

High-power Laser Beam Shaper

Features

- › Multiple laser input beam shaping & combining
- › Tailored beam shape
- › High power handling: up to 16 kW CW
- › OEM (optical core) or standalone versions (complete system)
- › Focus shift improvement

Applications

- › Laser Beam Welding
- › Laser Cutting
- › Additive Manufacturing
- › Heat treatment

Description

CANUNDA-HP is an efficient high-power beam shaper and combiner platform based on Cailabs patented light manipulation technology of **Multi-Plane Light Conversion*** (MPLC).

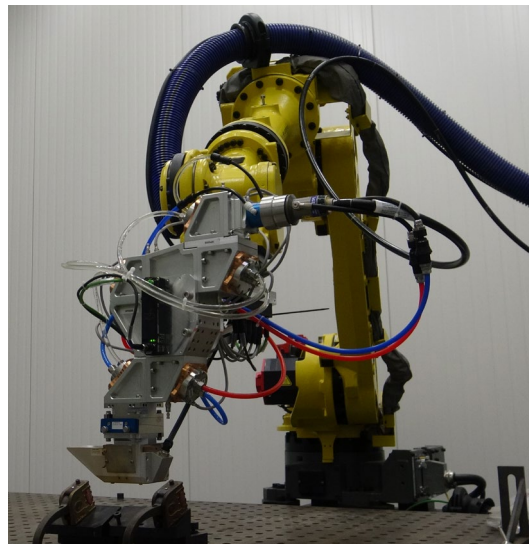
It reshapes and combines **multiple laser beams** from either **singlemode** or **multimode** lasers creating tailored and adaptable intensity patterns with an **optimal beam quality**.

CANUNDA-HP is particularly suited to highly multimode laser beam shaping as well as singlemode laser non coherent combining with total achievable powers of **several kilowatts** of optical power.

Tailored and adaptable beam shapes are a key driver in high-power laser material processing quality and throughput improvement.

Use cases

Laser Beam Welding Platform compatible with Trumpf 16kW laser



General specifications

All parameters given at 25 °C operating temperature and 1070 nm operating wavelength unless otherwise stated.

PARAMETER	MIN.	TYP.	MAX.	OBSERVATIONS
General				
Operating wavelength	1000 nm		1100 nm	Other wavelength ranges available
Conversion efficiency	95 %	98 %		
Total transmission	90 %	95 %		
Input beams				
Number		1 or 2		
Type	Fibered input with QBH connector			Collimated free-space input beam possible, with optional collimation module
Diameter if free-space collimated input beam	2.0 mm		10 mm	
Operating regime	CW			
Total power			16 kW	
Spatial mode	Multimode			
Output beam				
Type	Collimated beam			Diverging and converging possible
Diameter	0.5 mm		100 mm	Depends on input beam type
Shape	Almost freeform			Shoe Horse, Donut, Top-Hat...
Mechanics and environment				
Package dimensions	On demand			
Ambient operating temperature	+15 °C	+25 °C	+50 °C	Non condensing
Storage temperature	0 °C		+60 °C	Non condensing
Relative humidity	10 %		65 %	
Watercooling		2 L/min		
Clean-air input	ISO-5 Clean Air Input (N2)			At input water temperature
Active layer safety enclosure	Optional			

System performance may be seen at our partner **Application Laboratory Institut Maupertuis**.