



RK200-04 Solar Radiation Sensor

Overview

RK200-04 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

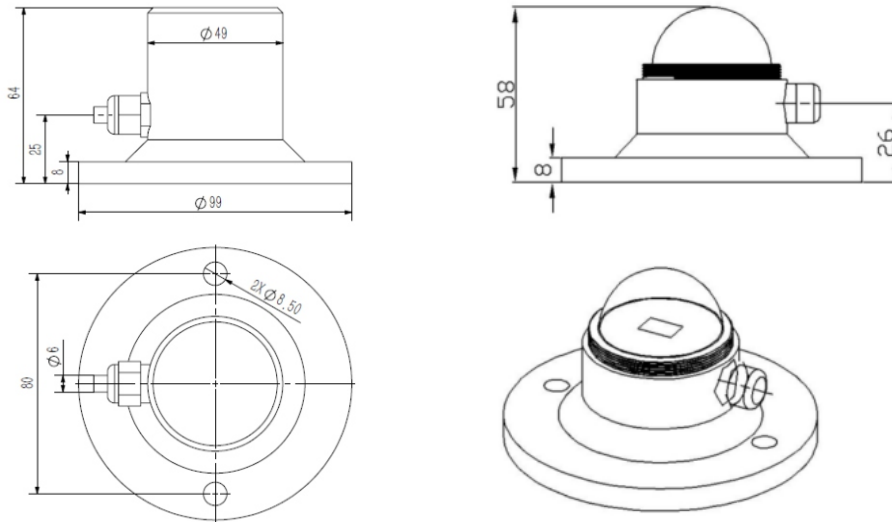
Item	Technical Specification
Spectral range	300-1100nm
Supply	5V,12-24VDC
Range	0-1500W/m ²
Resolution	1W/m ²
Output	0-2.5V,0-5V,4-20mA,RS485,SDI-12
Power consumption	0.2W
Response time	≤500nS(95%)
Cosine correction	≤±10%(Solar elevation angle=10°)
Non-linear	≤±3%
Temperature effect	±0.08%/°C
Stability	≤±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

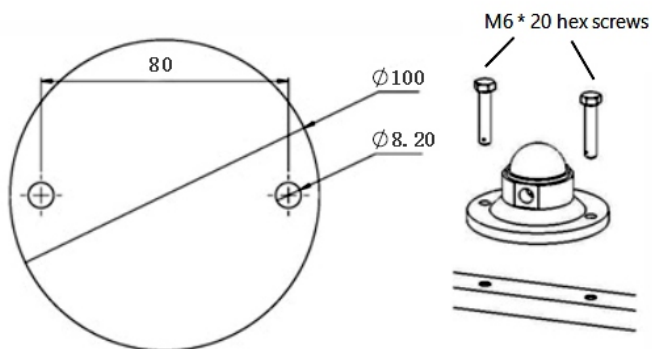
Sunshine hours is the sum of time periods that the sun direct irradiance intensity to reach or exceed 120W/m² time hour as a unit, a decimal. Sunshine hours is also known as actual irradiance time.

Dimensions

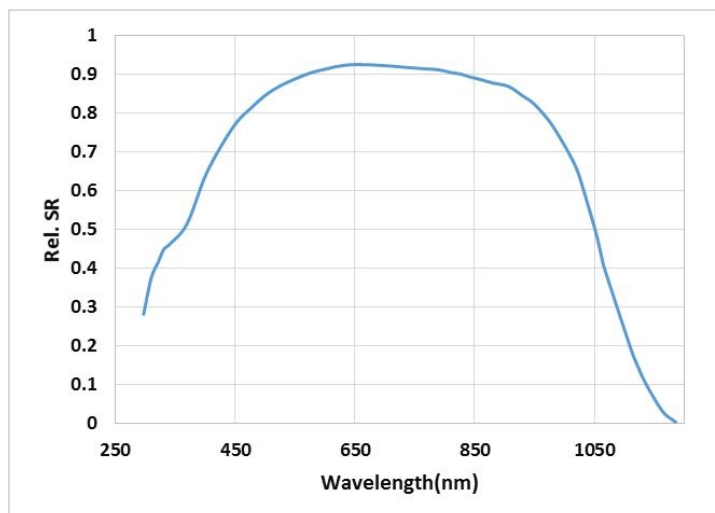
Unit:mm



Mounting



Spectral Response





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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	