

## Extended Area Black Body

### Wide Temperature Range

LBBCH offer a temperature range from  $-35^{\circ}\text{C}$  to  $50^{\circ}\text{C}$

### Large emissive area

LBBCH has the large emitting surface area precise temperature control with good uniformity. It is available in the customize sizes.

### High Emissivity

The LBBCH Exceptionally high emissivity of  $0.98 \pm 0.02$ . Extremely quick to reach various temperatures, i.e. heats up room temp to  $+50^{\circ}\text{C}$  in 15 minutes. This saves time and increases productivity.

### Accuracy and performance

The LBBCH is high stable unit that also provides excellent calibration accuracy with stability  $\pm 0.1^{\circ}\text{C}$  at  $50^{\circ}\text{C}$ .

### Easy to use

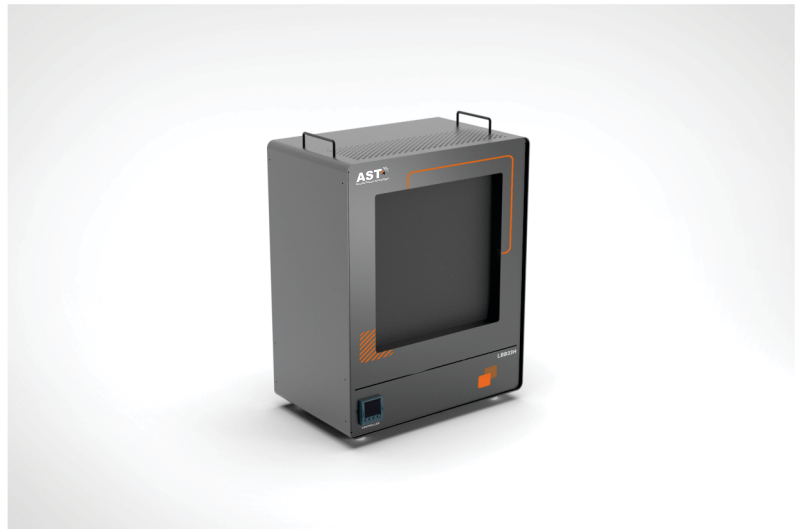
LBBCH has inbuilt PID controller or can be provided separately that shows real time display of the surface and set temperature

### Computer Interface

The communication port enables communication with selected LBBCH calibrators for automation calibration and documentation thus it made documentation easy. Remote control via Ethernet link, Rs232 or USB port.

## LBBCH #

### Low temperature Extended area black body



Extended area black body is defined by the large emitting surface area precise temperature control with good uniformity. AST make Blackbodies are state of the art, highly accurate and stable with different standard sizes and temperature ranges.

The LBBCH Series Extended Area black bodies are low temperature infrared reference sources operating either in absolute or differential mode.

This Black body series featuring the very high stability, they are particularly well adapted for the characterization and performance validation of a very wide range of IR Sensors, such as high resolution cameras for Thermography and long range thermal imagers. Essentially the black body emits a known amount of energy for an infinite number of wavelengths. This enables to draw the expected black body radiation curve for a given temperature. Temperature is accurately controlled by High accurate PID self tuning controller.

A recirculation chillers unit cools a black body to approximately the desire temperature and electronic control system and heaters unit assembly of thermoelectric coolers further control the black body surface temperature precisely and accurately to the desired set point.

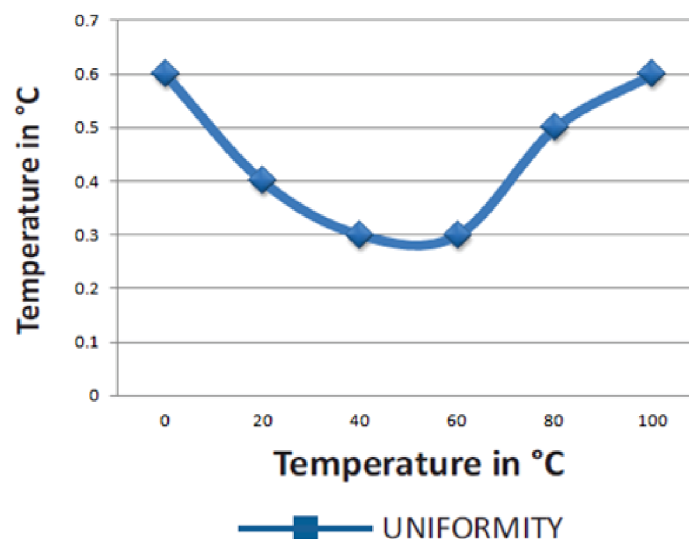
LBBCH includes all the components needed for operation : Black body, Chiller unit, Temperature controller.

