

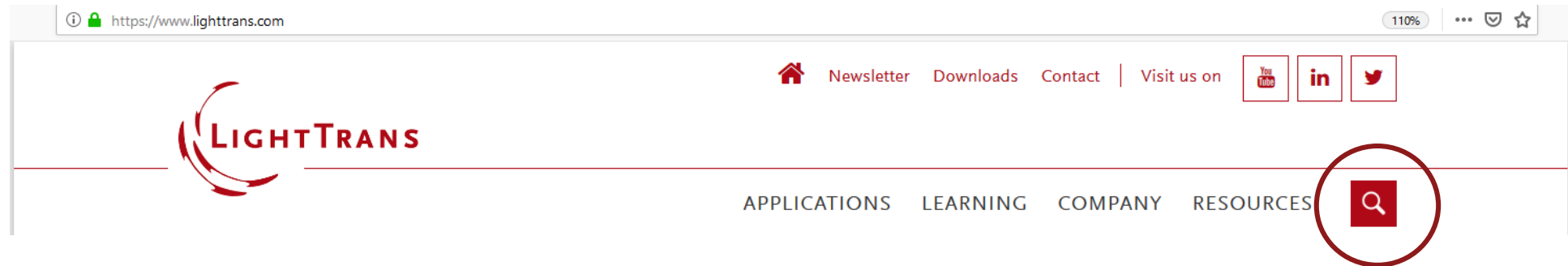
Tips, Tricks and Info for our search function(s) at the webpage

Introduction

- In general, we have two different search functions on our webpage:
 - the **Global Search** function
 - the **Download Search** function.
- Both are based on a different search algorithm. This means that each search function may give different outcomes.
- It is highly recommended to use the **Global Search** function.

Global Search

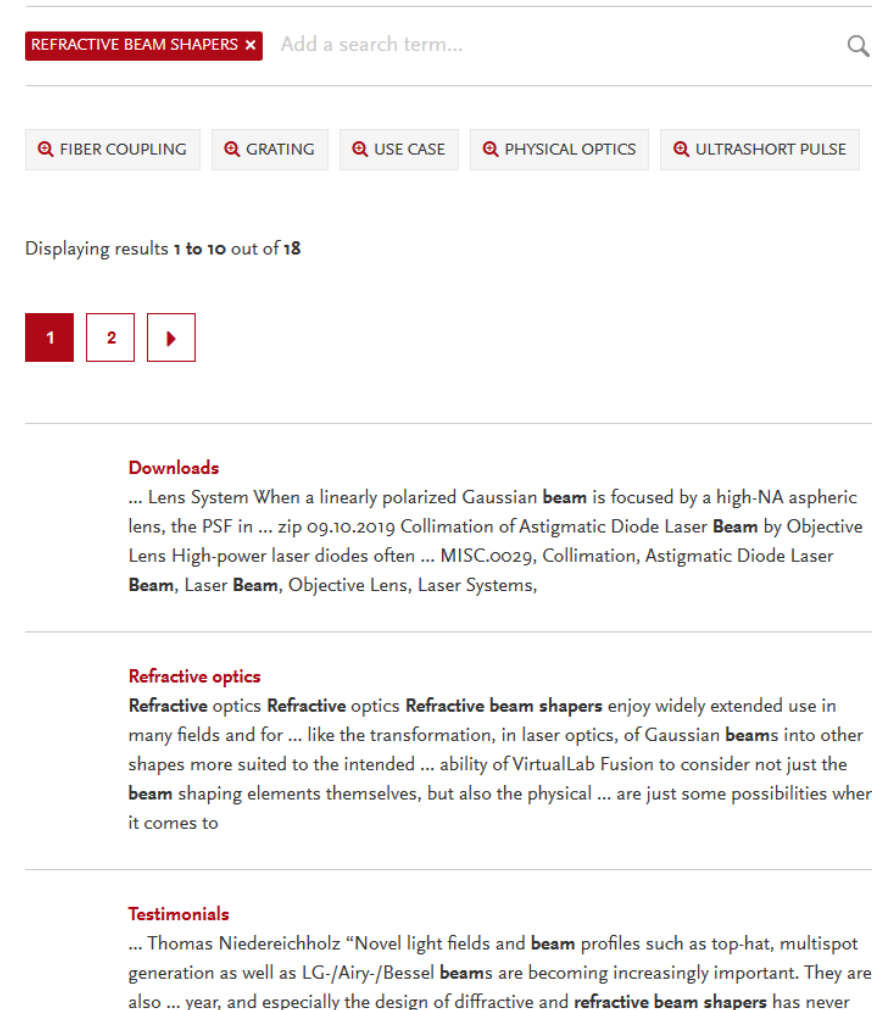
- You can reach the **Global Search** either via the search icon in our webpage (upper right corner) or via <https://www.lighttrans.com/search.html>.



