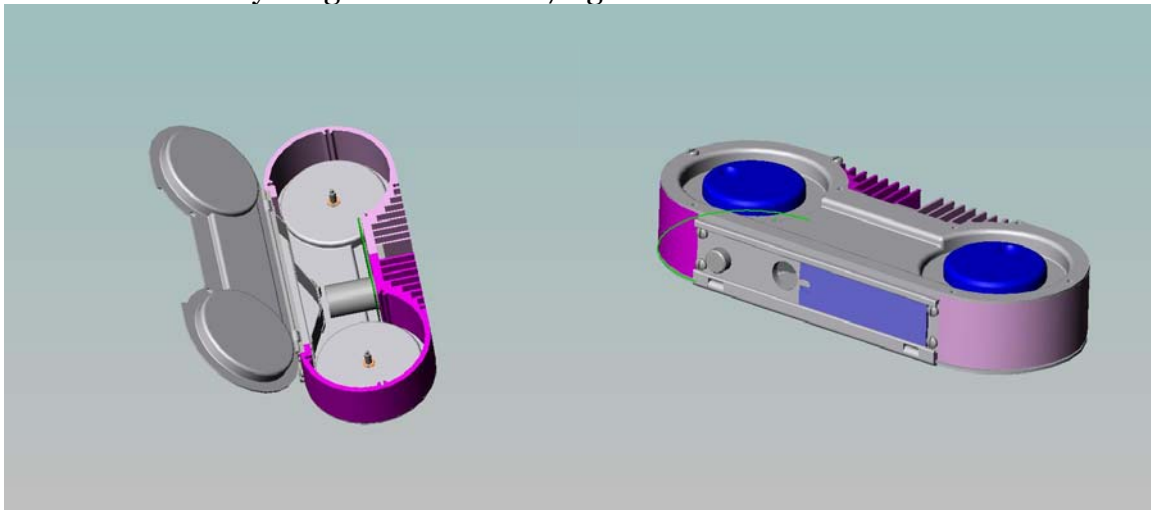


Kinkajou γ Prototype Development Report 5 - 11 April 2004

LED life test: The life test begun two weeks ago accumulated 100 hours of constant illumination and an additional 240 h at intermittent, 90% duty cycle operation with a period of 2 seconds. Temperature has been $30\text{C} \pm 1\text{C}$ the entire run.

New Package Design:

- The solid model continues to take shape. Some additional features added:
1. The heatsink/housing halves have been refined to include extruded screw hole slots. These will minimize the machining required. The fins have been adjusted to fit without standing proud of the housing, and the surface area adjusted in accordance with thermal requirements. This extrusion will now go out for preliminary quote.
 2. Top and bottom plates are stamped sheet aluminum. The shape provides clearance for the film advance knobs on the top, and stiffness for hinging and two fasteners on the bottom plate. Both plates utilize the same stamping, punched for different fasteners.
 3. Front plate has an extruded slot for the hinge pin which retains the bottom plate, in cooperation with bent-up hinges on the bottom plate. The only separate hinge part is the pin, which is retained by the ends of the heatsink.
 4. Focus mechanism. The film gate consists of two polished metal plates, one of which attaches to the front plate by a long flexural part. A thumbscrew through the plate adjusts the gate's position. The thumbscrew also secures the lens cover in closed position.
 5. Lens tube. The design of the condenser lens tube and the projector lens housing, if any, awaits definition, but the housing shown, which measures 6 cm in depth, should accommodate the Fisher-Price lenses.
 6. Preliminary weight estimate: 1.7 kg with film.



Allen Armstrong