MOTORIZED ATTENUATORS & PULSE ENERGY MONITORS

ATTENUATOR FEATURES

Drop-in attachable to the laser body attenuators for 1st, 2nd, 3rd, 4th or 5th harmonics of Nd:YAG or Nd:YLF lasers

Up to 98% maximum transmission

Precise transmission control by stepper motor in microstepping mode (12800 steps/rotation)

Transmission adjustment resolution <0.15%

Remote control via common with laser Ethernet interface

Optional stand-alone version for mounting on optical table

Optional side port transforms attenuator to variable beam splitter

ATTENUATOR SPECIFICATIONS ¹⁾ ATTENUATORS MODEL AT1 AT3 AT4 AT5 Design wavelength 1064 nm 532 nm 355 nm 266 nm 213 nm Typical max transmission²⁾ 98 % 95 % 90 % 75 % 65 % Typical min transmission²⁾ 1% 0.5 % Output polarization 3) linear, horizontal linear, rotating Resolution < 0.15 % $\pm 0.5\%$ Accuracy Clear aperture $6 \, \mathrm{mm}$ Stepper motor 12800 steps / 360 deg, 4-phase, 1A Dimensions (W×L×H) $42 \times 54 \times 77 \text{ mm}^3$ Weight <0.4 kg

PULSE ENERGY MONITOR SPECIFICATIONS 1)

MODEL	PULSE ENERGY MONITOR						
	EM1	EM2	EM3	EM4	EM5	EM/BB	
Design wavelength	1064 nm	532 nm	355 nm	266 nm	213 nm	210 – 2600 nm	
Insertion loss		<2 %					
Detector type		Photodiode					
Resolution		12 bit					
Accuracy		±3 %					
Clear aperture		6 mm					
Dimensions (W×L×H)		$24 \times 28 \times 48 \text{ mm}^3$					
Weight		<0.1 kg					

Due to continuous improvements all specifications are subject to change. The parameters marked typical are not specifications. They are indications of typical performance and will vary with each unit we manufacture.

- ²⁾ Depends on polarization state of laser. Depolarization of laser beam might affect values provided here.
 ³⁾ Encourse and the colorization three
- ³⁾ For some models polarization plane depends on angular position of polarizer.

PULSE ENERGY MONITOR FEATURES

Drop-in laser pulse energy or power monitoring (up to **100 samples/second**)

Less than 2% insertion losses

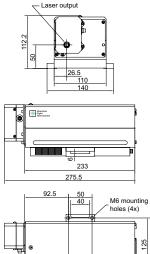
12-bit resolution

Average pulse energy and pulse-to-pulse stability calculation

Sample&Hold analog output from BNC socket on the rear panel of laser controller

Digital readout trough laser Ethernet interface

Optional broadband version for 210 - 2300 nm range



Dimensions (in mm) of Q1 laser with attenuator attached



Attenuator and pulse energy monitor attached to the laser head



Quantum Light Instruments Quantum Light Instruments Ltd. Mokslininku 6A LT-08412, Vilnius, Lithuania Phone: +370 5 250 3717 Fax: +370 5 250 3716 Email: sales@qlinstruments.com