- From a general point of view, the mechanism of this search function is very similar to that of Google Search. By using the **Global Search**, all webpages and saved information will be retrieved (e.g. presearches).
- As in Google search, you can also use different **OPERATORS** to specify your search/results precisely.

Global Search – Operators

- If you search for a term, you will get results in which the words appear, somewhere and somehow. The searched-for words do not necessarily have to appear contiguous to each other, or in the same order as provided in the search box.
- Example:
 - If you search for **Refractive Beam Shapers** (without quotation marks), you will get the results where these three words appear anywhere on the webpage (or in the metadata).



The screenshot displays a search interface with a search bar at the top containing the text "REFRACTIVE BEAM SHAPERS" and a magnifying glass icon. Below the search bar, there are several filter buttons: "FIBER COUPLING", "GRATING", "USE CASE", "PHYSICAL OPTICS", and "ULTRASHORT PULSE". The interface indicates "Displaying results 1 to 10 out of 18". A pagination control shows "1" selected, "2", and a right arrow. Below the search results, there are three sections: "Downloads" with a snippet about a lens system, "Refractive optics" with a snippet about beam shapers, and "Testimonials" with a snippet about light fields and beam profiles.

REFRACTIVE BEAM SHAPERS x Add a search term... 🔍

🔍 FIBER COUPLING 🔍 GRATING 🔍 USE CASE 🔍 PHYSICAL OPTICS 🔍 ULTRASHORT PULSE

Displaying results 1 to 10 out of 18

1 2 ▶

Downloads
... Lens System When a linearly polarized Gaussian **beam** is focused by a high-NA aspheric lens, the PSF in ... zip 09.10.2019 Collimation of Astigmatic Diode Laser **Beam** by Objective Lens High-power laser diodes often ... MISC.0029, Collimation, Astigmatic Diode Laser **Beam**, Laser **Beam**, Objective Lens, Laser Systems,

Refractive optics
Refractive optics **Refractive beam shapers** enjoy widely extended use in many fields and for ... like the transformation, in laser optics, of Gaussian **beams** into other shapes more suited to the intended ... ability of VirtualLab Fusion to consider not just the **beam** shaping elements themselves, but also the physical ... are just some possibilities when it comes to

Testimonials
... Thomas Niedereichholz "Novel light fields and **beam** profiles such as top-hat, multipot generation as well as LG-/Airy-/Bessel **beams** are becoming increasingly important. They are also ... year, and especially the design of diffractive and **refractive beam shapers** has never

Global Search – Operators

- In order to get results which exactly match the searched-for word sequence, use **Quotation Marks**. If you put several words between quotation marks, you will get only results where these words appear in that exact same order.
- Example:
 - If you search for “**Refractive Beam Shapers**”, only search results where those three words appear in that exact sequence will appear. With this restriction, the scope of results shown is narrower.

The screenshot shows a search interface with a search bar containing the text "REFRACTIVE BEAM SHAPERS" and a magnifying glass icon. Below the search bar, there are several filter buttons: "FIBER COUPLING", "GRATING", "USE CASE", "PHYSICAL OPTICS", and "ULTRASHORT PULSE". Below the filters, it says "Displaying results 1 to 5 out of 5". The search results are displayed in a list format with the following items:

- Refractive optics**
Refractive optics **Refractive beam shapers** enjoy widely extended use in many fields and for numerous applications, like the transformation, in laser optics, of Gaussian beams into other ...
- Testimonials**
... Lédl, Pavel Psota „We have been using the LightTrans VirtualLab Diffractive Toolbox for one year, and especially the design of diffractive and **refractive beam shapers** has never been easier before. VirtualLab has become our daily bread.” Dr. Vit Lédl, Pavel Psota TOPTEC / Institute of Plasma Physics AS CR ...
- User's Manual for VirtualLab Fusion 7.6.0, page 1-88g**
.....208 19.1.8 Merit Functions for **Refractive Beam Shapers**
.....209 ... formula is given in Sec. 142.2.6. 19.1.8 Merit Functions for **Refractive Beam Shapers** Five different merit functions can be used for analysis and ...
Diffractive Beam Shaper Opens a session editor for the design of
- Light Shaping**
... wavefront error, and aberrations. Selected Topics Expand the boxes below and/or click on the links for more detailed info. Refractive optics **Refractive beam shapers** enjoy widely extended use in many fields and for numerous applications, like the transformation, in laser

