

TEUS-S100



TEUS-S100

EUV light source product specifications

Main Specifications

| | |
|---|-------------------------|
| Laser average power | 100W |
| Maximum pulse repetition rate | 25kHz |
| Solid angle of collectable EUV power | 0.05sr |
| Conversion efficiency in-band (13.5 nm±1%) radiation | 2% @2π·sr |
| EUV flux inside collection angle after debris mitigation system in-band (13.5nm±1%) | 8.5mW |
| Spectral brightness after debris mitigation system in-band (13.5nm±1%) | 90W/mm ² ·sr |
| Plasma size* | 60um |
| Plasma stability** | 3% RMS |

System Lifetime and Maintenance Requirements

| | |
|--|-------------------------|
| Collector lifetime with degradation of 10% without using a special membrane filter in 24/7 mode of operation | not less than 12 months |
| Collector lifetime with degradation of 10% using a special membrane filter in 24/7 mode of operation | not less than 24 months |
| Maintenance time every 8 month | 8 hours |
| Uptime in 24/7 mode of operation*** | 4 months |

Electrical Power, System Dimensions and Weight

| | |
|------------------------------------|------------------|
| Electrical power | 6.5 kW |
| Dimensions (L×W×H) | 1400×1000×1200mm |
| Weight, including laser components | 770Kg |

Facility Requirements

| | |
|------------------------|---------|
| Room cleanliness class | ISO7 |
| Water flow rate | 10L/min |

* : 1/e²

** : determined mainly by laser stability

*** : with shutting off the EUV beam for 5mins every 2 months for membrane magazine replacement

For full band (13.5nm ± 2%) conversion efficiency is 4% @2π giving double brightness and double the

TEUS-S200

EUV light source product specifications

Main Specifications

| | |
|---|--------------------------|
| Laser average power | 200W |
| Maximum pulse repetition rate | 50kHz |
| Solid angle of collectable EUV power | 0.05sr |
| Conversion efficiency in-band (13.5 nm \pm 1%) radiation | 2% @2 π ·sr |
| EUV flux inside collection angle after debris mitigation system in-system in-band (13.5nm \pm 1%) | 17mW |
| Spectral brightness after debris mitigation system in-band (13.5nm \pm 1%) | 180W/mm ² ·sr |
| Plasma size* | 60um |
| Plasma stability** | 3% RMS |

System Lifetime and Maintenance Requirements

| | |
|--|-------------------------|
| Collector lifetime with degradation of 10% without using a special special membrane filter in 24/7 mode of operation | not less than 6 months |
| Collector lifetime with degradation of 10% using a special membrane filter in 24/7 mode of operation | not less than 12 months |
| Maintenance time every 4 months | 8 hours |
| Uptime in 24/7 mode of operation*** | 3 months |

Electrical Power, System Dimensions and Weight

| | |
|------------------------------------|------------------|
| Electrical power | 8.5kW |
| Dimensions (L×W×H) | 1400×1000×1300mm |
| Weight, including laser components | 770Kg |

Facility Requirements

| | |
|------------------------|---------|
| Room cleanliness class | ISO7 |
| Water flow rate | 15L/min |

* : 1/e²

** : determined mainly by laser stability

***: with shutting off the EUV beam for 5mins every month for membrane magazine replacement

For full-band (13.5nm \pm 2%) conversion efficiency is 4%@2 π , giving double brightness and double the collected EUV power.

TEUS-S400 product

EUV light source product specifications

Main Specifications

| | |
|---|--------------------------|
| Laser average power | 400W |
| Maximum pulse repetition rate | 100kHz |
| Solid angle of collectable EUV power | 0.05sr |
| Conversion efficiency in-band (13.5 nm \pm 1%) radiation | 2% @2 π -sr |
| EUV flux inside collection angle after debris mitigation system in-band (13.5nm \pm 1%) | 34mW |
| Spectral brightness after debris mitigation system in-band band (13.5nm \pm 1%) | 360W/mm ² -sr |
| Plasma size* | 60um |
| Plasma stability** | 3% RMS |

System Lifetime and Maintenance Requirements

| | |
|--|------------------------|
| Collector lifetime with degradation of 10% without using a using a special membrane filter in 24/7 mode of operation | not less than 3 months |
| Collector lifetime with degradation of 10% using a special special membrane filter in 24/7 mode of operation | not less than 6 months |
| Maintenance time every 2 months | 8 hours |
| Uptime in 24/7 mode of operation*** | 2 months |

Electrical Power, System Dimensions and Weight

| | |
|------------------------------------|------------------|
| Electrical power | 10.5 kW |
| Dimensions (L×W×H) | 1400×1000×1400mm |
| Weight, including laser components | 770Kg |

Facility Requirements

| | |
|------------------------|---------|
| Room cleanliness class | ISO7 |
| Water flow rate | 25L/min |

* : 1/e²

** : determined mainly by laser stability

***: with shutting off the EUV beam for 5mins every 2 weeks for membrane magazine replacement

For full-band (13.5nm \pm 2%) conversion efficiency is 4%@2 π , giving double brightness and double the double the collected EUV power

TEUS-MXXX products

Models TEUS-M100, TEUS-M200 TEUS-M400 with solid angle of collectable EUV power of 0.15sr are under development. The demonstrated collected EUV power in these models will be 3 times greater than in the equivalent models TEUS-SXXX (i.e the collected power of TEUS-M100 is 3 times more than TEUS-S100 and so on).