SOLID STATE LASER POINTER

INTRODUCTION

Enhances your lassons, lectures and presentations by giving you a bright and visible red pointer, from any position in a room. Use it while presenting material on whiteboards, overhead projectors, flip charts, slide shows, etc. Highlights items from anywhere in the room. You can also use it for optical experiments.

USING THE POINTER

The laser pointer employs a small rechargeable nikel-cadmium battery, to turn on the pointer you press two of the three rivets. The laser has two modes of operation: A continuous mode and a Pulsed mode. (Fig 1.0)

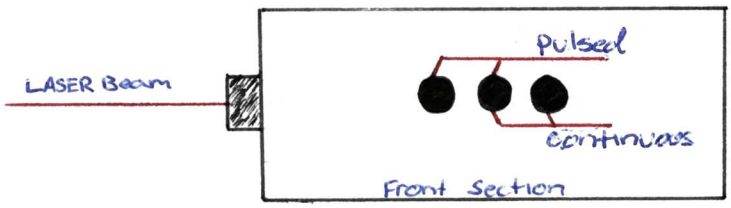


FIG 1.0

RECHARGING THE BATTERY

The battery is charged by the charging plug in the endcap of the pointer (opposite endcap of where the beam exits). The laser is conected to the charger via the plug. There are two parts to the charger: The power pack and a little black box. This box is the voltage regulator for the power pack. The laser is conected to the power pack via the regulator.

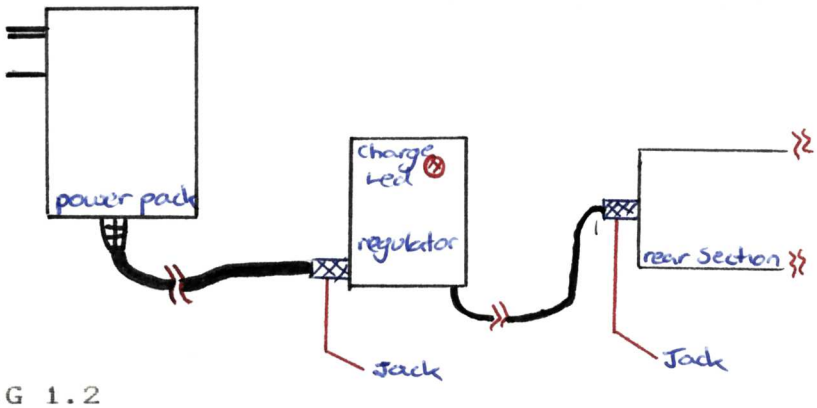


FIG 1.2

The laser is charged over a period of 10 to 12 hours.

LASER SAFETY

The pointer employs a 5mW laser diode, at a wavelenth of 670nm corresponding to deep red, thus a 5mW laser diode appers as bright as a 0.7mW helium neon laser. Under any circumstances you MUST not look directly into the laser beam, the intensity of light is enough to burn the retina in the eye I.E permanent blindness.
DO NOT OPEN THE LASER POINTER, AND/OR ADJUST THE TRIMPOT AS DAMAGE TO THE LASER DIODE WILL RESULT I.E LOSS OF LASER LIGHT.

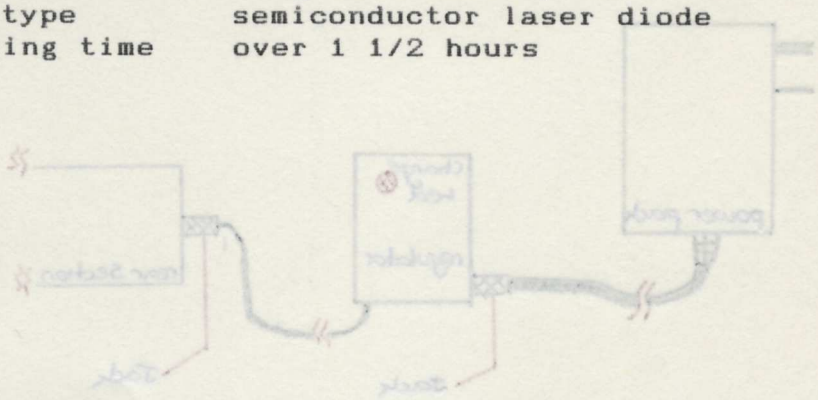
CARE OF THE LASER

The only care of the laser is to keep the lends and the case clean. The cleaning of the lends should be carried out with lends cleaning fluid and a lends cloth.The cleaning of the case is done by a soft dry cloth.
DO NOT clean the case with solvents
DO NOT leave the pointer in the rain or for long periods at a time in direct sunlight.
DO NOT use any other power pack for charging other than the one suppled for charging

