Sleeves into the ends of the Brass Tube one at a time. To avoid damage to the laser pointer body and sleeves, pad the jaws on the press or vise.

The Laser Pointer can be assembled with or without the Pocket Clip.

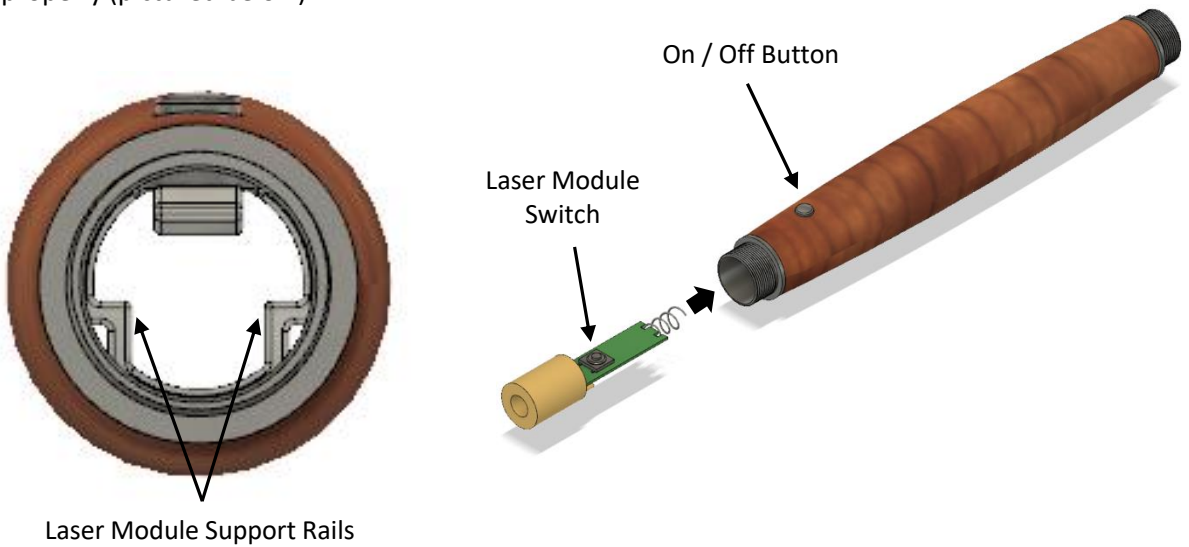


	Model			
	LM01-635C2	Class 2 Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm
LM01-515C2	Class 2 Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	515nm	
LM01-635C3R	Class 3R Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	635nm	
LM01-515C3R	Class 3R Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	515nm	

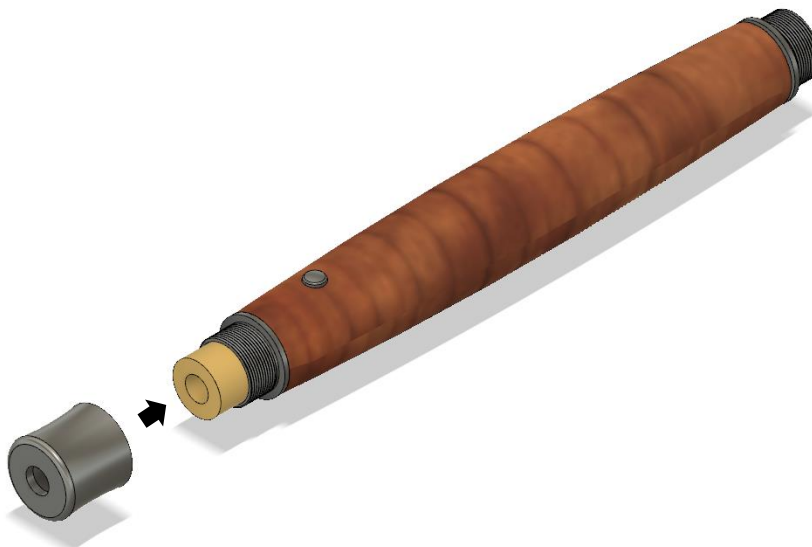


LASER POINTER ASSEMBLY CONTINUED

- Insert the Laser Module (spring end first) into the front end of the laser pointer body. The Laser Module slides above and rests on the supporting rails inside the Laser Module Housing until the brass housing on the Laser Module is flush with the retaining ring inside the Laser Module Sleeve. The Laser Module Switch should be facing up so that it interfaces with the On/Off Button properly (pictured below).



- Secure the Laser Module in place by screwing the Laser Module Cap onto the Laser Module Sleeve.



