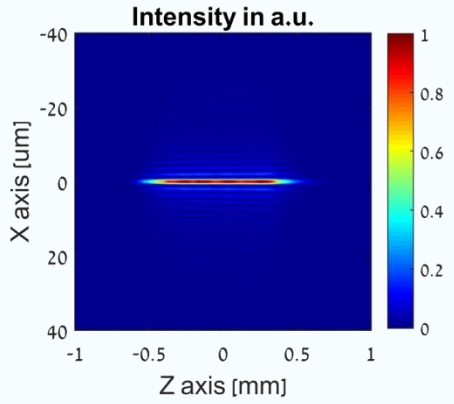


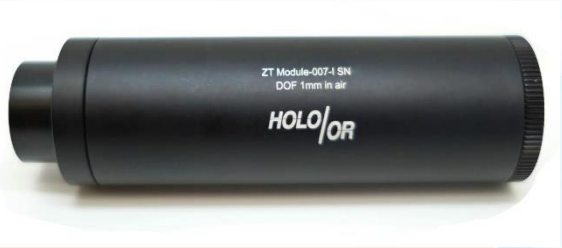
DeepCleave™ Module

The DeepCleave™ Module is specially designed to offer a **complete optical solution for laser glass cutting** of thick glasses, with no need for external high NA objectives or other high cost optics.

Laser glass cutting with ultra-short IR pulses is fast becoming a key technique for the high throughput glass processing. Cutting of thick glasses (>500um) using this technique possess unique challenges, as the laser energy needs to be both focused to a tight spot and spread evenly in the glass depth.

To help our customers overcome this challenge, ***Holo/Or*** is proud to present DeepCleave™, a glass cutting optical module with tight focusing (<2um spot) over a large Depth of Focus (>1mm in air). The focused spot is equivalent to 0.35 objective NA and is ideally suited for glass cutting of thick glasses, such as flat panels.

This unique elongated focus optical element was developed in order to improve the laser glass cutting efficiency and is SM1 compatible to enable easy integration into your laser machine.



SPECIFICATIONS RANGE

Wavelengths	1030nm, 1064nm, others by request		
Beam Mode	Single Mode M^2<1.3		
Optical elements Material	Fused Silica		
Coating	All optical elements are AR coated		
Models	**Standard**	**Extended Working Distance**	**Extended Working Distance ++**
Input Beam Diameter (exp^{-2})	6mm (+-10%)	8mm (+-10%)	10mm (+-10%)
Depth of Focus in Air [mm]	0.25 to 3, single fixed value per module		
Waist Diameter (exp^{-2})	1.8 [um]		
Working Distance [mm]	7.4	15.5	23.7
Efficiency	>93%		
Dimensions [mm]	30.5 diameter x106 [mm] length	30.5 diameter x206.2 [mm] length	30.5 diameter x307.8 [mm] length
Mounting Thread	Input SM1	Input SM1 External/ output SM1 Internal (for protective window)	

Tel +972-8-9409687, www.holoor.co.il, holoor@holoor.co.il

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