

## CompactPowerMonitor

Laser beam power is one of the most important laser parameter and essential for laser beam processing performance.

Lack of accuracy will not be acceptable. The PRIMES CompactPowerMonitor is measuring the laser power precisely, even for modern beam sources in the multi-kW-range

Due to the integrated display the device can be operated without an additional PC. USB, analogue-out and a safety interlock allows a further integration of the system.

All the water cooled absorbers are designed for long term operation, even with deionized water. Together with the fiber adapter a very high operation safety can be ensured.

### CPM F-10

Highlighting the CPM-F, which provide a large flat absorber, light weight and ultra low rate of back reflection. The calorimetric principle allows various beam dimensions and beam positioning on the absorber, achieving precise diagnostic results always.



### CPM F-20

This „Big Brother“ was reduced in weight as well. The clear aperture of 135 mm allows power measurement far behind the focal plane or measurements of larger beam cross sections e.g. right after a telescope.



### CPM F-1

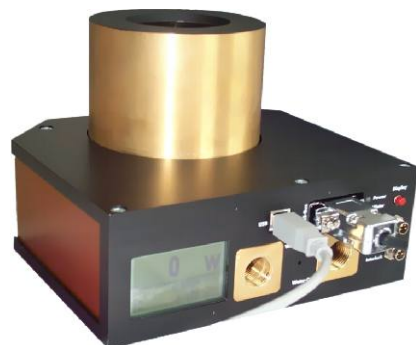
The CPM-1 is a calorimetric power meter operation within 0.1 up to 1.4 kW.

Mirroring the relationship to the model CPM-F the reduced all-over-dimensions allow power measurements even in smaller laser processing cells.



### CPM C-9

Extended weight but designed for higher power densities is the conical absorber of the CPM-C. It is equipped with a combination of a conical reflector and a cylindrical absorber.



Characteristic and operational area - customized solutions are possible.

Beam	Power	1mW	100 W	20 kW	MW	>MW	Device	Temporal resolution	Single pulse	ms	10 s	cw		
	Beam width	1 μm	10 μm	50 μm	3 mm	10 mm		70 mm	User	R&D	Laser Manufact.	System Manufact.	Service	Enduser
	Wave length	300 nm	800 nm	1100 nm	10,6 μm				Application	Stand alone	Stand alone and OEM	OEM		
	Pulse duration	fs	ps	ns	μs	ms		s	cw	Prize	low	middle	high	

**Technical Data**

	<b>CPM F-10</b>	<b>CPM C-9</b>	<b>CPM F-1</b>	<b>CPM F-20</b>
Power range [kW]:	0,5 - 10	0,5 - 9 kW	0,1 - 1,4	2,0 - 20,0
Power density [kW/cm <sup>2</sup> ]:	< 1	< 5	< 1	< 1
Wavelength [nm]:	800 - 1100	800 - 12000	800 - 1100	800 - 1100
Repeatability [%]:	± 1,5	± 1,5	± 1,5	± 1,5
Accuracy [%]:	± 3	± 3	± 3	± 3
Time constant [s]:	> 10	> 10	> 10	> 10
Flow rate [l/min]:	> 5	> 5	> 5	> 5
Clear aperture [mm]:	90	55	45	135
Dimensions [mm]: (H x W x D exc. connectors)	71x180x162	136 x180 x162	71x180x123	113x180x163
Weight [kg]:	2,9	4,8	0,9	4,8

All absorber types are water cooled and designed for endless operation even with deionized water.

**Options:**

- Safety transport and shipment box
- Adapter for direct fiber adaption (LLK-B, LLK-D, QBH)
- External display
- Different Interfaces

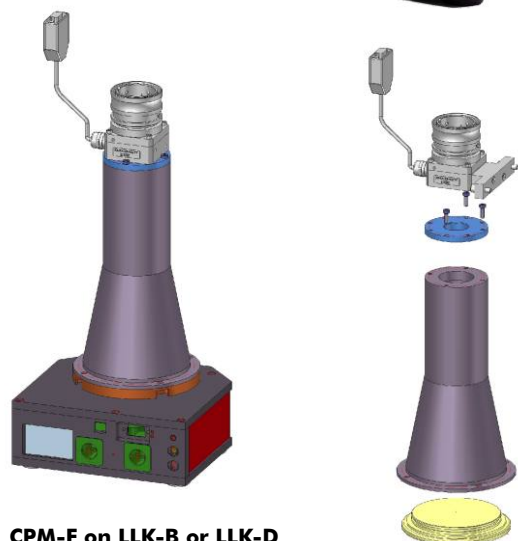
**Fiber adapter**

All available fiber adapters enable straight fiber connection to any PRIMES power meter.

For the CompactPowerMonitor CPM F-1, CPM F-10 and CPM F-20 fiber adapters are available for the fiber plugs LLK-B, LLK-D and QBH. Power measurements between fiber connector and focussing optics will be done in a safe environment.

Fiber adapters are also available for PowerMonitor 48 and EC-PowerMonitor.

**CPM F-1 with  
optional  
fiber adapter**



**CPM-F on LLK-B or LLK-D**