



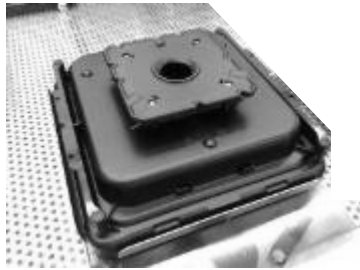
# ASML

## Reticle shipping in EUV-pods

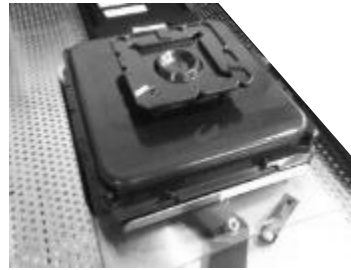
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30 September 2012

# Introduction

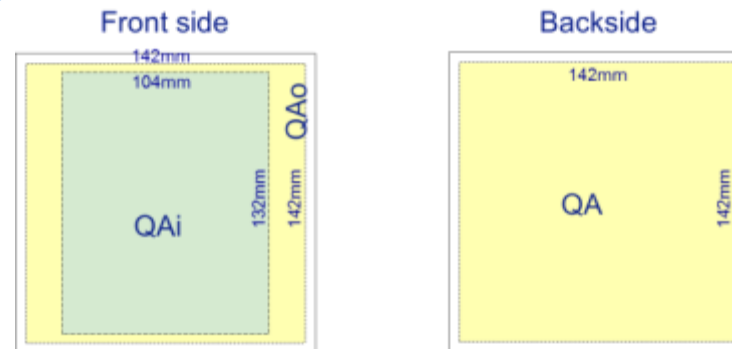


Entegris EUV-pod



Gudeng EUV-pod

- Two suppliers of dual pods have been qualified for use in NXE scanners
- In addition, a shipping test was done to check performance using supplier packaging and commercial transport
  - Test is a practical test for high confidence interval for meeting the targeted performance
- Particle adders on the reticle are counted in separate areas front side and back side using a Reflex TT 90 particle measurement system

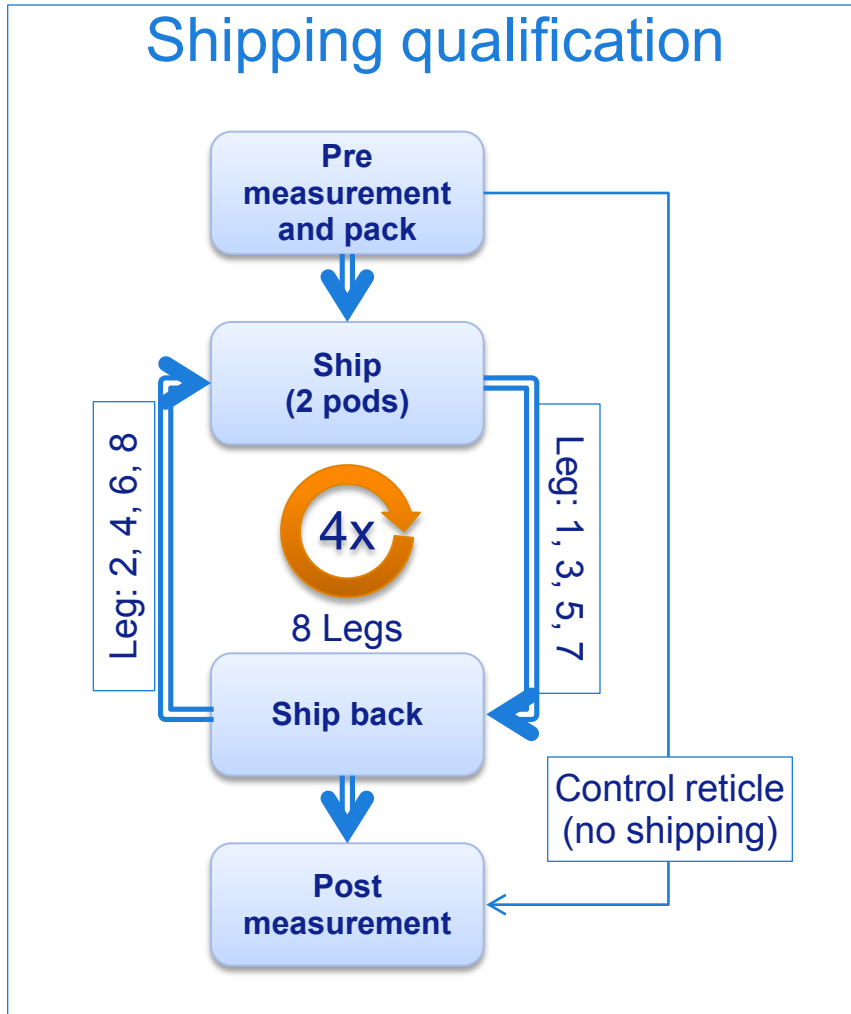


The measurement area is 146mm x 146mm



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# The shipping test requires 3 shipping boxes, one of which is a control



