The Redwire Coarse Sun Sensor (Cosine Type) is a small, lightweight sun sensor that offers approximate cosine and conical symmetry field of view capabilities.

- Single Detector
- Field of View (FOV): Approximate cosine, conical symmetry
- Baffles can be provided to restrict the FOV
- Coarse Sun Sensor (Cosine Type) is Rad hard >100 krad (Si)

**PARAMETERS**

<table>
<thead>
<tr>
<th>APPROXIMATE COSINE, CONICAL SYMMETRY</th>
<th>NONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field of View</td>
<td></td>
</tr>
<tr>
<td>Input Power</td>
<td></td>
</tr>
<tr>
<td>500 μA to 1300 μA</td>
<td></td>
</tr>
<tr>
<td>Peak Output</td>
<td></td>
</tr>
</tbody>
</table>

| Mass                                |
|                                     | 10 GRAMS (NOMINAL), 0.353 OZ          |

<table>
<thead>
<tr>
<th>MOUNTING FLANGE X BODY X HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.10” X 0.74” X 0.47”</td>
</tr>
<tr>
<td>2.8 CM X 1.9 CM X 1.2 CM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions</th>
</tr>
</thead>
</table>

**APPLICATIONS**

- Solar-Array Pointing
- Sun Acquisition
- Fail-Safe Recovery

**CONFIGURATION**

Baffles can be provided to restrict FOV

Baffles
1. Nearly any FOV can be accommodated by a unique baffle for the CSS. Typically the customer defines the particular FOV needed to shield the detector from any stray light reflections. Redwire designs the baffle to meet this Stray Light FOV, while maximizing the Active FOV of the detector. For complex baffle designs, a prototype baffle is typically built and verified by test.

Sun Sensors are export controlled through an ECCN (Export Control Classification Number) issued by the United States Department of Commerce, ECCN 7A104. Export shipment requires successful application for an export license.
COARSE SUN SENSOR (COSINE TYPE)

MISSION HERITAGE

+ GRAIL
+ Mars Phoenix
+ GPM
+ GPMI
+ LRO/LCROSS
+ WISE
+ Kepler
+ SDO
+ EMM (Hope)
+ Worldview
+ Fermi (GLAST)
+ MRO
+ Deep Impact
+ Swift
+ Classified Programs

For more information about our space capabilities,

CONTACT REDWIRE SPACE SALES

HERITAGE

Redwire is a new leader in mission critical space solutions and high reliability components for the next generation space economy. With decades of flight heritage combined with the agile and innovative culture of a commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of future space missions. For more information, please visit www.redwirespace.com.

Typical CSS response with no baffles installed

Actual CSS Response is shown solid; true cosine is shown dashed.

This can be represented by an 8th order polynomial approximately as follows:

\[ R(\theta) = 2 \times 10^{-16} \cdot \theta^8 - 1 \times 10^{-12} \cdot \theta^6 - 1 \times 10^{-9} \cdot \theta^4 - 1.5 \times 10^{-4} \cdot \theta^2 + 1 \] (\theta in degrees)