Compliance sheet — star-lambert

Everything a supplier qualification, a legal review or an export check usually asks about star-lambert 0.1.3, in one document.

1. Identity

Document	STAR-PKG-STAR-LAMBERT-EN · v2.3 · 2026-11-14
Package	star-lambert
Version	0.1.3
Capability	star.orbit.lambert
Maturity	Beta (VERIFIED)
Python	>=3.9
Source commit	dc09f61d
Source	https://github.com/Andrea07072000/S.T.A.R.-/tree/main/packages/star_lambert

2. Licence and obligations

Apache License 2.0. You may use, copy, modify and distribute it, also commercially, and you receive a patent licence from the contributors. When you redistribute it: keep the LICENSE file and the copyright notices (and a NOTICE file, if a future version adds one), and state in modified files that you changed them. You may not use the S.T.A.R. name to endorse your product.

3. What it needs at run time

Nothing beyond the Python standard library: it works offline.

4. Integrity

SHA-256 fingerprints of the files published on this website. Check a downloaded file with:

```
python -c "import
hashlib,sys;print(hashlib.sha256(open(sys.argv[1],'rb').read()).hexdigest())" star_lambert-
0.1.3-py3-none-any.whl
```

FILE	SHA-256
star_lambert-0.1.3-py3-none-any.whl	63f57331a607fc0f006e8b36d3e32c4aa7d74f29bb3396a25c2268f079ce81ef
star_lambert.py	4ba3d54d17e13b3267d6b010e064ef286298fa181ba23af5111c3531b93fac76
star_lambert-0.1.3-source.zip	0fc53dbbbc9dc8a7ada932e8db1096a0b45416746c4813da1db57e56f02c6b62

5. What it does, and its limits

Zero-revolution solver for Lambert's problem (universal variables, Stumpff functions, Newton on z; Bate-Mueller-White / Curtis Algorithm 5.2). Standard library only.

Multi-revolution transfers; transfer angles within 1e-8 rad of 0 or 180 deg (refused: the transfer plane is not defined); any statement of flight qualification.

- `lambert(r1, r2, tof, mu=398600.4418, prograde=True) -> (v1, v2)`: velocities at r1 and r2 for a transfer of duration `tof`. Units: km, s, km/s, km^3/s^2.
- Never return an unconverged result: `RuntimeError` instead.
- Invalid input fails explicitly: `ValueError` for tof <= 0, zero position vectors, degenerate geometry (0 or 180 deg).

6. Export, use and certification

The package is published and freely available. That usually takes software out of export-control lists, but not every use of it: read the page on space activities and export control before using it in a controlled programme. It is not certified or qualified for flight; the evidence describes what was tested and how.

7. Citation and bill of materials

```
@software{cavazzini_star_lambert_0_1_3,
  author  = {Cavazzini, Andrea},
  title   = {{star-lambert}: Universal-variable Lambert orbital boundary value problem
solver},
  version = {0.1.3},
  year    = {2026},
  url     = {https://andrea07072000.github.io/S.T.A.R.-/software/star_lambert/},
  note    = {Apache-2.0. Source: https://github.com/Andrea07072000/S.T.A.R.-, commit dc09f61d}
}
```

CITATION.cff · BibTeX · SBOM CycloneDX 1.5 · SBOM SPDX 2.3

8. Warranty and liability

Provided "as is", without warranties or conditions of any kind (Apache License 2.0, sections 7 and 8), to the extent the law allows. This never excludes liability that the law does not allow to exclude.

Related: space activities and export control · acceptable use · evidence and limits · licence texts