

From: Colin Whyte colin.whyte@strath.ac.uk

Subject: Lens dimensions

Date: 24 April 2020 at 15:59

To: Bob Bingham - UKRI STFC bob.bingham@stfc.ac.uk, ken.long@stfc.ac.uk, Pozimski, Juergen (Imperial Coll.,RAL,ISIS) juergen.pozimski@stfc.ac.uk, Dascalu, Titus-Stefan t.dascalu19@imperial.ac.uk



All

Gabor lens dimensions in current model are

Length 914mm

I believe the beam model uses 1m as the total length of the lens, the active length of the lens is then reduced by 43mm per end to allow for voltage hold off etc.

Internal radius of anode 35mm

Juergen used 30mm internal radius cathodes which are slightly re-entrant into the anode at either end – so the internal aperture of the lens is reduced at these point to 30mm radius.

The beam enters the lens with a radius of approximately 4mm (I think this is the 2 sigma point) and a included angle of approximately 2.3 degrees divergence. The design calls for the beam to exit the lens at a size which I've just realised I don't know. I think it is a good fraction of the cathode radius? Hopefully Juergen will know?

Yours Colin