

Motorized laser power attenuators LPA



4Lasers designs and manufactures motorized laser power attenuators for laser power control. LPA could be produced for use in the UV, visible, and NIR spectral ranges from 250 nm to 2000 nm. These devices feature a large clear aperture dedicated for considerable beam application. All optical elements of these laser power attenuators are made for

high LIDT and provide a stable and reliable performance even when using them with high power lasers in industrial applications. Secondary laser beam from the laser power attenuator unit is rejected out through the output window to an external beam dump (optional) in order to avoid any thermal effects or stress in the housing of the LPA device. Exit laser beam has a 2,25 mm beam offset.

Main features

- Robust design
- Damage threshold up to 10J/cm² (10 ns @ 1064 nm)
- Adjustable polarizer angle ±2 deg
- Clear aperture 18 mm
- External controller included
- Intuitive software
- 175,543 steps in full rotation
- ±0.05 % laser power accuracy
- Adjustment time $\lt; 0.2 \text{ sec}$ (min to max)

Application examples

- Laser machining
- Research
- Laser power control and attenuation

Standard specifications

MOTORIZED LASER POWER ATTENUATOR SPECIFICATIONS	
Input and output clear aperture	18 mm
Dimensions (H x W x L)	98 x 26 x 74,5 mm 58 x 51,5 x 74,5 mm with beam dump
Control interface	USB and RS232
Controller	External

*Custom design available

Standard products

ATTENUATION RANGE	LIDT	WAVELENGTH	SKU
0.5 - 95 %	2 J/cm ² (10 ns @ 266 nm)	257 nm	9264
		266 nm	9267
0.2 - 94 %	3 J/cm ² (10 ns @ 355nm)	343 nm	9264
		355 nm	9263
0.1 - 98 %	5 J/cm ² (10 ns @ 532 nm)	515 nm	9262
		532 nm	9262
		10 J/cm ² (10 ns @ 1064 nm)	1030 nm
		1064 nm	9258

Accessories for laser power attenuators LPA

RECOMMENDED ACCESSORY	FOR BEAM HEIGHT OF	SKU
Flat mounting set	50 mm or 76 mm (2" or 3")	9343
Flat mounting set	73 - 125 mm (2.9" - 5.1")	9344
Dedicated beam dump with protective window	-	9345

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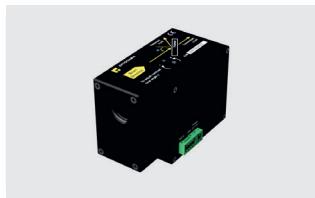
〒336-0017 埼玉県さいたま市南区南浦和 1-2-17
 TEL: 048-871-0067 FAX: 048-871-0068
 e-mail: voc@phototechnica.co.jp

sales@4Lasers.com

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4 LASERS

Advanced motorized laser power attenuators LPA-A



Advanced laser power attenuator LPA-A is a compact motorized device for laser power control with an integrated controller and absolute encoder. The LPA-A is produced in the UV, visible and NIR spectral ranges, from 250 nm to 2000 nm. This device is combined with the unique mechanical design which ensures repeatability and high stability of performance.

All optical components of the LPA-A are made for high LIDT and provide a stable and reliable performance even when using them with high power lasers in industrial applications. A secondary laser beam from the laser power attenuator 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 LPA-A device.

Main features

- Integrated controller
- Absolute encoder - no homing required
- High accuracy - ±0.004 deg (less than ±0.01 % of laser power)
- Resolution - 0.002 deg, 7.4 arcsec, 0.035 mrad
- Fast adjustment - less than 0.2 sec (min to max)
- High damage threshold: up to 10J/cm² (10 ns @ 1064 nm)
- Adjustable polarizer angle

Application examples

- Precise laser micromachining
- Laser power stabilization
- Research

Standard specifications

ADVANCED VARIABLE MOTORIZED LASER POWER ATTENUATOR SPECIFICATIONS	
Input and output clear aperture	18 mm
Controller	Integrated
Dimensions (H x W x L)	86 x 47 x 58 mm
Control interface	USB or RS232

Standard products

ATTENUATION RANGE	LIDT	WAVELENGTH	SKU
0.5 - 95 %	2 J/cm ² (10 ns @ 266 nm)	257 nm	11809
		266 nm	11810
0.2 - 94 %	3 J/cm ² (10 ns @ 355nm)	343 nm	14898
		355 nm	14898
0.1 - 98 %	5 J/cm ² (10 ns @ 532 nm)	515 nm	11807
		532 nm	11805
		10 J/cm ² (10 ns @ 1064 nm)	1030 nm
		1064 nm	11708

Accessories for laser power attenuators LPA-A

MOUNTING OPTION	FOR BEAM HEIGHT OF	SKU
Flat mounting set	76.2 - 100 mm (3" - 4")	9344
Flat mounting set	57 - 85 mm (2.2" - 3.4")	9347
Dedicated beam dump with protective window	-	9345

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 TEL: 048-871-0067 FAX: 048-871-0068
 e-mail: voc@phototechnica.co.jp

sales@4Lasers.com

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4 LASERS

Manual laser power attenuators LPA-M



4Lasers designs and manufactures industrial grade manual control laser power attenuators for use in the UV, visible, and NIR spectral ranges, from 240 nm to 2000 nm.

All optical elements of these laser power attenuators are made for high LIDT and provide a stable and reliable performance even when using them with high power lasers in industrial applications.

Main features

- Industrial robust design
- Wide wavelength adoption 240 nm - 2 μm
- Cost effective
- Suitable for high power industrial lasers

Application examples

- Laser micromachining
- Laser power attenuation
- Research

Standard specifications

VARIABLE MANUAL LASER POWER ATTENUATOR SPECIFICATIONS	
Adjustment	Manual
Input and output clear aperture	8 mm
Dimensions (H x W x L)	57 x 72 x 100 mm

*Custom design available

Standard products

ATTENUATION RANGE	LIDT	WAVELENGTH	SKU
0.01 - 70%	100 MWe/cm ² 10 ns @ 1064 nm	200-300 nm	18751
		300-2000 nm	18783
0.5 - 95 %	2 J/cm ² (10 ns @ 266 nm)	257 nm	7894
		266 nm	7897
0.2 - 94 %	3 J/cm ² (10 ns @ 355nm)	343 nm	7893
		355 nm	7884
0.1 - 98 %	5 J/cm ² (10 ns @ 532 nm)	515 nm	7673
		532 nm	7672
		10 J/cm ² (10 ns @ 1064 nm)	1030 nm
		1064 nm	7670

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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

sales@4Lasers.com

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