## SPECIFICATIONS

Parameter	LBB11CH	LBB22CH	LBB33CH
Emissive area	100 x 100 mm <sup>2</sup>	200 x 200 mm <sup>2</sup>	300 x 300 mm <sup>2</sup>
Temperature range	0 to 100°C		
Emissive area uniformity (1)	±1% @(T-Tmax)		
Emissivity	0.98±0.02		
Stability	±0.01°C		
Temperature measurement Accuracy	±0.3°C		
Display resolution	0.01°C		
Method of control	Digital self tuned PID Controller		
Head dimensions W x H x D (mm <sup>3</sup> )	300 X 320 X 190 mm	550 x 550 x 260 mm	550 x 550 x 260 mm
Weight	15 kg	25 kg	35 kg
Max. power consumption	1 K W	1.5 K W	2 K W
Power supply	230 VAC, 1 ph. 50 Hz	230 VAC, 1 ph. 50 Hz	230 VAC, 1 ph. 50 Hz
Remote control	Ethernet, RS-232	Ethernet, RS-232	Ethernet, RS-232
Operating temperature range (head)	5°C to +35°C	5°C to +35°C	5°C to +35°C

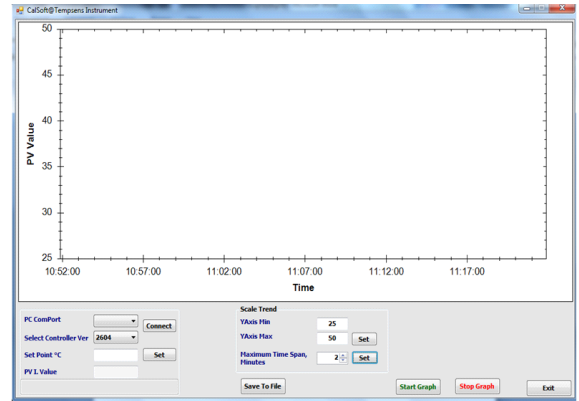
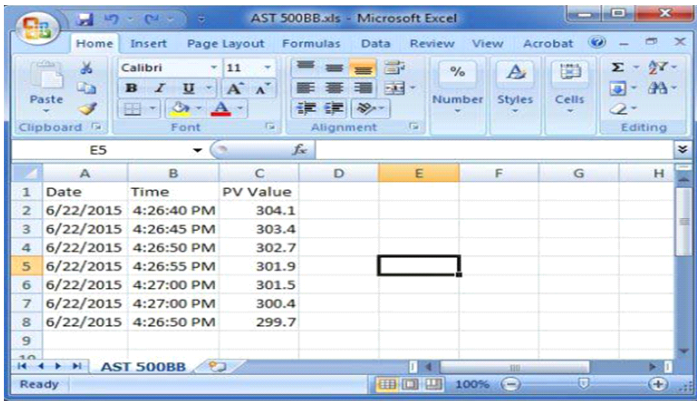
\*1 at 80% of emissive area

## Graphical Representation



## ACCESSORIES

### SOFTWARE



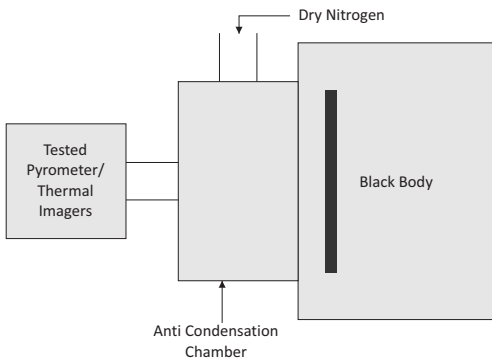
- CalSoft including for setting bath temperature and monitoring the PV. Graphical representations of PV/TIME with 2 hours data logging.
- Operational Manual
- NABL accredited calibration certificate - 3 point

### CHILLER UNIT



A recirculation chillers unit cools a black body to approximately the desire temperature.

### ANTI CONDENSATION CHAMBER



Along with LBBCH model blackbodies AST also offers anti condensation chamber around black body emitter for dry air / nitrogen to prevent any ice build up or water vapor condensation in case black body operate below ambient. one end off the chamber will be fit to black body emitter and another hole of the chamber fits to optics of tested pyrometer or thermal imagers .