



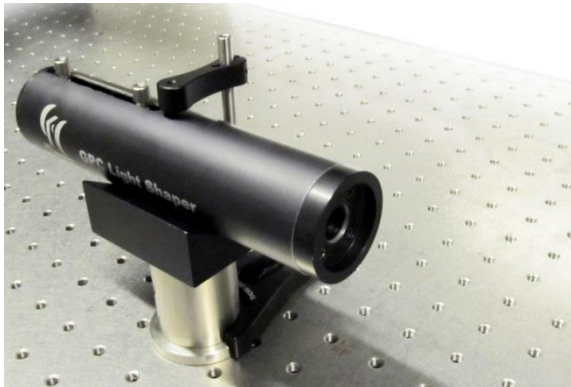
GPC Light Shaper for $\lambda = 1070\text{nm}$

Efficiently illuminate your SLM

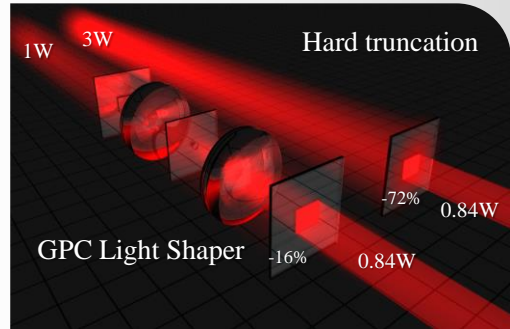
Preliminary Datasheet

Phase-only spatial light modulators (SLMs) are indispensable tools for shaping light for research or industrial applications. However, the usual practice of truncating the illumination for SLMs wastes a large amount of the input laser power. The GPC Light Shaper solves this problem by efficiently reshaping the illumination to match the SLM's rectangular area.

Specifications	
Input beam diameter ($1/e^2$)	1mm
Input aperture	$\varnothing 8.1\text{mm}$
Design wavelength	1070nm
Max input power	10W
Efficiency	>80%
Intensity gain	$\sim 3\text{x}$
Energy savings	>90%
Output beam size:	$\varnothing 0.4\text{mm}$
with 20x beam expander:	$\varnothing 8\text{mm}$
Output aperture	$\varnothing 25.4\text{mm}$
Body length*	17cm
with 20x beam expander:	36cm
Body diameter	40mm

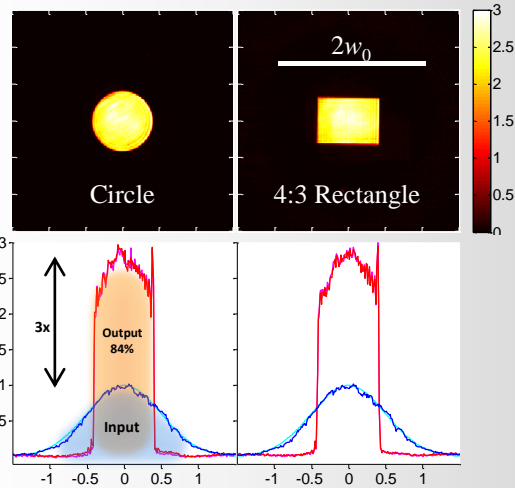


GPC Light Shaper (without beam expander).



Speckle-free shaped illumination

- **Circle:** maximizes light through objective's back aperture
- **Rectangle:** maximizes SLM utilization



Efficiency

Ratio between output and input energy

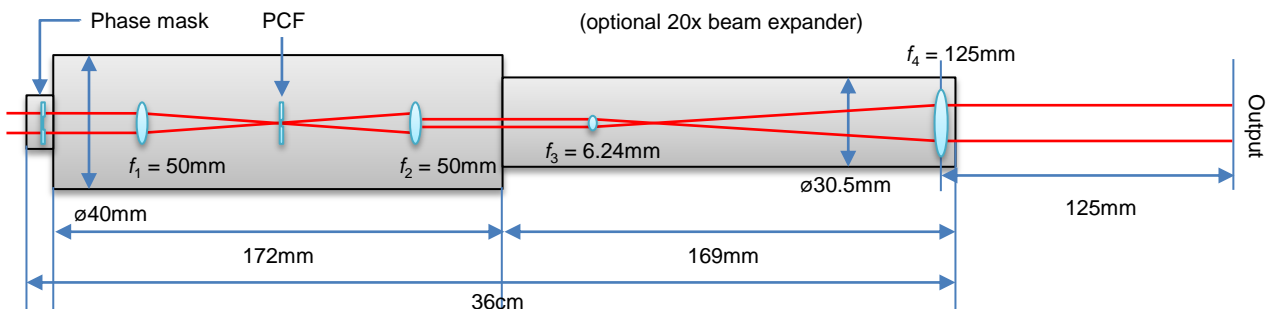
Intensity gain

Ratio between output and Input peak intensity

Energy savings

Energy saved compared to a hard truncated beam giving the same output.

Dimensions*



*Final dimensions of the GPC Light Shaper may change slightly.