Annexure B
ISO Standard Sheets

B.1: ISO-9060 SPECIFICATION SUMMARY FOR PYRHELIOMETER [Source: WMO (2), 2008]

Table B.1: ISO-9060 Specification Summary for Pyrheliometer

Pyrheliometer Specification List			
Specification	Class of Pyrheliometer		
	Secondary Standard Class	First Class	Second
Response time—95% response	< 15 s	< 20 s	< 30 s
Zero offset Response to 5-K h-1 change in ambient temperature	± 1 Wm^{-2}	± 3 Wm^{-2}	± 6 Wm^{-2}
Resolution—smallest detectable change in Wm^{-2}	± 0.5 Wm^{-2}	± 1 Wm^{-2}	± 5 Wm^{-2}
Stability—percentage of full scale, change/year	± 0.5%	± 1%	± 2%
Nonlinearity—percentage deviation from the responsivity at 500 W/m^2 because of change in irradiance between 100 Wm-2 and 1,000 Wm^{-2}	± 0.2%	± 0.5%	± 2%
Spectral selectivity—percentage deviation of the product of the spectral absorptance and the spectral transmittance from the corresponding mean between 0.35 µm and 1.5 µm	± 0.5%	± 1%	± 5%
Temperature response—total percentage deviation because of change in ambient temperature within an interval of 50 K	± 1%	± 2%	± 10%
Tilt response—percentage deviation from the responsitivity at 0 degrees tilt (horizontal) because of change in tilt from 0 degrees to 90 degrees at 1,000 W/m^{-2} irradiance	± 2%	± 0.5%	± 2%
Traceability—maintained by periodic comparison	With a primary standard pyrheliometer	With a secondary standard pyrheliometer	With a first-class pyrheliometer or better

B.2: ISO-9060 SPECIFICATION SUMMARY FOR PYRANOMETER [Source: WMO (2), 2008]

Table B.1: ISO-9060 Specification Summary for Pyranometer

Pyrheliometer Specification List			
Specification	Class of Pyrheliometer[a]		
	Secondary Standard Class	First Class	Second
Response time—95% response	< 15 s	< 30 s	< 60 s
Zero offset Response to 200 Wm^{-2} net thermal radiation (ventilated) Response to 5-Kh^{-1} change in ambient temperature	± 7 Wm^{-2} ± 2 Wm^{-2}	± 15 Wm^{-2} ± 4 Wm^{-2}	± 30 Wm^{-2} ± 8 Wm^{-2}
Resolution—smallest detectable change	± 0.5%	± 1%	± 3%
Stability—percentage change in responsivity per year			
Nonlinearity—percentage deviation from the responsivity at 500 W/m^2 because of change in irradiance between 100 Wm-2 and 1,000 Wm^{-2}	± 10 Wm^{-2}	± 20 Wm^{-2}	± 30 Wm^{-2}
Directional response for beam radiation (the range of errors caused by assuming that the normal incidence responsivity is valid for all directions when measuring, from any direction, a beam radiation that has a normal incidence irradiance of 1,000 Wm^{-2}	± 3%	± 5%	± 10%
Spectral selectivity—percentage deviation of the product of the spectral absorptance and the spectral transmittance from the corresponding mean between 0.35 µm and 1.5 µm	2%	4%	8%
Temperature response—total percentage deviation because of change in ambient temperature within an interval of 50 K	± 0.5%	± 2%	± 5%
Tilt response—percentage deviation from the responsitivity at 0 degrees tilt (horizontal) because of change in tilt from 0 degrees to 90 degrees at 1,000 W/m^{-2} irradiance			