SPCIFICATIONS AND FEATURES

* Projects a visible dot even over large distances
* Attractive, lightweight and robust
* Built-in Ni-CAD batteries
* touch switch with continuous and pulsed modes
* range over 150 meters

* maximum output	5mW
* Wavelength	670nm (deep red)
* Dimensions	140mm long by 27mm diameter
* Weight	100g with battery
* Laser type	semiconductor laser diode
* Operating time	over 1 1/2 hours



SOLID STATE LASER POINTER

PARTS

Laser diode.....$60.00
Driver.....$10.00
Lens.....$20.00

DC adaptor.....>
Case.....>
Battery.....> $20.00
Aluminium.....>
PVC.....>

PROJECT: LASER POINTER
TYPE: SEMICONDUCTOR

- - - - - Threaded hole (3mm)

A 2.5mm hole is drilled before tapping the thread.

All Screws are of 3mm

A 6mm Drill bit is used for counter Sonk screws.

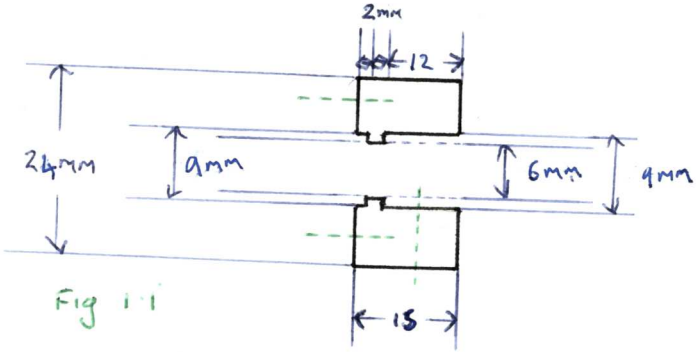


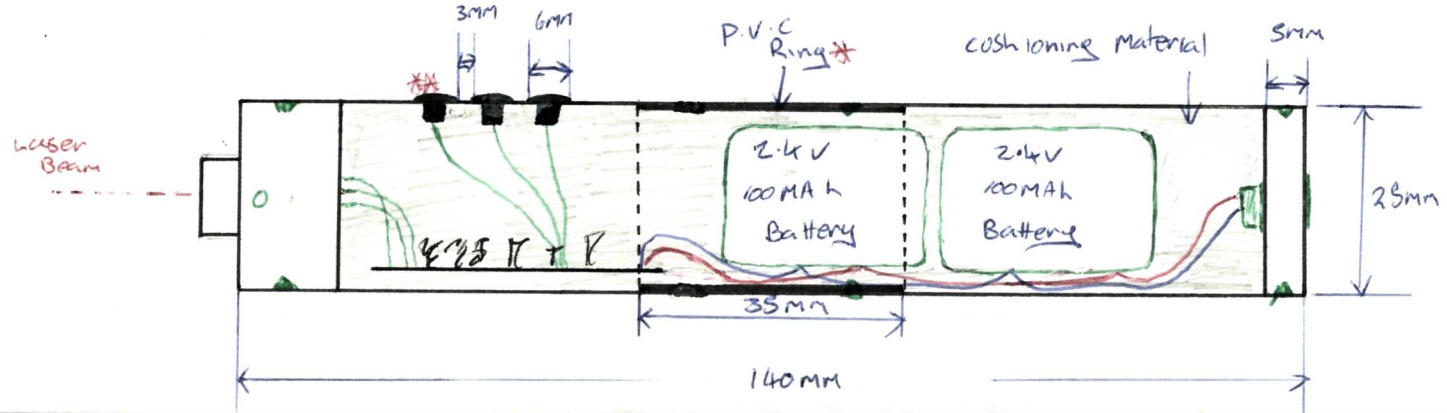
Fig 1.1

Heatsink/collimator End cap.

Side view

The cage is made from P.V.C pipe, it is thoroughly cleaned Before Spraying with black matt spray paint.

** Biffercated rivets are used for the touch Switch. The Bottom 'leaved part' is cut off, the rivets are glued to the case after painting and Soldering.



* The cage is in two halves a 35mm Ring with external Diameter of 25mm is glued to one half the Back half is Screwed on.

Project: LASER pointer.

LASER Type: Semiconductor.

The Heat Sink / collimator is lathed to correct Diameter Then the holes are set. All holes MUST be done on a drill press for Accuracy.

The main case (Tube) is made from PVC pipe.

The case is Thoroughly cleaned with solvent. Before spraying with Black matt Spray paint.

