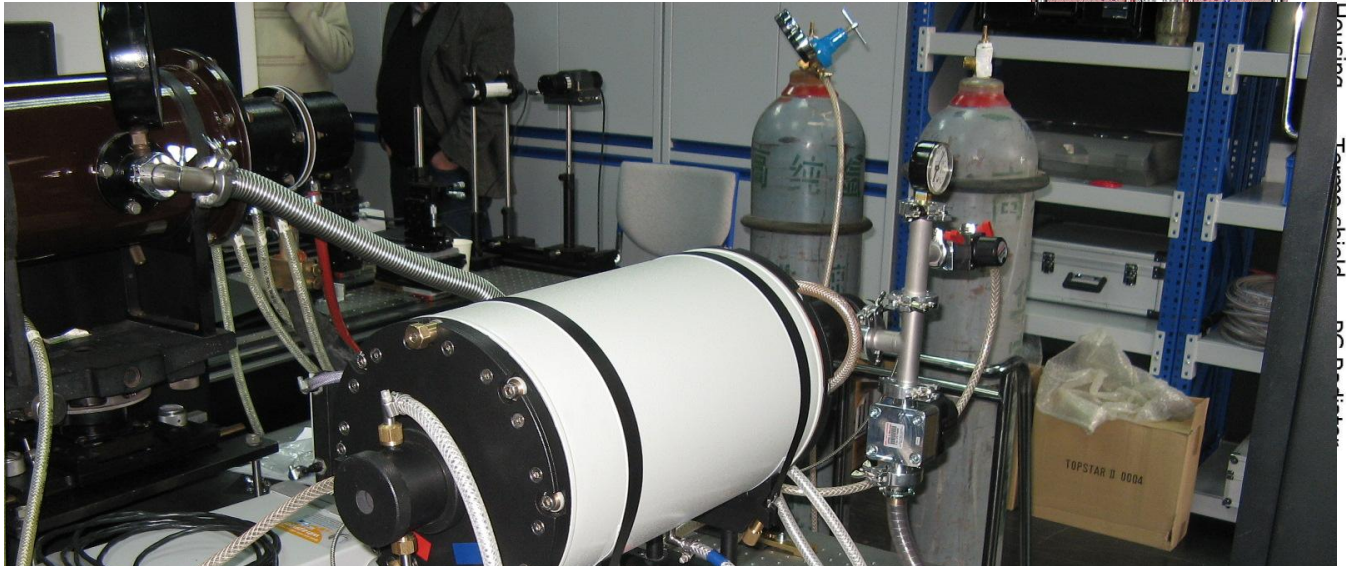
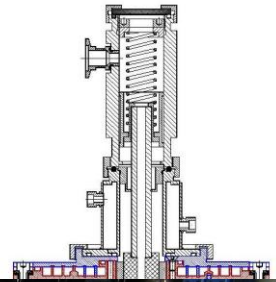


# «ULTRATHERM»

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## PYROLITIC GRAPHITE LARGE AREA SUPER-HIGH TEMPERATURE **BLACKBODY BB3500-M**

*BB3500-series blackbody is of the latest generation of precision high-temperature blackbodies developed by “ULTRATHERM” LLC during last years. Their direct prototypes, high temperature pyrolytic graphite blackbodies BB3200 and BB3500 had been developed within the last decade of years and used in several world-leading metrology centers for realization and dissemination of radiometric and radiation temperature scales, including operation as a furnaces for heating the cells containing fixed-point blackbodies on the base of metal-carbon eutectics with the temperatures up to 3500K (covering TiC-C at 3033 K, ZrC-C at 3155 K and HfC-C at 3453K).*



**BB3500M-series radiation source (right).  
Left – BB3500 at the spectral radiance  
calibration facility.**

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## PYROLITIC GRAPHITE LARGE AREA SUPER-HIGH TEMPERATURE BLACKBODY BB3500-M

### TECHNICAL SPECIFICATIONS

Temperature Range, K	1500-3500
Radiating Cavity Inner Diameter, mm	38
Cavity Opening	windowless, Ø 25 mm and/or Quartz glass window, detachable at high temperature
Emissivity in the ranges 1800 – 3300 K and 350 – 2500 nm	0.9995 ± 0.0005
200 – 350 nm	0.9995 ± 0.001
Maximum Current, A	800
Maximum Voltage, V	30
Service life of Radiator, hrs at 2800 / 3200 K	more 700 / 150
Cooling Agent	Plant water
Operating atmosphere	vacuum or inert gas (Argon)
Orientation:	vertical (for filling fixed-point cells) and horizontal (for operation)
Housing Diameter, mm	260
Total length, mm.	700
Recommended water consumption, liter/min. (at 15 °C)	25
Purge gas consumption (main line), liter/m.	3
(gas curtain line), liter/min	0.4

### DELIVERY SET (BASIC COMPONENTS FOR BB3500-M):

PyroGraphite high-temperature blackbody (BB) model BB3500M, basic set including:

- BB3500M optical source, 1 set;
- Power supply (PS) PS-800pu, (1 set)  
with 3-phase input at 380V, with electrical input/output cables and interface cables;
- Temperature-control system, including optical feedback detector (with fiber optical cable),  
current/voltage converter-amplifier FB-2pu with cables, digital multimeter Agilent 34401A (or Keithley  
2000), with accessories;
- Vacuum pump with valves, tubing and other accessories;
- Ar gas flow meters with valves and tubing;
- Water tubing for plant water supply;
- BB and PS Technical documentation /operation manuals

### SAFETY MEASURES:

- ◆ Water flow meter alarm.
- ◆ No welded seams on the inside BB water-cooled housing including flanges.
- ◆ No water boiling inside cooled housing.