Global Search – Operators

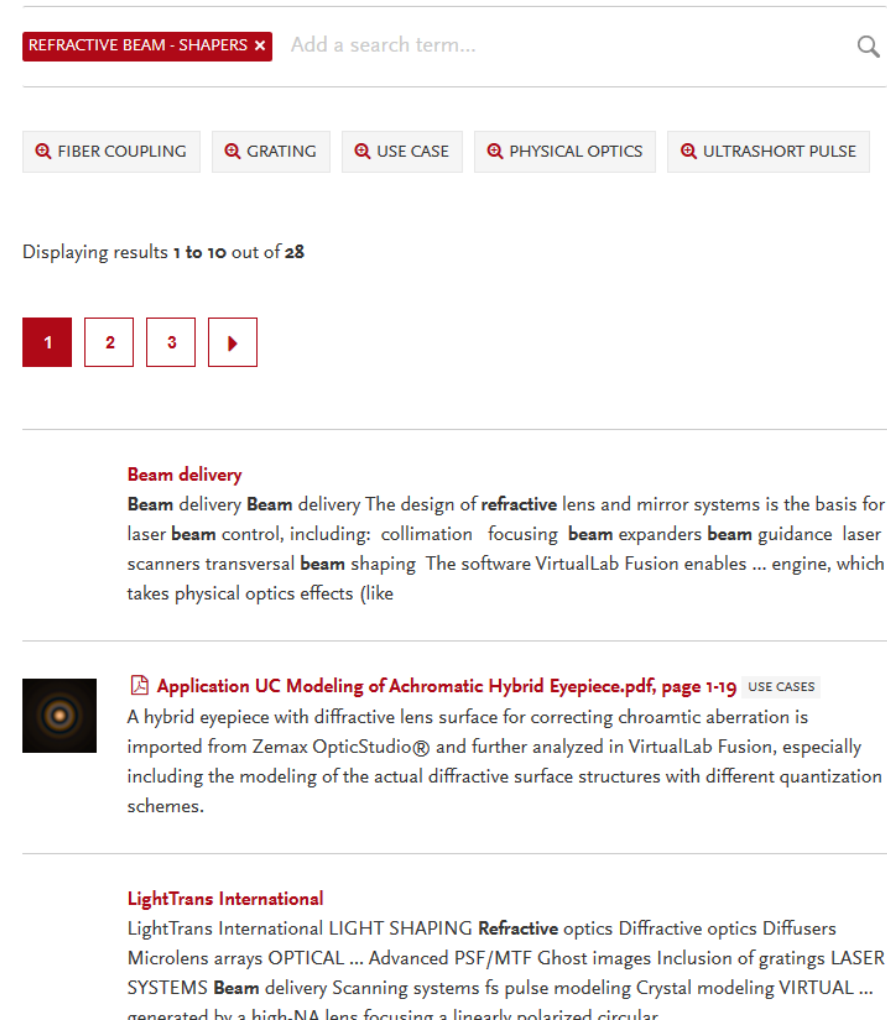
- A plus sign between two words is interpreted like a **space**, and the results of the search are the same as if the plus sign had been a space.
- Example:
 - If you search for *refractive + beam + shapers*, you will get the same results as searching just for **Refractive Beam Shapers**.
- Note: You need to use a space after every word / sign.

The screenshot shows a search interface with a search bar containing the text "REFRACTIVE + BEAM + SHAPERS" and a magnifying glass icon. Below the search bar, there are five filter buttons: "FIBER COUPLING", "GRATING", "USE CASE", "PHYSICAL OPTICS", and "ULTRASHORT PULSE". Below the filters, it says "Displaying results 1 to 10 out of 18". There are three navigation buttons: a red button with "1", a white button with "2", and a white button with a right arrow. Below the navigation buttons, there are three sections of results:


- Downloads**: ... Lens System When a linearly polarized Gaussian **beam** is focused by a high-NA aspheric lens, the PSF in ... zip 09.10.2019 Collimation of Astigmatic Diode Laser **Beam** by Objective Lens High-power laser diodes often ... MISC.0029, Collimation, Astigmatic Diode Laser **Beam**, Laser **Beam**, Objective Lens, Laser Systems,
- Refractive optics**: **Refractive optics** **Refractive beam shapers** enjoy widely extended use in many fields and for ... like the transformation, in laser optics, of Gaussian **beams** into other shapes more suited to the intended ... ability of VirtualLab Fusion to consider not just the **beam** shaping elements themselves, but also the physical ... are just some possibilities when it comes to
- Testimonials**: ... Thomas Niedereichholz "Novel light fields and **beam** profiles such as top-hat, multipot generation as well as LG-/Airy-/Bessel **beams** are becoming increasingly important. They are also ... year, and especially the design of diffractive and **refractive beam shapers** has never

Global Search – Operators

- A minus sign between two words excludes from the search the word following the minus sign.
- Example:
 - If you search for *refractive beam - shapers*, you will only get results which include the terms *refractive* and *beam*, but which do not contain **Shapers**.
- Note: You need to use a space after every word / sign.



