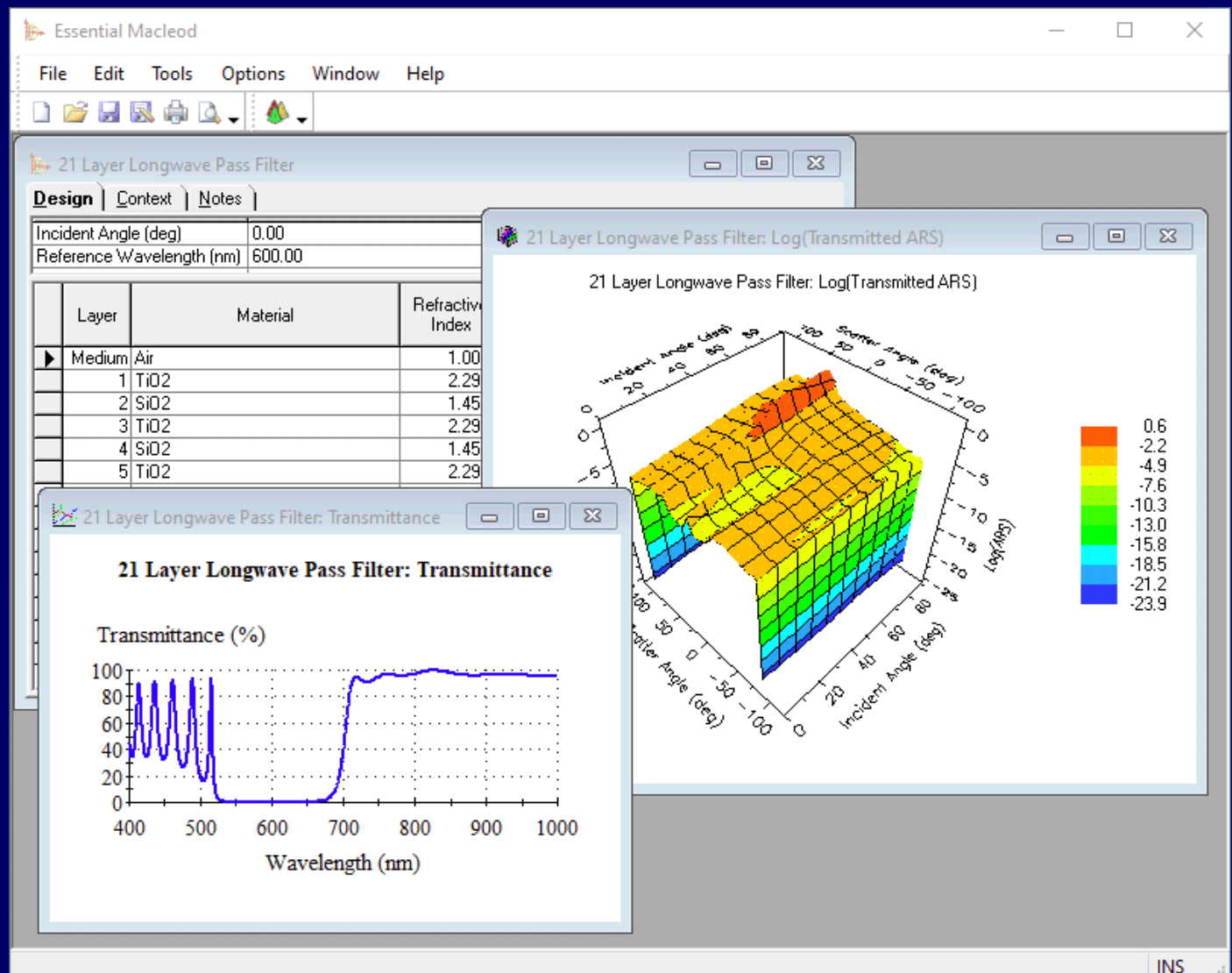


THE ESSENTIAL MACLEOD

The Essential Macleod is a comprehensive software package for the design, analysis, manufacture and trouble shooting of thin film optical coatings. It runs under Microsoft Windows 10, 8.1, 8 and 7 operating systems, both 64 bit and 32 bit. The program has a true multiple document interface. It can handle coatings from rugates to ultrafast, from single-layer antireflection coatings to demanding color separation beamsplitters, providing all that is necessary for their design, analysis, production planning and even reverse engineering of a failed production attempt. A wide range of performance parameters, from straightforward transmittance and reflectance to color coordinates in different color spaces, is built into the software. It can synthesize designs from scratch or refine existing ones, investigate errors and extract optical constants of film materials for use in designs. It consists of a Core that is its minimum configuration. The Core is supplemented by a number of optional Enhancements that extend the capabilities in various directions. The package is an integrated whole with a progressive licensing system that controls the activation of the various enhancements. This permits fitting the configuration, and price, to the needs of the user. The licensing system is a software one residing within the computer. Each user is permitted to have the software installed not only on an office machine but also on a laptop and machine at home. Licenses for these are issued at no extra charge.



Core

The Core contains all the normal design and analysis tools. It considers individual coatings, of as many layers as required, and any number of such coatings on any number of surfaces in an assembly, provided that the surfaces are reasonably parallel. Calculations in the Core include all reflectance, transmittance, phase shifts where meaningful, dispersive parameters such as Group Delay Dispersion, the ellipsometric parameters, together with derivatives in terms of wavelength, up to the third order, where relevant. All of these can be derived in terms of wavelength, frequency, angle of incidence, polarization and thickness of a chosen layer. Calculable color parameters include all the common color spaces. Five refinement tools and two synthesis tools are included. [more...](#)

Runsheets Enhancement

Runsheets is a facility for planning coating production consisting of a machine configuration editor and a run sheet generator. A machine configuration stores details of a coating machine, its sources and their tooling factors, and its monitoring systems. With the run sheet generator, the user can plan the monitoring of a coating design for a given machine configuration. Both optical and crystal monitoring are included as well as advanced features such as dynamic tooling factors, system bandwidth, wideband monitoring, gain and offset. [more...](#)