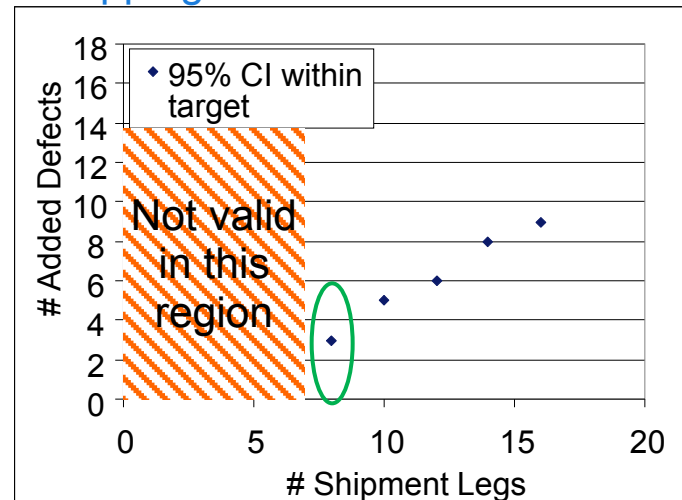
Round trip is not required; number of legs is what is important

Adder targets for 8 shipping legs

Side of reticle	Area	95% CI Adder Target*	Particle size (nm)
Front	QAi	3	≥ 85
Front	QAo	3	≥ 200
Back	QA	3	≥ 3000

