



Motorized laser power attenuators LPA

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 <0,2 sec (min to max)

Application examples

- Laser machining
- Research
- Laser power control and attenuation

Optogama 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.

Standard specifications

MOTORIZED LASER POWER ATTENUATOR SPECIFICATIONS	
Input and output clear aperture	18 mm
Dimensions (H x W x L)	58 x 36 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	9326
		266 nm	9327
0,2 - 96 %	3 J/cm ² (10 ns @ 355nm)	343 nm	9264
		355 nm	9263
		515 nm	9262
0,1 - 98 %	5 J/cm ² (10 ns @ 532 nm)	532 nm	9260
		1030 nm	9259
		1064 nm	9258

Accessories for laser power attenuators LPA

RECOMMENDED ACCESSORY	FOR BEAM HEIGHT OF	SKU
Post mounting set	50 mm or 76 mm (2" or 3")	9343
Post mounting set	73 - 125 mm (2,9" - 5")	9344
Dedicated beam dump with protective window	-	9345



Advanced motorized laser power attenuators LPA-A

Main features

- Integrated controller
- Absolute encoder - no homing required
- High accuracy - $\pm 0,004$ deg (less than $\pm 0,01$ % 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 $10\text{J}/\text{cm}^2$ (10 ns @ 1064 nm)
- Adjustable polarizer angle

Application examples

- Precise laser micromachining
- Laser power control and attenuation
- Research

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.

Standard specifications

ADVANCED VARIABLE MOTORIZED LASER POWER ATTENUATOR SPECIFICATIONS	
Input and output clear aperture	15 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
	5 J/cm ² (10 ns @ 532 nm)	515+1030 nm	14898
0.2 - 96 %	3 J/cm ² (10 ns @ 355nm)	343 nm	11808
		355 nm	11805
		515 nm	11807
0.1 - 98 %	5 J/cm ² (10 ns @ 532 nm)	532 nm	11806
	10 J/cm ² (10 ns @ 1064 nm)	1030 nm	11804
		1064 nm	11708

Accessories for laser power attenuators LPA-A

MOUNTING OPTION	FOR BEAM HEIGHT OF	SKU
Post mounting set	76.2 - 100 mm (3" - 4")	9346
Post mounting set	57 - 65 mm (2.2" - 2.6")	9347
Dedicated beam dump with protective window	-	9345


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