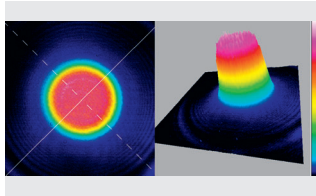


Flat top converter FTC



Flat top converter unit is all in one motorised solution for a Gaussian beam transformation to a Flat-Top (Top Hat) beam. Any focusing element is needed. The beam profile remains Flat-Top shape along optical axis. The device consist of quartz wave-plate, space-variant wave-plate and a high contrast polariser. The FTC is produced in the UV, visible and NIR spectral ranges, from 250 nm to 2000 nm.

All optical components of the FTC are made for high LIDT and provide stable and reliable performance even using them with high power lasers in industrial applications. A secondary laser beam from Flat top converter unit can be rejected to an external beam dump. The beam dump is used for avoiding any thermal effects or stress in the housing of the FTC device.

Main features

- Quick change between Gaussian and Flat-top beam
- The beam profile remains Flat-Top shape along optical axis
- Integrated controller
- Designed according your laser specs.
- Clear aperture up to 15 mm
- Quick switching time - 0.2 sec
- High damage threshold up to 10J/cm<sup>2</sup> (10 ns @ 1064 nm)
- Conversion efficiency up to 70% (white on Flat-Top mode)

Application examples

- Precise laser micromachining
- Life sciences
- Research

Standard specifications

FLAT TOP CONVERTER FTC SPECIFICATIONS	
Input and output clear aperture	ndc on waveplate
Conversion efficiency and transmission	Up to 70% (Flat-Top beam mode) No loss (Flat-Top Gaussian beam mode)
LIDT coating	>10 J/cm <sup>2</sup> (10 ns @ 1064 nm)
Controller	USB and RS232
Control interface	External
Dimensions (H x W x L)	105 x 51 x 43.5 mm FTC 60 x 47 x 43.5 mm FTC with beam dump (BC-d)

\*Custom design available

Standard products

MODEL	APERTURE	WAVELENGTH	ADJUSTMENT	TYPE	CONTROL INTERFACE	TYPICAL APPLICATION	SKU
FTC	ø 6 mm	1030 nm	Motorised	DDE	USB or RS232	Flat top converter	19750
	ø 6 mm	515 nm	Motorised	DDE	USB or RS232	Flat top converter	19751
	ø 3 mm	1030 nm	Motorised	DDE	USB or RS232	Flat top converter	19752
	ø 3 mm	515 nm	Motorised	DDE	USB or RS232	Flat top converter	19753
	ø 6 mm	1064 nm	Motorised	DDE	USB or RS232	Flat top converter	19754
	ø 3 mm	1064 nm	Motorised	DDE	USB or RS232	Flat top converter	19755
	ø 6 mm	532 nm	Motorised	DDE	USB or RS232	Flat top converter	19756
	ø 3 mm	532 nm	Motorised	DDE	USB or RS232	Flat top converter	19757



www.phototechnica.co.jp  
フォトテクニカ株式会社

〒336-0017 埼玉県さいたま市南区南浦和 1-2-17  
TEL: 048-871-0067 FAX: 048-871-0068  
e-mail: voc@phototechnica.co.jp

Motorized polarization rotator MRO



Rotator (MRO) is a compact motorised device for laser polarisation control. The MRO is produced in the UV, visible and NIR spectral ranges, from 250 nm to 2000 nm. The device has external controller.

All optical components of the MRO are made for high LIDT and provide stable and reliable performance even using them with high power lasers in industrial applications.

Main features

- Compact design
- High resolution - 177543 μsteps in 360 deg rotation
- High accuracy - ±10 μsteps accuracy (± 0.02 deg)
- Clear aperture - 18 mm
- Fast adjustment - less than 0.2 sec (0 to 45 deg)

Application examples

- Flat top ir custom laser beam profile shaping
- Laser micromachining
- Biophotonics and microscopy

Standard specifications

SPECIFICATIONS	
Travel range	Y axis: 8 mm (±4 mm)
	Z axis: 4 mm (±2 mm)
Yaw: ±5.5 deg	Pitch: ±2.5 deg
	Resolution
Z axis: 4 mm	Yaw: 0.018 deg/div
	Pitch: 0.018 deg/div
Maximum load	Mounted horizontally: 1.5 kg
	Mounted vertically: 0.4 kg
Suitable optics	ø25.4 mm (1" x 1/8" in thickness)

Standard products

CLEAR APERTURE	CONTROL INTERFACE	WAVEPLATE	RETARDATION	LIDT	SKU	
18 mm	USB or RS232	1064 nm	L/2	10 J/cm <sup>2</sup> (10 ns@1064 nm)	19706	
		1030 nm	L/2	10 J/cm <sup>2</sup> (10 ns@1030 nm)	19707	
		532 nm	L/2	5 J/cm <sup>2</sup> (10 ns@532 nm)	19708	
		515 nm	L/2	5 J/cm <sup>2</sup> (10 ns@515 nm)	19709	
		355 nm	L/2	3 J/cm <sup>2</sup> (10 ns@355 nm)	19710	
		343 nm	L/2	3 J/cm <sup>2</sup> (10 ns@343 nm)	19701	
		266 nm	L/2	2 J/cm <sup>2</sup> (10 ns@266 nm)	19702	
		257nm	L/2	2 J/cm <sup>2</sup> (10 ns@257 nm)	19706	
		1064 nm	L/L	10 J/cm <sup>2</sup> (10 ns@1064 nm)	19708	
		1030 nm	L/L	10 J/cm <sup>2</sup> (10 ns@1030 nm)	19709	
		532 nm	L/L	5 J/cm <sup>2</sup> (10 ns@532 nm)	19709	
		515 nm	L/L	5 J/cm <sup>2</sup> (10 ns@515 nm)	19476	
		355 nm	L/L	3 J/cm <sup>2</sup> (10 ns@355 nm)	19527	
		343 nm	L/L	3 J/cm <sup>2</sup> (10 ns@343 nm)	19477	
		266 nm	L/L	2 J/cm <sup>2</sup> (10 ns@266 nm)	19711	
		257nm	L/L	2 J/cm <sup>2</sup> (10 ns@257 nm)	19710	
		without optics	None	None	None	19707



www.phototechnica.co.jp  
フォトテクニカ株式会社

〒336-0017 埼玉県さいたま市南区南浦和 1-2-17  
TEL: 048-871-0067 FAX: 048-871-0068  
e-mail: voc@phototechnica.co.jp