

## OSLO Revision History

### Release 24.1

- New: New Schott RealView glasses are included in their own catalog.
- New: OHARA now has additional ILine IR, ILine Visible, and Special catalogs.
- New: CDGM now has an additional ILine catalog.
- Update: The following glass catalogs have been updated including new glasses:
  - Hoya,
  - Hikari,
  - OHARA,
  - Sumita,
  - CDGM,
  - CDGM-IR, and
  - Schott, andObsolete catalog changes for glasses moving in or out of production.
- Update: The a\_menu.ccl file has been updated for the glass catalog changes. For users that have customized that part of the interface, please look for glass catalog interface information to compare to your private/a\_menu.ccl implementation.
- Update: The hologram.len, hoe.len, and na75hoe.len files all now include finite substrate thicknesses (for import into TracePro). Each improved file has system notes that include how to create the former zero-thickness perfect aplanatic forms.
- Update: Main In-Program Help page has been updated.
- Update: Some In-Program Help pages updated for glass catalog changes.
- Update: Additional In-Program Help pages improved.

### Release 23.2

- New: A new diffractive CGH quartz plate example is included in the ../Public/Len/Demo/Premium/New folder.
- Update: Updated Visual Studio project files distributed in bin/dll to work with VS2015, VS2017, VS2019 and VS2022
- Update: The CGH In-program Help page has been updated.
- Update: The Preferences In-program Help page has been updated for compliance with OSLO 23.2.
- Update: Fixed a bug with the Herzberger dispersion formula showing in two catalog In-program Help pages.
- Update: Verified all ray aiming documentation for the six ray-aiming modes in the In-Program Help.

## Release 23.1

- New: OSLO runs on Windows 11, per internal tests. Please report any operating issues to Support if they arise.
- New: Added two new OHARA glasses.
- Update: Fixed a warning when loading OSLO on a computer that does not have an internet connection.
- Update: Update the options on the License Troubleshooter dialog that is displayed when no license is available to run OSLO.
- Update: The CDGM glass catalog has been updated.
- Update: The CDGM-IR glass catalog has been updated.
- Update: The in-program Help has been updated to cite that glass names in OSLO are limited in length. OSLO limits these glasses to 10 characters. Note at release two instances of an eight-character citation was found and will be fixed in the next release.
- Update: The import default file type for Zemax imports now prompts for All files (\*.\*)
- Update: Fixed a bug where saved STEP file exports had defective geometry, The export error resulted in rays passing through surfaces in TracePro as well as visual defects in SolidWorks.
- Update: The In-Program Help system has numerous enhancements and clarifications.

## Release 22.2

- New: A Powell lens example has been added.
- Update: The Ohara glass database no longer gives a plotting error.
- Update: Fixed a bug that omitted mirrors in some STEP exports.
- Update: The Help system has been improved.
- Update: The overview Help page has been updated.
- Update: Added comment in the Import/Export Help page about limits on CAD export filenames.
- Update: The Zemax import selection in the user interface has been fixed.
- Update: The CodeV importer has been upgraded to include Qcon imports and how it manages glass interpolation.

## Release 22.1

- New: OSLO will now remind users of subscription expiration 30 days in advance of the need to renew – O1629
- Update: The Ohara glass catalog has been updated.
- Update: Update CodeMeter licensing software to version 7.30a.
- Update: Display message when license file update is required rather than starting troubleshooter.