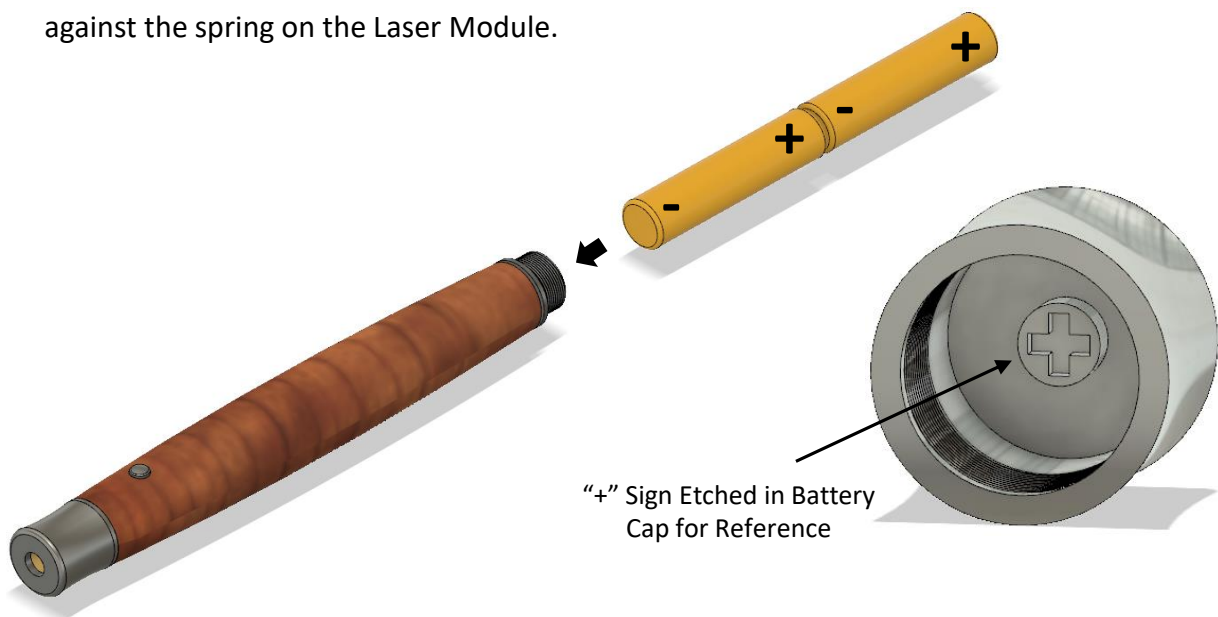
Model	Class	Product	LASER LIGHT	635nm
LM01-635C2	Class 2	Product	DO NOT STARE INTO BEAM	515nm
LM01-515C2	Class 3R	Product	AVOID DIRECT EYE EXPOSURE	515nm
LM01-635C3R	Class 3R	Product	AVOID DIRECT EYE EXPOSURE	515nm
LM01-515C3R	Class 3R	Product	AVOID DIRECT EYE EXPOSURE	515nm



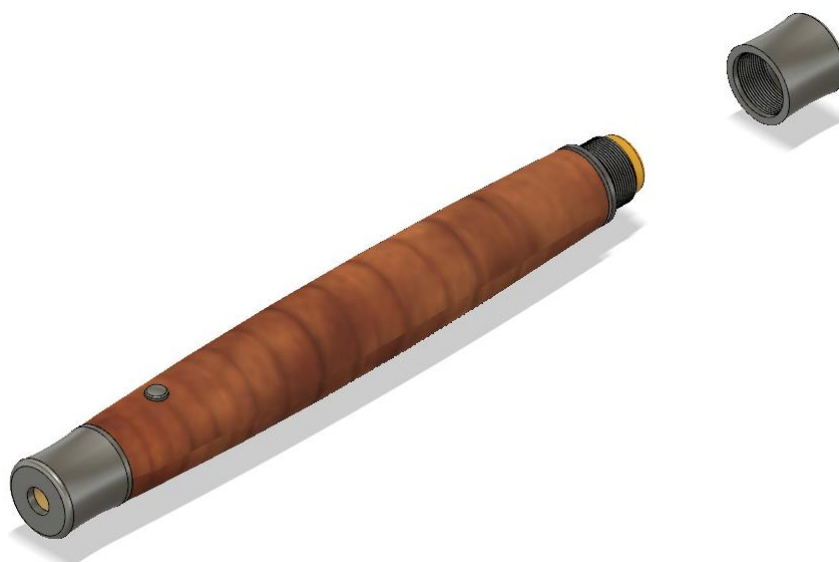


LASER POINTER ASSEMBLY CONTINUED

- Install two AAA batteries (not included) into the back end of the Laser Pointer. The negative (-) terminal on the battery inserts into the laser pointer body first and rests against the spring on the Laser Module.



- Lock the AAA batteries into place by screwing the Battery Cap onto the Battery Sleeve.



Model				
LM01-635C2	Class 2 Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm	
LM01-515C2			515nm	
LM01-635C3R	Class 3R Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	635nm	
LM01-515C3R			515nm	





LASER POINTER ASSEMBLY CONTINUED

- With a clean rag, remove any fingerprints or finish residue from the Laser Module Cap. The Safety Label must be placed on the Laser Module Cap centered in reference to the On/Off Button. Do not place the Safety Label on the laser pointer body; the Safety Label will not adhere well to certain finishes.



Affix safety label here

NOTE: It's a violation of FDA regulations to sell or gift an assembled laser pointer without the safety label.

- If selling or gifting this Laser Pointer to an End User, be sure to include the End User Manual. The information in the End User Manual must accompany the Laser Pointer.

	Model			
	LM01-635C2	Class 2 Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	635nm
LM01-515C2	Class 2 Laser Product	LASER LIGHT DO NOT STARE INTO BEAM	515nm	
LM01-635C3R	Class 3R Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	635nm	
LM01-515C3R	Class 3R Laser Product	LASER LIGHT AVOID DIRECT EYE EXPOSURE	515nm	