THERMOELECTRIC PYRHELIOMETER

Areas of Application

Designed to measure direct solar irradiance with the highest accuracy using the absolute method. It can be used for measuring the solar constant both ground based and in space conditions (as part of meteorological satellites or space stations) and as a metrological means for ensuring the accuracy of measurements of short- and long-wave parts of the solar spectrum, scattered solar radiation, etc.

Specification

Basic error of measurement within	
the range of 80–2500 W/ m^2 , %	±0.1
Reproducibility of measurement	
results at the level of solar constant, %	± 0.04
Time constant, s	1
Time for reading the measurement	
result with an accuracy of up to 0.05%	
amplitude, s	-10
External dimensions of pyrheliometer	
(without mounting spots):	
diameter, mm	120
height (without aperture pipe), mm	110
height (with aperture pipe), mm	300
Total weight, kg	2.8



Advantages

Higher accuracy of measurements as compared with known counterparts

Stage of Development. Suggestions for Commercialization

IRL6, TRL6 Manufactured and supplied, upon request

IPR Protection

IPR3

Contact Information

Pavlo D. Mykytiuk, Institute of Thermoelectricity of the NAS of Ukraine and the Ministry of Education and Science of Ukraine; +38 037 22 4 44 22, e-mail: anatych@gmail.com