## Release 21.2

- New: pwf2d capability expanded to 36 fields. Note for higher numbers of field points 5x5 or 6x6 recommended. – 7207
- New: All DLL example files now include solution and project files. The files can be found in ../bin/dll. – 8053
- New: Significant additions have been made to the OSLO Help Overview page to include significant additional user help and resource information including webpage and download links. – 8243
- New: A CDGM Infrared material catalog database has been created and included as a Public glass database. –8248
- Update: Replaced a\_menu.ccl in the Private directory with a copy that only has comments on use. All users should refer to our release guide to ensure they will get interface updates now. – 7233
- Update: Filenames now all open with full name versus truncated versions. – 1511
- Update: The ../Public/Len/demo/Premium/wwcd.len system notes have been corrected to reflect on how the example lens is set up. – 1721
- Update: Double Gauss example lens (see ../Public/Len/demo/Light/dblgauss.len) has had its last element increased to 19.5 mm semi-aperture from 19.0 mm semi-aperture. Further, the drawing condition for the FBY 1.0 field has been changed to FY of 1.0 maximum (was FY of 1.1). – 1795
- Update: Diffractive surfaces are now more stable as a specific crash related to units now correctly functions. – 1888
- Update: Made error message clearer when trying to optimize with an error function that has no constraint or non-zero weighted operands assigned. – 2964
- Update: Fixed array dimensioning to correct value in the CCL Global Data Help page. – 3661
- Update: Fixed an issue where files saved in former versions of OSLO always prompted for saving. Now the user will only be asked about saving a modified file if it was really modified. – 7951
- Update: Missing Help page link for DLL fixed. – 8058
- Update: Help pages updated for DLL files updated in this build, including guidance to using the example files for modification or templates in the creating DLLs Help page. – 8062
- Update: Ray failure issue fixed in the Wassermann-Wolf aplanatism Conformal CD Demo Lens. – 8140
- Update: Fixed errors in help page for mkcat command. – 8240
- Update: Broken link fixed in the OSLO Copy Protection Help page. – 8242
- Update: Changed the name of one Help menu item to "Help and Resources" in the default interface found in a\_menu.ccl. To ensure you get interface changes, please review the release guide. – 8243
- Update: Added spot diagram operating conditions back into the default OSLO interface. – 8244

Update: The CDGM Public glass catalog database has been updated. – 8248

## Release 21.1

Update: The STEP exporter has improved aspheric surface export capability. – 5930

Update: PSF2D now correctly executes polychromatic calculation, monochromatic wavelength switching, and printing out the wavelengths in the output graphics window. – 7600

Update: Improvements made to user communication on boundary violation messages.

Update: Message on error function reporting of boundary violations in OSLO is no longer abbreviated.

Update: Change in error message in some cases to more descriptive "Command is currently not available (most common cause is you should close spreadsheets)". – 958

Update: In program Help page system page outdated information fixed to correctly cite information in the paraxial setup spreadsheet and output commands. – 901

Update: Addition of reference link to the glass catalog page for thermal coefficient of expansion units in the OSLO Help Overview – Lens Data Entry – Special Surface Data – Surface Controls Help page. – 1070

Update: Added comment to the in-program Help Page on the Command Line about entering constants or global variables first that have command names. To avoid error messages or argument prompts, use the + operator with the constant (such as +Pi versus Pi). – 1980

Update: Corrected icon button for damped least squares help page. – 3113

Update: The status bar help page (OSLO Help Overview – Getting Started – Setup Overview) updated to match the order in the program. – 3113

Update: The OSLO Help Overview – Programming – Accessing Data – CCL Global Data page had several typos fixed. – 3113

Update: The OSLO Overview Help page now includes contact information for Lambda Research Corporation, the download URL for all OSLO manuals, and the OSLO support e-mail address. – 3704

Update: The Help pages for Interferometric files and Zernike Phase surfaces now informs user to consult the Optics Reference Manuals with the goal of correctly citing ISO standards covering Zernike data. – 3820

Update: The General Conditions in program Help page now includes a comment that afocal mode does not consider the image surface thickness. – 4205

Update: Amended in-program help to make DLL syntax simpler for users. – 4360

Update: Radiant Imaging source format files references made consistent throughout in-program Help. – 5415

Update: Changes made to ISO 10110 page for commands inserted by OSLO that are not formally documented (e.g. ELMTTL, ELMMED, and ELMSF). – 6033

- Update: The rco help page and the coordinates help page have been updated to document how rco changes will almost always automatically keep the succeeding surface(s) in place. – 6460
- Update: Global Explorer Beginner's guide in-program help images restored. Help page title for beginner's guide page changed to "Global Explorer Beginner's Guide" for search differentiation from Global Explorer help page. – 7625
- Update: The Q Type asphere Help page has been improved to include new figures in the page and instructions to avoid error messages. – 7892
- Update: In program Help page updated for deletion of UltraEdit from main toolbar in OSLO 20.2. – 8017
- Update: The Variables help page has been updated to point to the Optics Reference on how boundary violations are calculated.
- Update: Help page for the command line now includes information how to use Alt for keystroke only access to the command history buffer.
- Update: Changed all EDU interface icons to Premium. – 7991
- Update: Fixed an initialization bug where EDU had erroneous icons related to glass availability. – 7992

