

# Optical Lens Design with Native Gradient Index Support – reTORT Ray Tracer 2.0.27 Released

*Optical lens design made easy, with native, advanced gradient index and metasurface capability.*

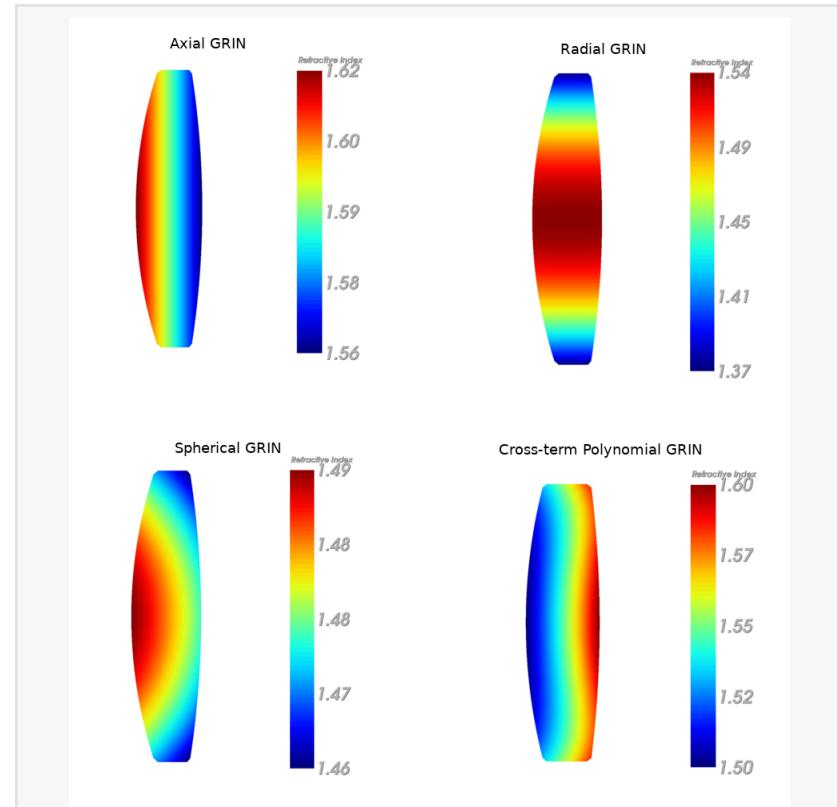
STATE COLLEGE, PA, UNITED STATES, March 6, 2020 /EINPresswire.com/ -- [E x H, Inc.](#) has just released [reTORT](#) 2.0.27, an advanced ray tracer enhanced by additional easy to use gradient index support features. With reTORT, you will realize every benefit ever promised and possible by transformation optics. reTORT 2.0.27 is optical lens design made easy, with native, advanced gradient index and metasurface capability.

Get your [free trial](#) with one click.

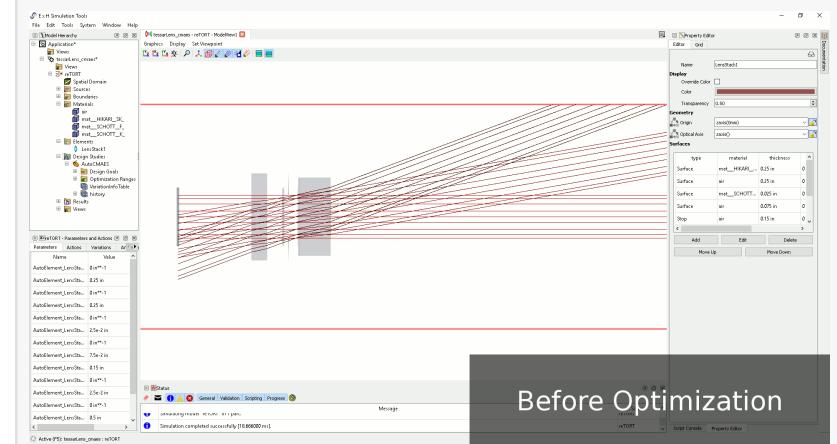
E x H, Inc. provides one click, customizable GRIN definitions. Easily specify radial, axial, or spherical polynomial profiles as well as radial/axial polynomials with or without cross terms. Setup is easy with our wizards, pre-configured lenses, materials and feature replication so you can move on to a solution. Then, optimize your design with the best geometric optics solution available today.

