

# Sunshine Recorder

## Solar Monitoring Instruments

### SUN SHINE RECORDER - VIEW

#### Balaji Hydro Met makes Sunshine Recorder

**Model (BHM-M-SSR-M)** is an instrument used for accurately measuring the duration of bright sunshine at a place. Both models work the same, just one comes with a marble base and another with an adjustable stand.

There are various types and models of Sunshine recorders available in the world but the **Campbell-Strokes Pattern**, which uses the focused heat radiation from the Sun, is tracked on the chart, is preferred and widely used. There are three types of Campbell-strokes pattern of Sunshine Recorder mainly used in Tropical Temperature and Polar latitudes but the Tropical Pattern of Sunshine Recorder as drawn up by the Indian Meteorological Department is extensively used in India which conforms to **as per IS: 7243-1974 AND** works between latitude  $0^{\circ}$  N to  $45^{\circ}$  S



#### TECHNICAL

#### DATA

<b>Latitude</b>	$0^{\circ}$ S to $45^{\circ}$ N or $0^{\circ}$ N to $45^{\circ}$ S
<b>Dimension</b>	24 x 19 x 17 CM
<b>Sphere Dia</b>	$100 \pm 1.3$ mm
<b>Changing Card</b>	Daily
<b>Period of recording</b>	18 hours
<b>D Light</b>	$74.9 \pm 0.25$ mm

**There are three types of cards for Recording which is used in different periods of the year.**

1. Small 'A' Type Curved Card is used from January 1 to February 28 or 29 after this period again this card is used from October 15 to December 31. Thus, a total of 137 to 138 cards 'A' are used.
2. Straight 'B' Type Cards are used from March 1 to April 11 and again from September 3 to October 14. A total of 84 Cards is used.
3. Long Curved 'C' Type Cards are used from April 12 to September 2 a total period of 144 days.

So, for a period of one year the cards are 365 to 366 nos. as one card per day is used by default 1 year of sunshine recorder cards come with the sun shine recorder.

The Sunshine Recorder consists of a glass sphere mounted concentrically in a section of a spherical bowl, the diameter of which is such that the instrument is exposed to the Sun's rays they are focused sharply on a card held in grooves in the bowl, to take cards suitable for different seasons of the year. The instrument is mounted on a heavy base made of marble or similar stone. The sphere is held in position inside a sphere supported by sphere centre and sphere axle. The sphere support with glass sphere and bowl can be tilted, adjusted and clamped at such an angle as to suit the latitude of the station. Focused sun's rays burn the trace on the card, which has a time scale printed on it. The length of the burn indicates the period of bright sunshine during the day.



Representative