1.1.2.7 High Power Thermal Sensors

1.1.2.7.5 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

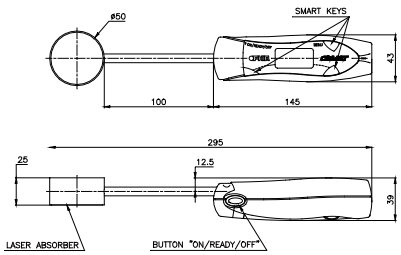
Comet 1K

Comet 10K

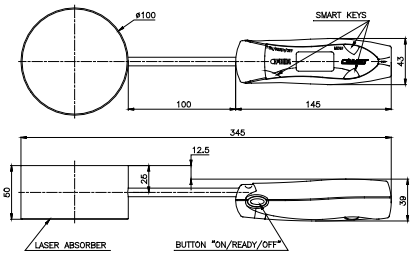
Comet 10K-HD

Model	Comet 1K		Comet 10K		Comet 10K-HD		
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 µm	0.2 - 20		1.06 and 10.6		1.06 and 10.6		
Aperture mm	Ø50mm		Ø100mm		Ø55mm		
Power Mode							
Power Range	20W to 1kW		200W to 10kW		200W to 10kW		
Repeatability			±1% for same initial temperature				
Maximum Average Power Density kW/cm²	Power	Damage Threshold	Power	Damage Threshold	Power	Damage Threshold	
						Beam dia <40	Beam dia >40
	100W	10	1kW	3.5	1kW	10	7
	200W	8	2kW	2.8	2kW	10	6
	300W	6	3kW	2.5	3kW	8	5
	500W	5	5kW	1.5	5kW	6	3
	1kW	4	10kW	1	10kW	4	2
Power Accuracy +/-%	5		5		5		
Linearity with Power +/-%	±2% ±1W from 20W to 1kW		±2% from 1kW to 10kW		±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 J/cm²							
<100ns	0.3		0.3		1		
10µs	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		
Version			V1		V2		
Part number	**7Z02702**		**7Z02705**		**7Z02706**		

Comet 1K



Comet 10K



Comet 10K-HD