



## RK200-04

# Pyranometer Solar Radiation Sensor



### Overview

RK200-04 pyranometer solar radiation sensor is designed based on a photodiode detector. It is mainly used for measuring solar radiation within the 300-1100nm wavelength. If the sensing face is downwards, it can test the reflected radiation and solar radiation on the incident to an inclined plane. If a shade is added, it can test the scattered radiation. It is widely used to monitor the solar radiation in meteorology, solar energy, agriculture, construction materials aging and atmospheric pollution and etc.

### Features

- Designed on silicon-cell principle
- Low response time
- High sensitivity
- Low power consumption
- Light weight, long service life
- Used as sunshine duration sensor

### Applications

- Meteorology
- Solar energy
- Agriculture
- Construction materials aging monitoring
- Air pollution monitoring

### Technical Parameter

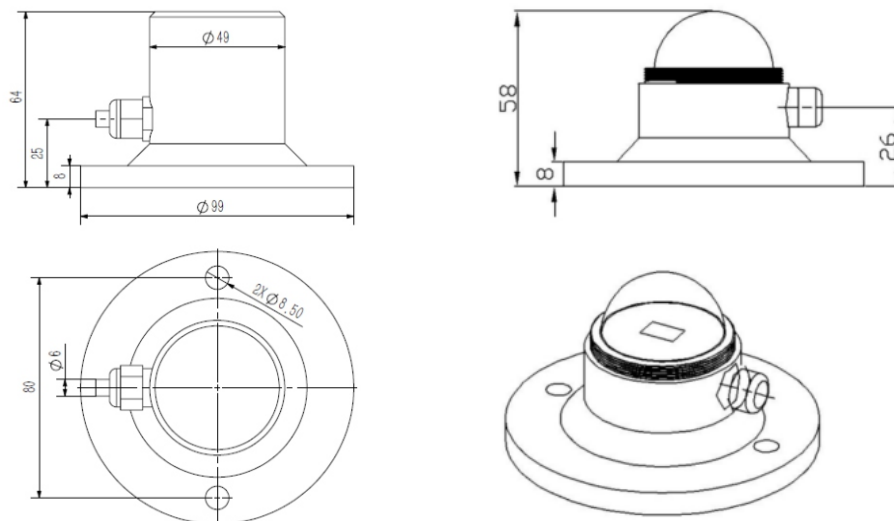
| Item                  | Technical Specification          |
|-----------------------|----------------------------------|
| Spectral range        | 300-1100nm                       |
| Supply                | 5V,12-24VDC                      |
| Range                 | 0-1500W/m <sup>2</sup>           |
| Resolution            | 1W/m <sup>2</sup>                |
| Output                | 0-2.5V,0-5V,4-20mA,RS485,SDI-12  |
| Power consumption     | 0.2W                             |
| Response time         | ≤500nS(95%)                      |
| Cosine correction     | ≤±10%(Solar elevation angle=10°) |
| Non-linear            | ≤±3%                             |
| Temperature effect    | ±0.08%/°C                        |
| Stability             | ≤±2%/year                        |
| Operating temperature | -40°C-+80°C                      |
| Ingress protection    | IP67                             |
| Weight(unpacked)      | 420g                             |
| Shell material        | Aluminum alloy                   |
| Storage condition     | 10°C-60°C@20%-90%RH              |

**This product can be used as a sunlight time sensor when paired with a recorder**

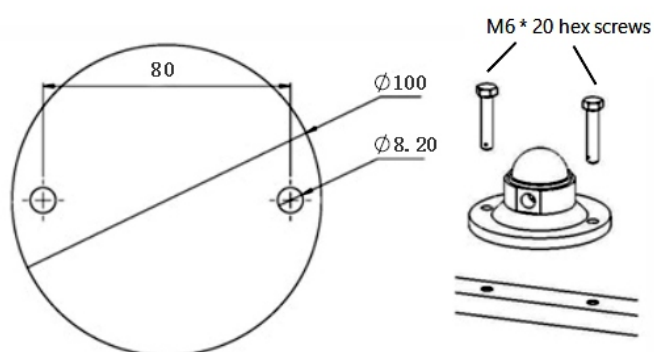
Sunshine hours is the sum of time periods that the sun direct irradiance intensity to reach or exceed 120W/m<sup>2</sup> time hour as a unit, a decimal. Sunshine hours is also known as actual irradiance time.

## Dimensions

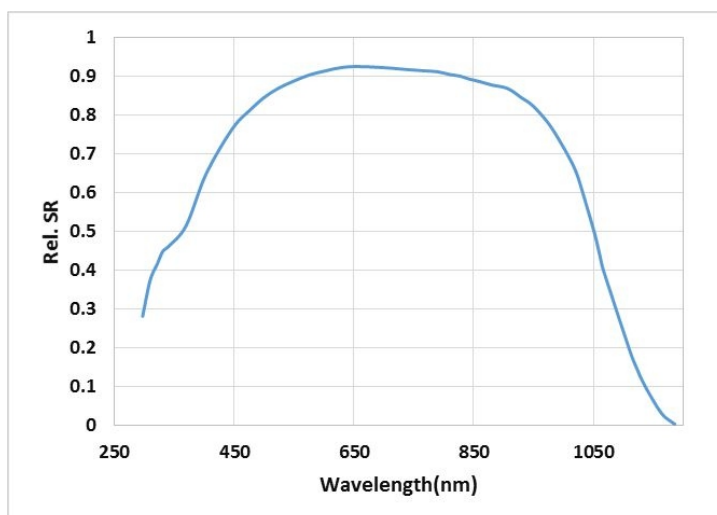
Unit:mm



## Mounting



## Spectral Response



## Parameter Selection Table

| Remark | Series | Type | Shell | Supply | Output | Cable Length |                       |
|--------|--------|------|-------|--------|--------|--------------|-----------------------|
| RK     |        |      |       |        |        |              |                       |
|        | 200    |      |       |        |        |              |                       |
|        |        | 04   |       |        |        |              |                       |
|        |        |      | M     |        |        |              | Metal(Aluminum alloy) |
|        |        |      | /     |        |        |              | /                     |
|        |        |      |       | A      |        |              | 5V                    |
|        |        |      |       | B      |        |              | 12-24V                |
|        |        |      |       | X      |        |              | Other                 |
|        |        |      |       |        | A      |              | 4-20mA                |
|        |        |      |       |        | B      |              | 0-5V                  |
|        |        |      |       |        | C      |              | 0-2.5V                |
|        |        |      |       |        | D      |              | RS485                 |
|        |        |      |       |        | X      |              | Other                 |
|        |        |      |       |        |        | 2500         | Units:mm(typ)         |
|        |        |      |       |        |        | 3000         | Units:mm              |
|        |        |      |       |        |        | ...          | Units:mm              |

Example: RK200-04MBA2500 Shell material: Aluminum alloy, Supply:12-24V,Output:4-20mA,Cable Length:2.5m.

| Revision time | Reviser | Current Version | Remarks |
|---------------|---------|-----------------|---------|
| 20250403      | Lee     | V5.0            |         |