University of MN, Minnesota Nano Center

Standard Operating Procedure

Equipment Name:	Oriel flood exposure system		
Badger Name:	oriel	**Revision Number:**	3
Model:	8095	**Revisionist:**	Paul Kimani
Location:	Bay 4	**Date:**	October 29, 2013

Description

The Oriel is a flood exposure system that produces a collimated and uniform beam of the UV light in the 350 - 450 nm region of the spectrum and is ideal for exposure of many photoresists. Most of the undesired light is filtered by internal optics.

1. **Safety**
   a. Avoid exposure to the direct, reflected or diffused UV light from the lamp.
   b. Wear UV glasses when the lamp is ON.
   c. Do not touch the lamp.
2. **Restrictions/Requirements**
   a. The volts/amperes cannot be adjusted.
3. **Required Facilities**
4. **Definitions**
5. **Setup**
   a. Check to see that the lamp is on by flipping the shutter toggle switch to **OPEN.**
   b. The lamp stays **ON;** the shutters for the lamp open and close exposing the sample to **UV** light. If the lamp is not on, press the black **START** button and wait **30 minutes** for the bulb to warm before continuing.
   c. The lamp current can be read either in Volts or Amperes. Move the switch to the desired method.
6. **Operating Instructions**
   a. Remove the black movable screen and set it aside.
   b. Load the sample, centering it on the middle of the X-sign.
   c. Replace the moveable black screen.
   d. Flip the shutter toggle switch to **OPEN** and start timing the exposure.
   e. Flip the shutter toggle switch to CLOSE when exposure time is complete.
   f. Remove the moveable black screen and remove the sample.
   g. Replace the moveable black screen.

a. Problems/Troubleshooting

   a. If the lamp does not turn on after restarting the lamp, it may need to be replaced.
   b. Notify the process staff.