## Release 20.2

- New: Five new example files are under the folder ..\public\len\demo\premium\new.
- Update: Fixed force prompt command call consistency bugs with respect to a number of rpt\_ commands (for example "rpt\_tfr ?"). - 3654
- Update: Corrected GRIN dll example file. - 7809
- Update: Corrected a bug with initialization of Background ASA. ASA now functions more consistently between background and foreground operation. - 2166
- Update: OSLO's in-program help system has been updated.
- Update: The OSLO tips file has been updated.
- Update: The Optimax test glass file has been updated.
- Update: Install version 7.8.6 of Notepad++ and install ccl.xml in the folder required by newer releases of Notepad++.
- Update: Remove the UltraEdit option from the menu list and the button in the standard toolbar. NOTE: This requires that the changes in the public a\_menu.ccl be merged into the user's private a\_menu.ccl. - 7857

## Release 20.1

- Update: Fix sign on odd-numbered anamorphic asphere coefficients when the surface is inverted– 7593
- Update: Remove references to OSLO Light and OSLO Standard.
- Update: Update glass data from OHARA

- Update: Fix obsolete glass catalogs; make sure that all recently obsoleted glasses were included, remove obsoleted glasses that were reinstated by the manufacturer, remove duplicate glasses.
- Update: Download the license file when reporting entitled release for a permanent license. The entitled release displayed in Help | License and in the License Troubleshooter will now reflect the latest license information.
- Update: Change the message in the License Troubleshooter when the entitled release can't be determined. Print a message "Could not determine entitled OSLO version." rather than "You are entitled to run OSLO Premium 0.0.0".

### Release 19.3

- Update: Fix crash when the '%' character is substituted into an error message in certain situations. Correctly handle %% in the format string for printf, fprintf, and sprintf when it is followed by one or more substitution strings – 7579
- Update: The regression associated with processing %% in fprintf statements also adversely affected the building of the glass and lens databases, making this release a mandatory update – 7574

### Release 19.2

- Update: Fix regression in release 19.1 that causes Check For Updates to fail and lead to a crash
- Update: Fix regression in release 19.1 associated with processing %% in fprintf statements – 7571, 4271
- Update: Fix user-reported issue with Monte Carlo Tolerancing analysis that led to an exception – 7572

### Release 19.1

- New: OSLO is now a 64-bit application – (x64)
- Update: Allow starting of OSLO using file association to lens file – 7302, 7251
- Update: Add support for non-required program arguments
- Update: Properly launch 64-bit Notepad++ – 7557
- Update: Enable '?' to work from spreadsheet – 7193, 7407
- Update: Fix exception when making qbfs[qtypeasphere] with all aspheric coefficients zero – 7555
- Update: Handle errors from DDE commands when attempted in editions other than premium
- Update: Change the user DLL search order to private\bin; adjacent to public\bin
- Update: Update glass data from OHARA
- Update: Update Hikari glass catalog – includes data from Nikon
- Update: Use Unicode characters for license and early visibility strings in the about dialog – 7305

## Release 7.0.2

- Update: Updated OHARA glass catalog
- Update: General improvements to error handling
- Update: Improvements to Check For Updates
- Update: Update message about saving a file from a different version of OSLO
- Update: Fix basic conversion bug from Unicode to multi-byte characters. This would occur when the user's name contained characters that must be represented as multiple bytes. An exception was thrown while processing the ini file when starting OSLO. – 7214

## Release 7.0.1

- Update: Fix intermittent crash/exception that would occur when deleting private glasses
- Update: Print the name of the file being compiled by the message string compiler (cst.exe) when the verbose compiler option (vbse) is turned on
- Update: Improve detection of the loss of the active license when OSLO is running
- Update: Fix bug in Check for Updates that would allow the download of a release that was not supported by the license in use. All users running 7.0.0 should update to this release so OSLO can update properly in the future. – 7194
- Update: Improve the detection of inconsistent amo files and agreement with current ccl

## Release 7.0.0

- New: Added “Check For Updates” capability to automatically check for and download newer releases
- New: Improved licensing using CodeMeter
- Update: Updated glass catalogs
- Update: Asymmetric Aspheres include base conic (OSLO Premium only)
- Update: Improved STEP File Exporter
- Update: Improved ZEMAX importer
- Update: Improved Code V importer