Monitorlink

Monitorlink provides extra software for configuring Runsheets so that its exported output matches a deposition controller. [more...](#)

Simulator Enhancement

Simulator provides a Monte Carlo model of the deposition process. Using a control plan created by Runsheets, Simulator introduces both random and systematic effects such as noise on the signal, tooling factor variation, packing density errors, temperature effects and so on, and shows the effect that these parameters have on the final simulated production coatings. Not only does this validate the control plan, but all kinds of other parameters associated with the coating system can be translated into the parameters of the model and their effect examined. [more...](#)

vStack Enhancement

vStack is a tool for optimizing a system of non-parallel coatings for a set of overall requirements that may involve alternative routes through the system. A color separation system that involves two beam splitters and three channels is a typical candidate system. The only requirement is that the surface normals should be coplanar. Polarization leakage, cumulative dispersive effects like group delay dispersion, ellipsometric parameters are all calculable parameters. [more...](#)

Function Enhancement

Function extends the capabilities of the Essential Macleod. A simple macro language (editor and syntax checker built-in) manipulates the results in tables in almost any imaginable way. It goes well beyond a spread sheet because all necessary interpolation of results with different independent variable intervals is handled completely automatically. Macros can be saved and used over and over again. Function also provides a BASIC scripting language that can access the entities like designs as objects. Calls to scripts can be embedded in the regular menus so that the use of scripts is virtually seamless. A wide range of scripts is supplied with Function. They include three-dimensional systems, performance statistics, extended tables, composite materials and many more. [more...](#)

DWDM Assistant Enhancement

DWDM Assistant automatically designs a set of multiple-cavity filters to meet typical telecommunication specifications. Filter designs may be sorted according to criteria such as total thickness and estimated deposition time. [more...](#)

Ordering Information

All products and services may be ordered directly from Thin Film Center or from any of our agents. For your convenience we accept payment by American Express, Mastercard and Visa. Please [contact us](#), or our [agents](#) for pricing information.



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