\* Includes pre- and post-metrology with manual reticle handling

Poisson statistics are used to establish practical targets for the shipping test



# The Gudeng EUV-pods are shipped using Gudeng's packaging

Gudeng order code for EUV-pod and shipping container: 9001-0001221



Inner box packed with pre-scanned reticle in Gudeng EUV-pod

Outer box dimensions:  
60cm x 57cm x 42cm

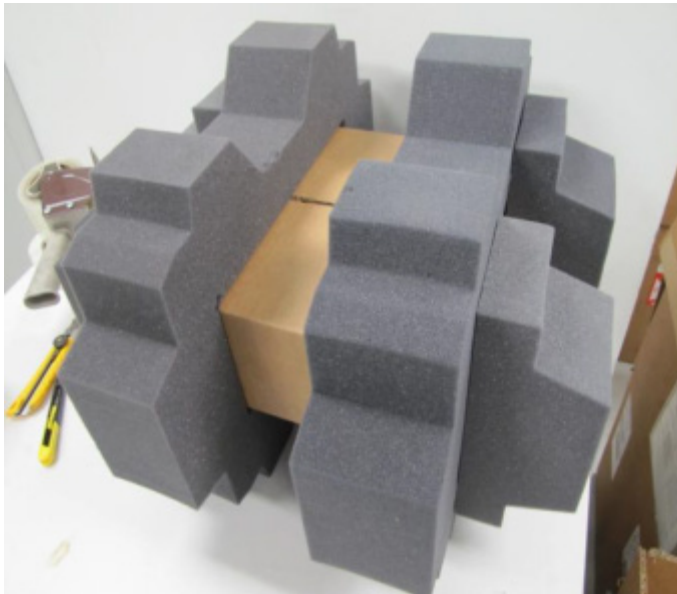


Inner box (with cover closed) in outer carton

# The Entegris 1005 EUV-pods are shipped using Entegris' packaging

Entegris order code for EUV-pod and shipping container: EUV-1005A-A110

Outer box dimensions:  
51cm x 51cm x 35.6cm

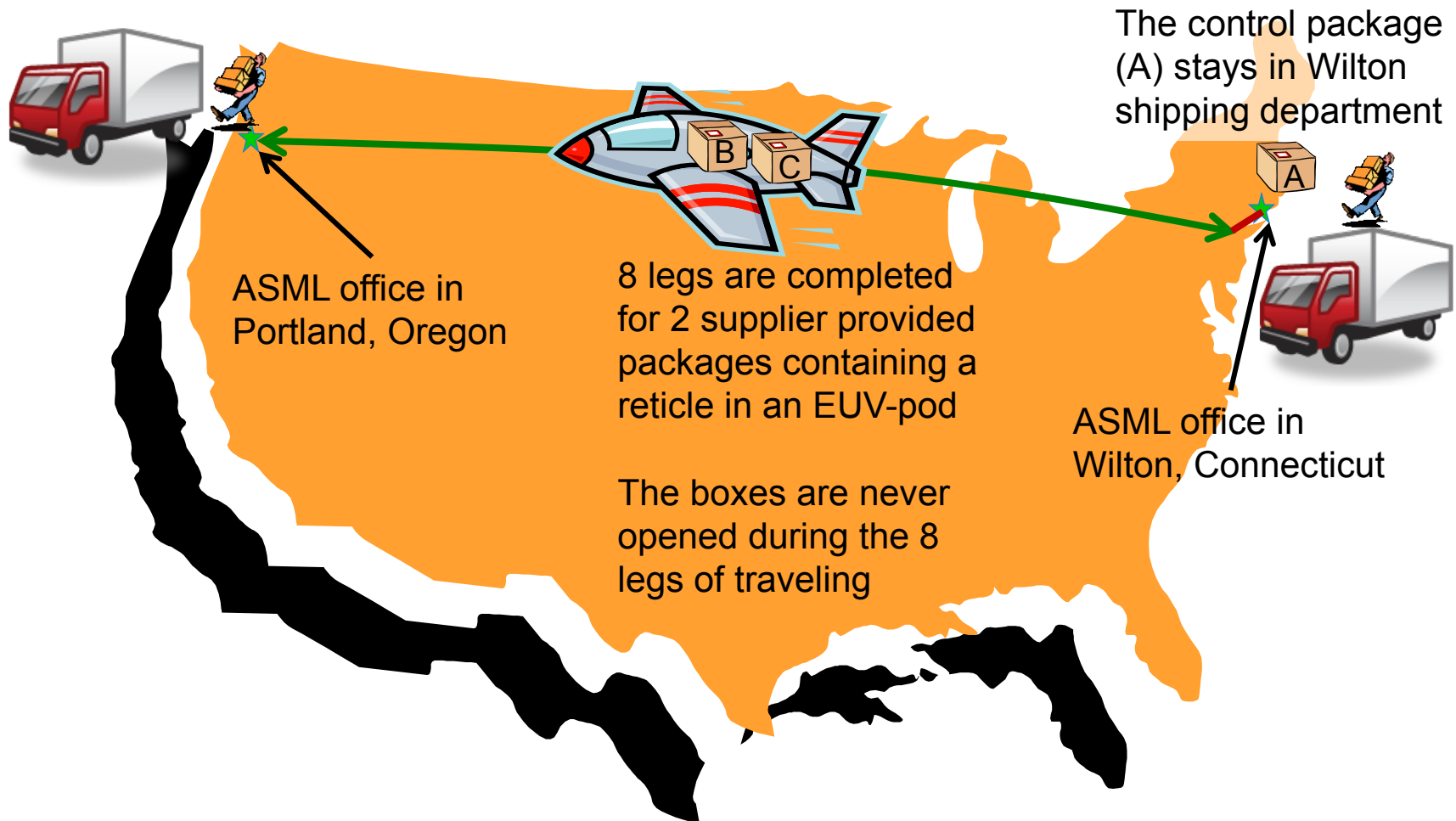


Inner box packed with pre-scanned reticle in Entegris EUV-pod



Inner box in outer carton

# Transportation of the packages involved several modes of commercial transportation



# Both EUV-pod suppliers meet targets for shipping reticles

Supplier	Reticle SN	Pod SN	Shipping box	Usage	Front		Back
					QAi	QAo	QA
A	A <sub>R</sub>	A <sub>A</sub>	A <sub>AX</sub>	Control 266 hours storage	0	0	0
	B <sub>R</sub>	B <sub>A</sub>	B <sub>AX</sub>	Shipping	0	0	0
	C <sub>R</sub>	C <sub>A</sub>	C <sub>AX</sub>	Shipping	1	2	2
B	D <sub>R</sub>	A <sub>B</sub>	A <sub>BX</sub>	Control 433 hours storage	0	0	3
	E <sub>R</sub>	B <sub>B</sub>	B <sub>BX</sub>	Shipping	0	0	3
	F <sub>R</sub>	C <sub>B</sub>	C <sub>BX</sub>	Shipping	2	0	0

Subscript key:

R = reticle

A = supplier A

B = supplier B

X = shipping box

Defect adders measured on a Reflex TT 90 and includes pre- and post-metrology with manual reticle handling



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