The screenshot shows a search interface with a search bar at the top containing the text "REFRACTIVE BEAM - SHAPERS" and a search icon. Below the search bar, there are several filter buttons: "FIBER COUPLING", "GRATING", "USE CASE", "PHYSICAL OPTICS", and "ULTRASHORT PULSE". The interface indicates "Displaying results 1 to 10 out of 28". Below this, there are navigation buttons for page 1 (highlighted), 2, 3, and a right arrow. The search results are listed below:

- Beam delivery**
Beam delivery The design of refractive lens and mirror systems is the basis for laser beam control, including: collimation focusing beam expanders beam guidance laser scanners transversal beam shaping The software VirtualLab Fusion enables ... engine, which takes physical optics effects (like
-  **Application UC Modeling of Achromatic Hybrid Eyepiece.pdf, page 1-19** USE CASES
A hybrid eyepiece with diffractive lens surface for correcting chromatic aberration is imported from Zemax OpticStudio® and further analyzed in VirtualLab Fusion, especially including the modeling of the actual diffractive surface structures with different quantization schemes.
- LightTrans International**
LightTrans International LIGHT SHAPING Refractive optics Diffractive optics Diffusers Microlens arrays OPTICAL ... Advanced PSF/MTF Ghost images Inclusion of gratings LASER SYSTEMS Beam delivery Scanning systems fs pulse modeling Crystal modeling VIRTUAL ... generated by a high-NA lens focusing a linearly polarized circular

Global Search – Operators

- You can combine operators as you wish.
- Example:
 - If you would like to search for the topic ***Refractive Beam***, but you are not interested in events, you have several possibilities:
 - *refractive beam - exhibition*
 - *refractive beam + use case*
 - “*refractive beam*” + “*use case*”

Global Search – Operators

- You can combine operators as you wish.
- Task:
 - Try to find results for trainings which were not held in the USA. Or maybe you would like to get a list of all introduction trainings, but there shouldn't be any newsletters listed.

Global Search – Operators

- You can combine operators as you wish.
- Task:
 - Try to find results for trainings which were not held in the USA. Or maybe you would like to get a list of all introduction trainings, but there shouldn't be any newsletters listed.
- Solution:
 - You should type in the following (the order is not important):
 - Introduction + training – usa – newsletter
 - Instead of newsletter the word news works as well.

Global Search – Results Ranking

- The search results are ranked according to the following hierarchy:
 - Title
 - Meta data (e.g. presearches)
 - Content
 - Container type (if a page has a container type, e.g. use case, this result will be shown at the top)
 - Date

Global Search – Forwarding Results Page

- If you would like to forward a specific search results page, you need to create a specific link. Unfortunately, you cannot just copy the URL.
- The link will be the following:
 - https://www.lightrans.com/search.html?tx_indexedsearch_pi2%5Baction%5D=search&tx_indexedsearch_pi2%5Bcontroller%5D=Search&tx_indexedsearch_pi2%5Bsearch%5D%5Bsword%5D=
- At the end of the link you need to include your search terms.
- Example:
 - If you would like to forward the search results page of the task from slide 9, the link will look as follows (search terms highlighted in yellow):
 - https://www.lightrans.com/search.html?tx_indexedsearch_pi2%5Baction%5D=search&tx_indexedsearch_pi2%5Bcontroller%5D=Search&tx_indexedsearch_pi2%5Bsearch%5D%5Bsword%5D=Introduction training - usa - newsletter

Download Search

- You can reach the search via menu (Resources > Downloads).
- Only the documents which are listed in the **Download Page** will be searched. The search algorithm is based on an older paradigm, although we plan to update it!

Download Search

- If you search for more than one word, you will only get results where that exact sequence of words appears (similar to the search with quotation marks in the global search).
- The above means that you should search for single words separated by commas if you would like your search results to be more general.
- The headline of a webpage is not included in the search, but the page title and the metadata are.
- The listing of the results appears according to container type and, for each container type, the results are listed alphabetically.
- Operators do not work in the Download Search.