

COARSE SUN SENSOR (Cosine Type)



Typical 2-Axis Model (Pyramid)

CONFIGURATION

- NO. OF MEASUREMENT AXES: 2
- NO. OF DETECTORS: 4 per bracket
- OTHER BRACKET CONFIGURATIONS:
2, 6 or 8 detectors per bracket

HERITAGE

DSCS, UARS, EUVE, GPS IIR, GPS IIF, LANDSAT, MARS SURVEYOR, MARS ODYSSEY, STARDUST, ODIN/CYCLOPS, AMOS-1, AMOS-2, SPACEBUS 4000, TDRS, GOES, CLASSIFIED PROGRAMS.

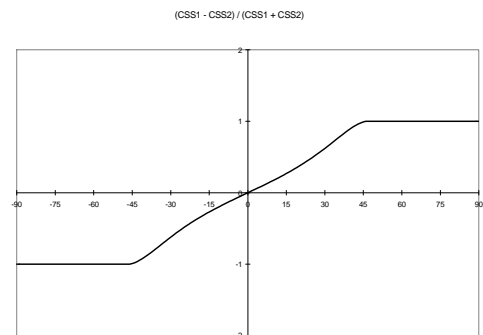
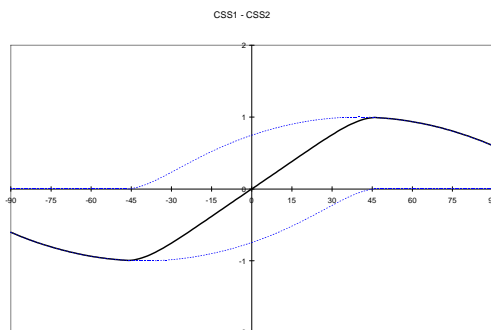
PARAMETERS

- FIELD OF VIEW: 2π steradian plus.
Note: Baffles can be provided to restrict the field of view (FOV).
- ACCURACY: $\pm 1^\circ$ at Null (typically).
- INPUT POWER: None.
- OUTPUT: 500 μ A to 1300 μ A peak, each detector.

APPLICATIONS

- Solar-Array Pointing
 - Sun Acquisition
 - Fail-Safe recovery
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- WEIGHT: 0.29 lb (0.13 kg) nominal
 - SIZE:
Mounting Base:
2.3"×2.3" (58×58)mm
With Baffles Extent:
3.5"×3.5"×1.7" (89×89×43)mm

PROCESSING



Plot showing an example of the difference of two individual detector responses, with a linear range of approximately $\pm 30^\circ$ about null. Detectors can be placed closer together or further apart, depending on linear range/accuracy requirements.

Plot showing the normalized transfer function $\frac{CSS1 - CSS2}{CSS1 + CSS2}$, giving an approximate linear response over the linear range.