The exclusive E x H arbitrary binary mixture engine is very well known. With this engine, you can allow reTORT to combine two dispersive materials to reach your goal. If you wish, you can also specify pure index of refraction GRIN models.

Very efficient sampling algorithms assure that binary mixture GRINs are manufacturable. You are assured that your design optimization remains within realistic bounds. Your design will use attainable indices of refraction. Therefore, never complete a design that is outside of the limits you yourself can set.

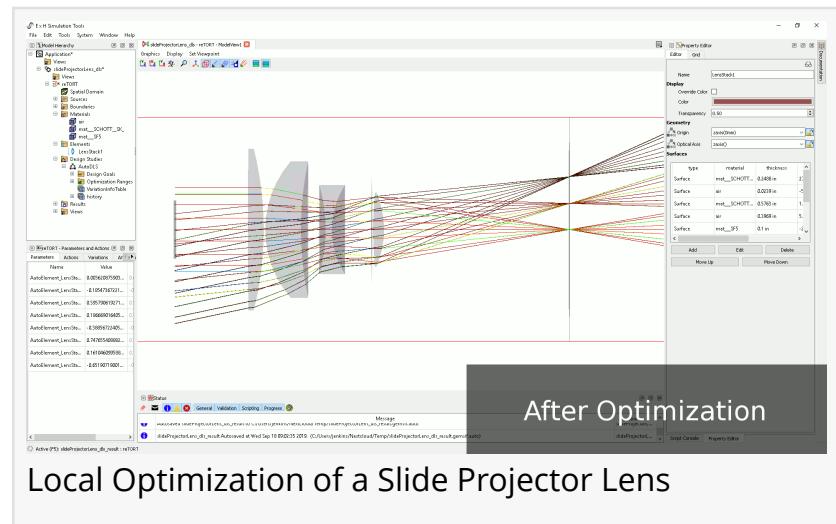


Customize gradient index profiles



Global Optimization of a Tessar Lens

The features we offer in reTORT mean that you can design singlets that replace achromatic doublets. E x H has the most flexible dispersive GRIN interfaces in the ray tracer market today. Many other solutions only model GRINs natively as non-dispersive, treating all wavelengths in the exact manner. With reTORT from E x H, Inc., you natively get color correction when using our reTORT ray tracer. That way, you don't need to add external scripts and libraries to adjust your results.



reTORT 2.0.27 now offers full support for solved lens diameters. With this feature, each lens diameter is solved during your optimization. Pre-specified edges won't get in the way of reaching the optimal solution. reTORT also natively optimizes for lateral color correction. In reTORT, we consider lateral color correction in our core spot size and wavefront error computations. It's not an afterthought, lateral color correction is performed within the computational framework.

With your license, you automatically receive GEMSIF. GEMSIF is the E x H GEometry, Modeling, and Simulation InterFace. It is the computational framework that ties together all of our solvers. GEMSIF is the common E x H platform through which you'll optimize your design. Much of the computational support is provided by GEMSIF. And, finally, GEMSIF is the tool through which you'll render your designs. Through GEMSIF, you will realize all transformation optics can offer. Our GEMSIF framework is tremendously flexible and powerful. It's unique in computational physics and electromagnetic simulation.

#### About E x H, Inc.

We are dedicated to providing you with advanced simulation tools. These tools allow you to design optical and RF systems that are smaller, lighter, faster and have greater clarity than ever before. Some of our solvers are licensed from Penn State University. These solvers have been developed in PSU's world renowned Computational Electromagnetics and Antennas Research Laboratory. Many of our scientists and engineers have been educated at CEARL. We have participated on multiple programs funded by DARPA. On the business side, we have been backed by Gran Sasso Ventures, the same venture capitalists that funded collaboration software firm Compoze Software, now a part of Oracle [ORCL:NYSE], and multitouch technology inventor FingerWorks, the driver of touch screen technology and now a part of Apple [AAPL:NASDAQ]. E x H is at the forefront of transformation optics.

Get your 2 week free trial by [clicking here](#).

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