

# Joint Requirements

ASML, Canon, Nikon

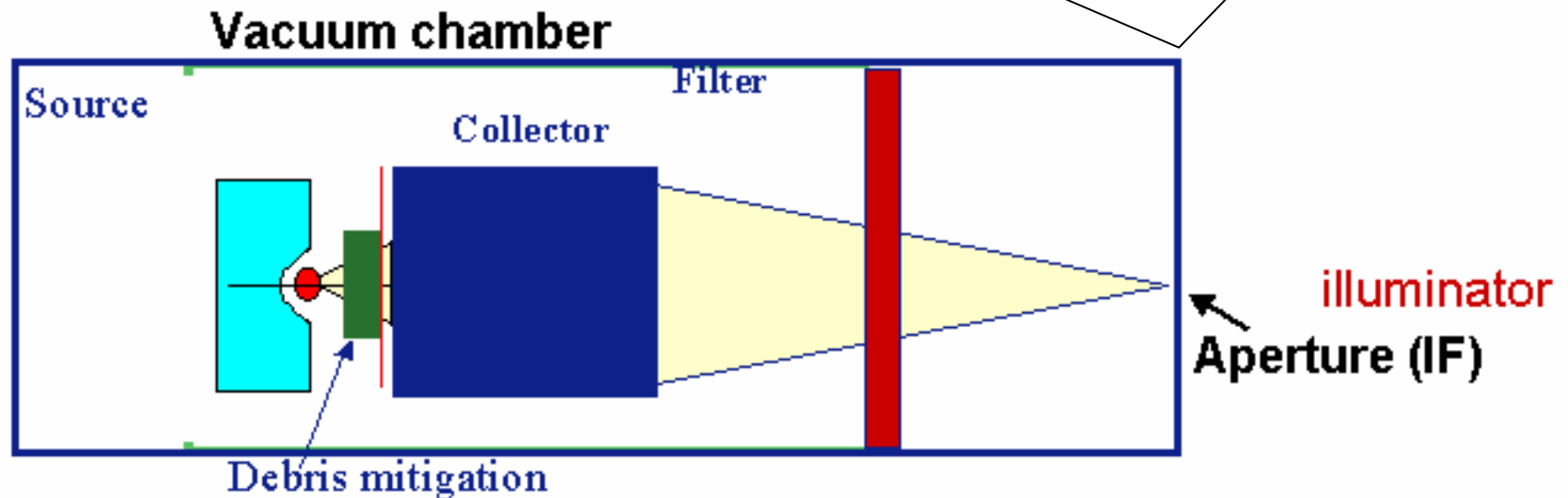


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# Definition of clean photon spot at intermediate focus (IF)

Source specifications are defined at intermediate focus (IF) which is illuminator entrance



# Joint Requirements for EUV Source

<u>SOURCE CHARACTERISTIC</u>	<u>REQUIREMENT</u>
•Wavelength	13.5 [nm]
•EUV Power (in-band)	115 W @ 5 mJ/cm <sup>2</sup> >115 W @ >5 mJ/m <sup>2</sup>
•Repetition Frequency	> 7-10 kHz ***
•Integrated Energy Stability	±0.3%, 3σ over 50 pulses
•Source Cleanliness	≥ 30,000 hours **
•Etendue of Source Output	max 3.3 mm <sup>2</sup> sr ***
•Max. solid angle input to illuminator	0.03 - 0.2 [sr] ***
•Spectral Purity: 130-400 [nm] (DUV/UV)	≤ 3 - 7% ***
* At IF ≥ 400 [nm] (IRVis) at Wafer	TBD ***
** After IF	
*** Design dependent	

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# Summary

- Due to uncertainty in the resist performance the power specification for the source might scale up for HVM
- We will propose to continuously monitor the EUVL development and present an updated joint requirements in the next source workshop.



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