

# MODO PRO w/ MODTRAN® 5

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In consideration of the mutual covenants set forth herein and other good and valuable consideration, ReSe and Licensee agree as follows:

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**7. Ownership; Non-disclosure.** ReSe and/or its Licensors own and retain all right, title and interest, including without limitation all copyright, trademark, trade secret, patent and other proprietary rights, in and to the Software and the documentation (the “Proprietary Materials”). Except as specifically authorized by this Agreement, Licensee shall not disclose, sell, lease, transfer, sublicense, dispose of, or otherwise make available the Proprietary Materials or any portion thereof, in source or object code, to any third party. Licensee agrees that dissemination of the Proprietary Materials in breach of this Agreement would cause irreparable harm to ReSe and its Licensors for which monetary compensation alone would be inadequate, and ReSe and its Licensors are entitled to injunctive relief prohibiting any such dissemination without the necessity of posting bond, in addition to any other remedies available at law or in equity. This Agreement is NOT a sale of the Proprietary Materials or any copy of them. Licensee obtains only such rights as are provided in this Agreement.

**8. Force Majeure.** ReSe and its Licensors shall not be liable for any failure to perform hereunder to the extent that such failure arises by factors outside ReSe’s reasonable control, including but not limited to Acts of God, war, terrorism, natural disaster or third party transportation and communications failure.

**9. Assignment.** Licensee may not sell, license, assign, or otherwise transfer the Software or the documentation without the written permission of ReSe, which may be withheld in ReSe’s sole discretion. Any such sale, license, sublicense, assignment, rental or transfer in breach of this provision shall be void.

**10. Amendment; Waiver; Severability.** No alteration, amendment, waiver, cancellation or other change to this Agreement shall be valid or binding unless agreed to in writing by both parties. No waiver by any party of a breach of any covenant or condition of this Agreement by any other party shall be construed to be a waiver of any succeeding breach of the same or any other covenant or condition. If any provision of this Agreement, or the application thereof, shall for any reason and to any extent be determined by a court of competent jurisdiction to be invalid or unenforceable, the remaining provisions of this Agreement shall be interpreted so as best to reasonably effect the intent of the parties. The parties further agree to replace any such invalid or unenforceable provisions with valid and enforceable provisions designed to achieve, to the extent possible, the business purposes and intent of such invalid and unenforceable provisions.

**11. U.S. Government and Spectral Sciences Not Parties; Third Party Beneficiaries.** Although the U.S. Government and Spectral Sciences are not a party to this Agreement and Licensee cannot enforce ReSe’s obligations hereunder against the U.S. Government or Spectral Sciences Inc., Licensee agrees that the U.S. Government and Spectral Sciences Inc are third party beneficiaries of the provisions that protect their interest in the Software and that they shall be entitled to enforce such provisions against Licensee. In case of such enforcement by the Government, Section Swiss OR, Abschnitt 2, Sect. C, \$211-215, hereof shall be inapplicable and U.S. federal law shall control. In case of such enforcement by SSI, Swiss OR, Abschnitt 2, Sect. C, \$211-215 hereof shall be inapplicable and the law of the Commonwealth of Massachusetts without reference to its choice of law provisions shall control.

**12. Acknowledgement; Entire Agreement.** Licensee ACKNOWLEDGES THAT IT HAS READ THIS AGREEMENT, UNDERSTANDS IT AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS. Licensee FURTHER AGREES THAT IT IS THE COMPLETE AND EXCLUSIVE STATEMENT OF THE LICENSE AGREEMENT BETWEEN Licensee AND ReSe WHICH SUPERSEDES ANY PROPOSAL, OR PRIOR AGREEMENT, ORAL OR WRITTEN, AND ANY OTHER COMMUNICATIONS BETWEEN Licensee AND ReSe RELATING TO THE SUBJECT MATTER OF THIS LICENSE AGREEMENT.

**13. Certification.** Upon ReSe request, Licensee agrees to provide certification of compliance with all terms and conditions of this Agreement.

IN WITNESS WHEREOF, the Licensee has executed this Agreement by online registration at <http://www.rese.ch/registration> and payment of the software fee.

## EXHIBIT A: SOFTWARE LICENSE PURCHASE SCHEDULE

### Type of License

- 1. Educational Use.** Educational Use licenses shall be used exclusively in connection with non-commercial research being performed by college and university researchers. Work being performed for commercial entities does not qualify as an Educational Use.
- 2. Commercial Use.** All licenses that are not Educational Use licenses are deemed to be Commercial Use licenses.

### Description of Software

The MODO PRO software, version 5 includes a full executable installation of the MODTRAN<sup>®</sup> 5 software, including its inherent components and databases. MODO PRO contains GUI tools for eased interfacing with MODTRAN<sup>®</sup> 5 which are created by ReSe and which are not related to the Licensors.

The MODTRAN<sup>®</sup> 5 software calculates atmospheric transmittance, radiation and scattering for user-defined paths and wavelengths. It has served as the U.S. Air Force and DoD standard moderate spectral resolution radiative transport model for wavelengths extending from the thermal infrared (IR) through the visible and into the ultraviolet (0.2 to 10,000.0 µm). The MODTRAN<sup>®</sup> 1 cm<sup>-1</sup> statistical band model was developed collaboratively by Spectral Sciences, Inc. and the USAF Research Laboratory. New model features include (1) finer spectral resolution via the Spectrally Enhanced Resolution MODTRAN<sup>®</sup> (SERTRAN) molecular band model, (2) a fully coupled treatment of auxiliary molecular species, and (3) a rapid, high fidelity multiple scattering (MS) option. The finer spectral resolution improves model accuracy especially in the mid- and long-wave IR atmospheric windows; the auxiliary species option permits the addition of any or all of the suite of HITRAN molecular line species, along with default and user-defined profile specification; and the MS option makes feasible the calculation of Vis-nearIR databases that include high-fidelity scattered radiances. Validation calculations with the new band model algorithms against line-by-line (LBL) codes have proven successful. MODTRAN<sup>®</sup> 5 includes flux and atmosphere-scattered solar calculations, essential components in the analysis of near-IR and visible spectral region data that are not readily generated by LBL models.

### Scope of License

Use of the MODO PRO software, version 5, including all its MODTRAN<sup>®</sup> 5 components is limited to Licensee's internal uses at one physical site, or in the case of personal laptop use, users whose primary place of business is a single physical site. Licensee may report on results obtained with the MODO PRO and the underlying MODTRAN<sup>®</sup> 5 software and should duly reference the software in reports and papers. Modification of the databases is permitted for non-commercial use, including incorporation into Licensee's internal software.

## Number of Units

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