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HOLO/OR Diffractive Beam Shapers



- Shape Gaussian Beams to Top-Hat Profile
- Square Output Shape with Uniform Intensity
- Designs for 532nm Nd:YAG Lasers
- Compatible with Single Mode Beams

Common Specifications

Physical & Mechanical Properties

| | |
|-----------------|-----------|
| Thickness (mm): | 3.00 ±0.1 |
|-----------------|-----------|

Optical Properties

| | |
|----------|----------------------|
| Coating: | Laser V-Coat (532nm) |
|----------|----------------------|

| | |
|--------------------------------|-----|
| Design Wavelength DWL (nm): | 532 |
|--------------------------------|-----|

| | |
|------------|---|
| Substrate: | Fused Silica (Corning 7980) |
|------------|---|

| | |
|---------------|--------|
| Output Shape: | Square |
|---------------|--------|

| | |
|---------------------------------|---|
| Damage Threshold, Reference: | See Link for More Details |
|---------------------------------|---|

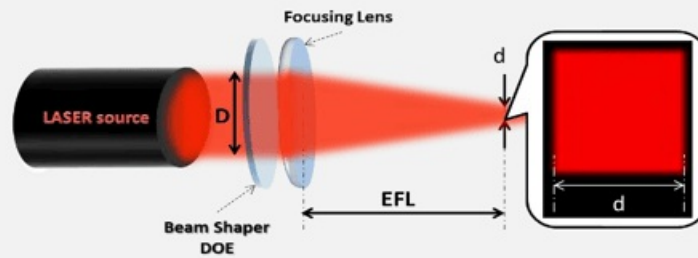
Technical Information

OPERATION PRINCIPLE

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A Top Hat (TH) Beam Shaper is an optical element, mainly based on diffractive technology (Diffractive Optical Element - DOE), and used to transform a Gaussian (TEM00) incident laser beam into a uniform-intensity spot of either round, rectangular, square, line or other custom well defined shapes. The most canonic set-up in the Beam Shaper application consists of a laser, a Beam Shaper element, a focusing optics and a surface to be treated. A typical Set Up with Top Hat beam is shown in fig.1 below.

Figure 1: Typical Set Up



Each beam shaper is designed for use with a specific set of optical system parameters:

- Wavelength
- Input Beam Size (D)
- Output Spot Size (d)

Note: using values of these parameters that are outside of the recommended narrow tolerances will degrade the performance of the Top Hat Beam Shaper element, and possibly render it useless for the application.

Products

| Title | Stock Number | Price | Buy |
|--|-------------------------|-----------|----------|
| 532nm, 25.4mm Dia., Top-Hat Diffractive Beam Shaper | #14-680 | €4.725,00 | 3-4 days |
| 532nm, 20mm Dia., Stable Top-Hat Diffractive Beam Shaper | #14-679 | €2.490,00 | 3-4 days |



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