

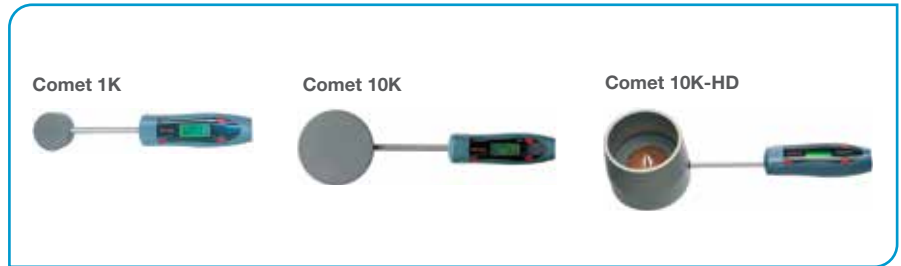
## 1.1.2.11 Short Exposure High Power Sensors

### 1.1.2.11.4 Comet Power Pucks

#### 20W to 10kW

##### Features

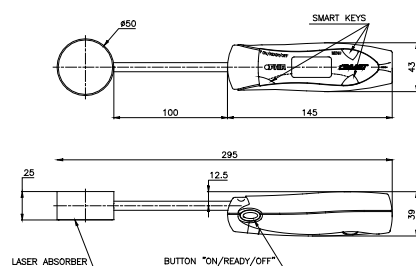
- Comet power pucks measure heat rise from 10s exposure to laser
- Accurate, built in temperature compensation algorithm
- Up to 10kW
- Up to 100mm apertures



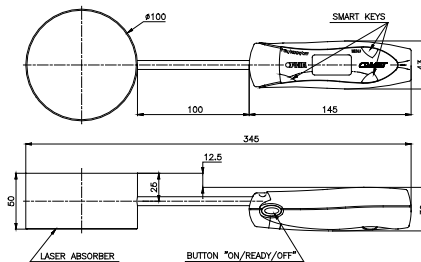
Model	Comet 1K <sup>(a)</sup>		Comet 10K <sup>(a)</sup>		Comet 10K-HD <sup>(a)</sup>	
Use	For powers to 1kW		For powers to 10kW		For high power density beams	
Absorber Type	Broadband		Broadband		Broadband with reflective cone beam spreader	
Spectral Range $\mu\text{m}$	0.2 - 20		0.98-1.07 and 10.6		0.98-1.07 and 10.6	
Aperture mm	$\varnothing 50\text{mm}$		$\varnothing 100\text{mm}$		$\varnothing 55\text{mm}$	
Power Mode						
Power Range	20W to 1kW		200W to 10kW		200W to 10kW	
Repeatability	$\pm 1\%$ for same initial temperature		$\pm 1\%$ for same initial temperature		$\pm 1\%$ for same initial temperature	
Maximum Average Power Density $\text{kW}/\text{cm}^2$	Power	Damage Threshold	Power	Damage Threshold	Power	Damage Threshold
					Beam dia <40	Beam dia >40
	100W	10	1kW	3.5	1kW	10
	200W	8	2kW	2.8	2kW	10
	300W	6	3kW	2.5	3kW	8
	500W	5	5kW	1.5	5kW	6
	1kW	4	10kW	1	10kW	4
Power Accuracy $\pm\%$	5		5		5	
Linearity with Power $\pm\%$	$\pm 2\% \pm 1\text{W}$ from 20W to 1kW		$\pm 2\%$ from 1kW to 10kW		$\pm 2\%$ from 1kW to 10kW	
Number of readings before probe must be cooled (for 25°C starting temp.)	100W	4	1kW	4	1kW	4
	300W	3	3kW	3	3kW	3
	400W	2	4kW	2	4kW	2
	1kW	1	10kW	1	10kW	1
Maximum Energy Density $\text{J}/\text{cm}^2$						
<100ns	0.3		0.3		1	
10 $\mu\text{s}$	0.8		0.8		3	
1ms	10		10		30	
10ms	50		50		150	
Time to Reading	Initial reading 10s after exposure, final reading 20s after exposure		Initial reading 20s after exposure, final reading 40s after exposure		Initial reading 30s after exposure, final reading 70s after exposure	
Temperature Compensation	Temperature compensated to give accurate readings independent of starting probe temperature					
Maximum Permitted Probe Temperature	70°C before measurement, 140°C after measurement					
Display	2x8 character LCD. Character height 5mm. CE Approved.					
Operation Mode	AUTO: Automatic measurement with laser set to 10s timed exposure. Unit senses temperature rise and measures automatically. MANUAL: User places probe in front of beam for 10s. Unit beeps to indicate start and stop measurement points. History: Stores last three readings. Calibration: Can be recalibrated by user.					
Battery	2 x AA. Lifetime in normal use approximately 1 year.					
Weight kg	0.3		1.2		1.2	
Compliance	CE, UKCA, China RoHS		CE, UKCA, China RoHS		CE, UKCA, China RoHS	
Version			V1		V2	
Part number	7Z02702		7Z02705		7Z02706	

Notes: (a) The Comet 1K, Comet 10K & Comet 10K-HD sensors are not under ISO/IEC 17025:2017 accreditation.

Comet 1K



Comet 10K



Comet 10K-HD

