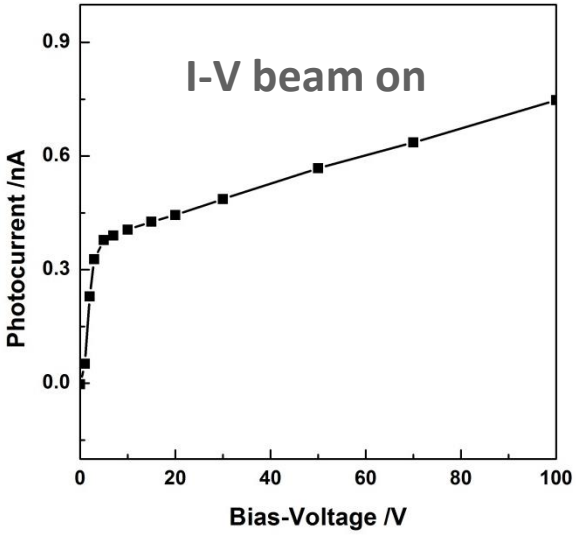
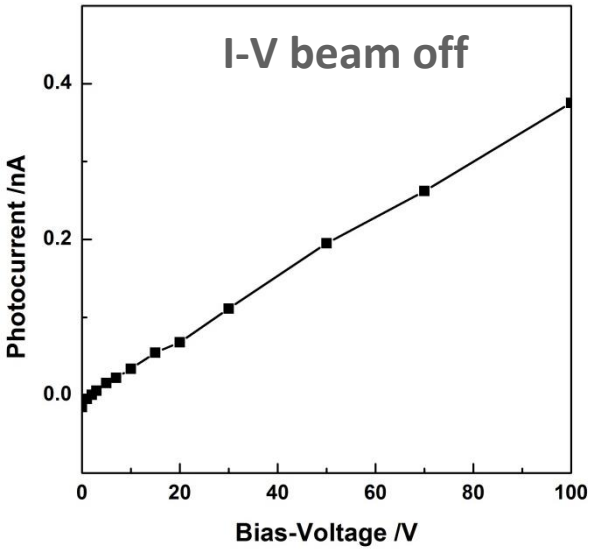
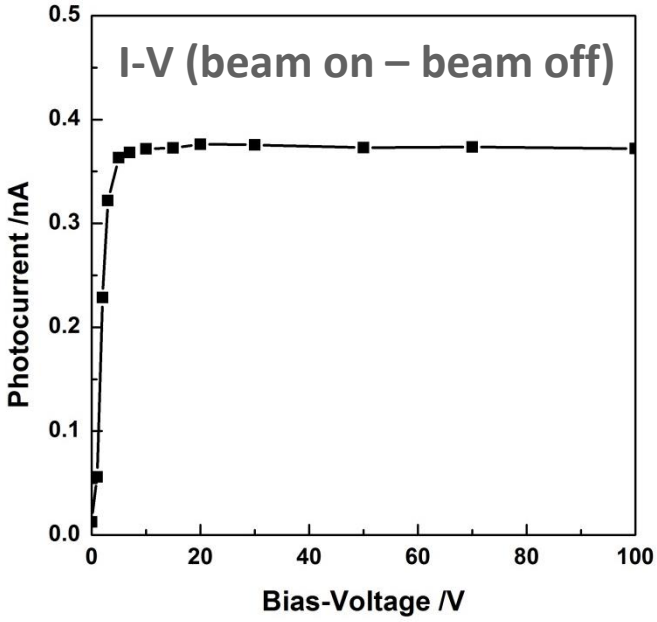
Tube #45 QE

I-V curve

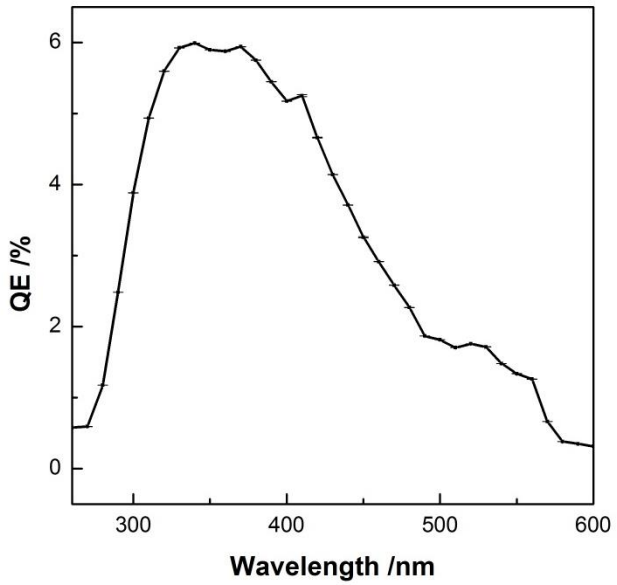


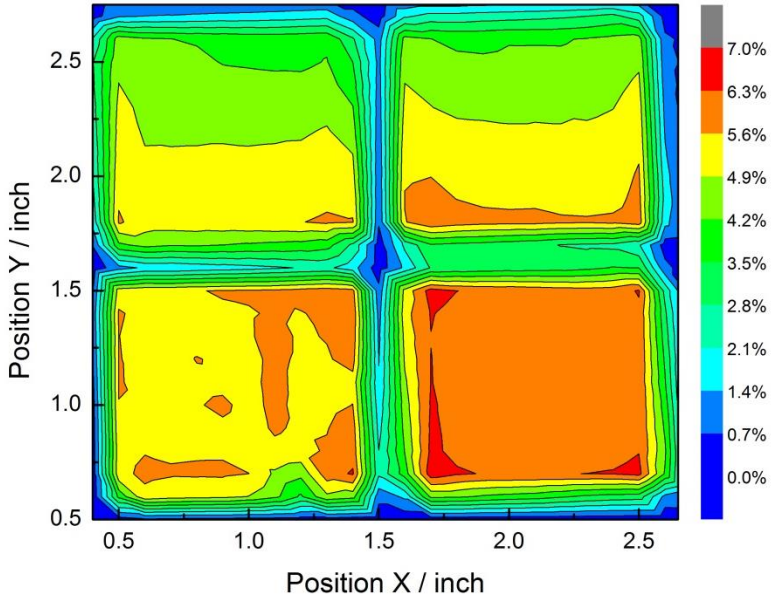




Spacer glass resistance = $2.5X10^{11}$ Ω

QE vs. wavelength and Map





- No Cs deposition for # 45 as Cs source gives out a large amount of gas during #44 growth, increases pressure to mid 10^{-7} Torr, reducing photocurrent.
- K_3Sb shows maximum QE ~7 %. Average 5-6 %. Same as #44.

Problems noticed:

Source may be contaminated during loadlock leakage time (after growth of #43). #41, #42, #43 all show reduction of sealing chamber pressure after cathode was moved to sealing chamber, while #44, #45 did not reduce sealing chamber pressure.

In-situ laser monitor shows final photocurrent of #45 before sealing is two times higher than that of #44. Ex-situ measurement shows same QE.

Cathode #44 also has NO Cs deposition?? Both #44 and #45 are K-Sb only cathode, No Cs?

Cs directly reacts with the contamination gas, did not reach to substrate. The K-Sb #44 cathode recovers itself after sealing??