* Note: That the case is made of Two halves. A ring of P.V.C is glued To one half, and the other is Secured by Screws As so with the Two end caps.

All Screws 2MM

* the hole for the lends is 0.5 MM Smaller

\# ------ Alternative

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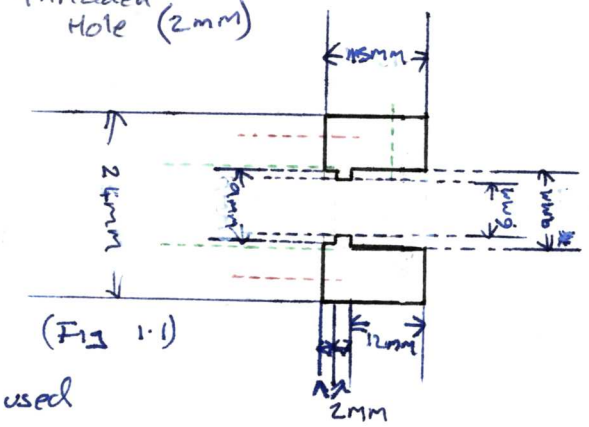
proposed Threaded Hole (2MM)

For the collimator / heat sink the holes TO Accept screws MUST be 'Taped'

A 1.6 MM pilot hole is Drilled before Tapping The Thread



(Fig 1.1)

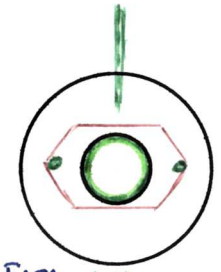


Fig 1.2

Top View

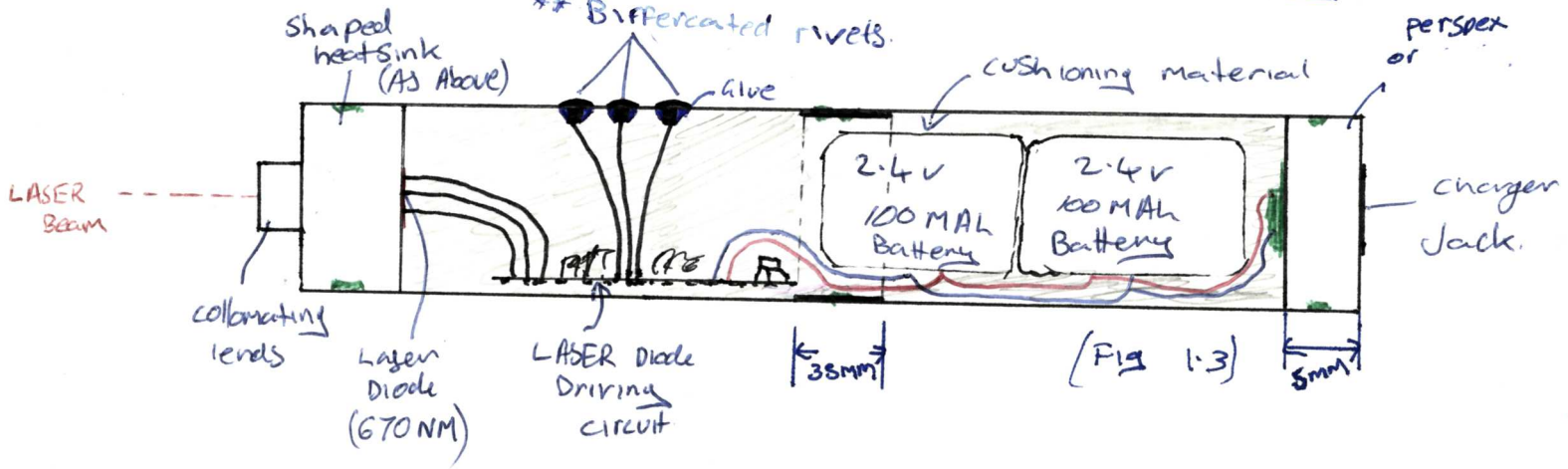
\# MOST likely TO be used (Fig 4.2)

side View

Heat Sink / collimator

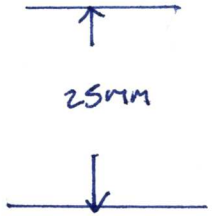
End cap

** The Bottom half of the rivet (lieved part) is cut off. The rivets are Glued into place After painting and Soldering



(Fig 1.3)

compleat laser pointer And inside Arrangment.



6th May 1992 54

Received from Marist college North Shore

the sum of two hundred Dollars

being for Laser Diode pointer

Prepaid $ 100 for parts

Balance $ 100

$ 100 00