

Amphenol Advanced Sensor	Document Type	Part No.	
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Single Solar Sensor



Applications

The single solar sensor is mounted on the dash panel near the front window. It uses one photodiode cell to measure the intensity of solar radiation and give electric information which is proportional to the calorific power and representative for the intensity of that. And then feeds it back to the automatic temperature control (ATC) unit of the vehicle's air conditioning system. The air temperature is automatically adjusted up or down, depending upon the amount of light entering into the vehicle.

Features

- Fast response time
- Easy to install
- Linear response to sun light intensity
- Narrow signal tolerance

1. Solar Sensor Specification

- Operating Temp. Range : -30°C to 80°C
- Storage Temp. Range : -40°C to 85°C
- Sensor output current : $0.4\text{mA} \pm 20\%$ (at $\Phi = 0^\circ$, $\theta = 0^\circ$)
[2856K Standard A light source, $767.4 \text{ (W/m}^2\text{)}$ or $17,359 \text{ (LUX)}$]

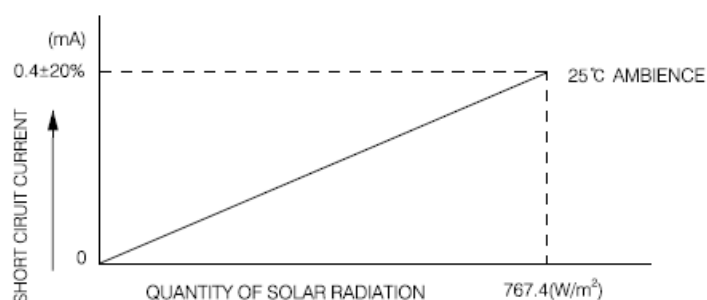
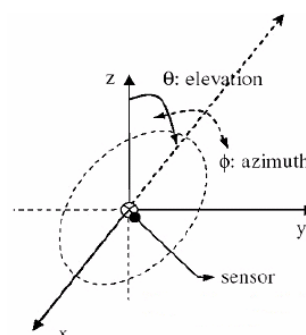


Fig 1. Current output vs. Light level.

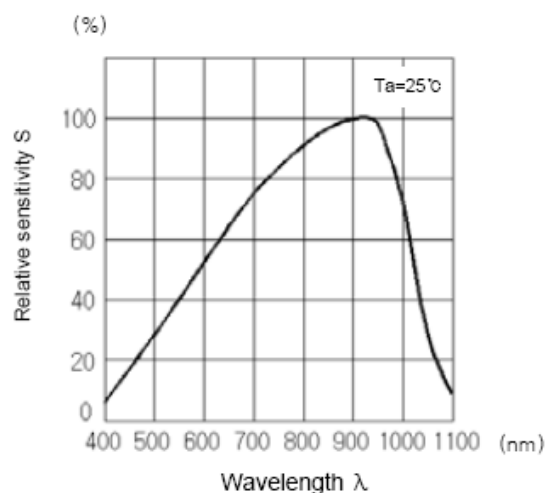


Fig 2. Relative Sensitivity vs. wavelength

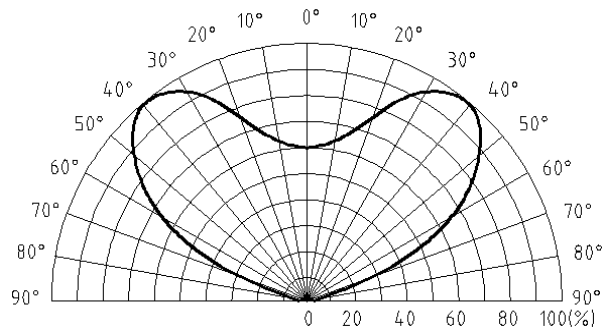


Fig 3. Relative Solar Output

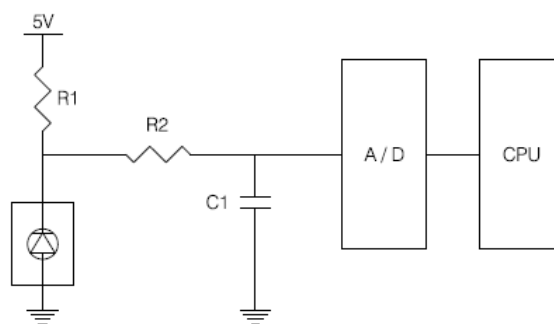


Fig 4. Application Schematic Example

