ON Semiconductor

# PRODUCT BULLETIN #20728

Generic Copy

**Issue Date:** 14-Jan-2015

**TITLE:** New datasheet revision of STAR1000 Space Image Sensor.

**PROPOSED FIRST SHIP DATE:** Effective Immediately

**AFFECTED CHANGE CATEGORY(S):** New datasheet revision

## FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor sales office or <Gretel.willems@onsemi.com>

## NOTIFICATION TYPE:

ON Semiconductor considers this change approved unless specific conditions of acceptance are provided in writing. To do so, contact <quality@onsemi.com>.

## DESCRIPTION AND PURPOSE:

This is to announce the release of a new STAR1000 datasheet revision, revision 14. The revision changes can be found in the Appendix below. Additionally, the datapack accompanying each NOIS1SM1000S delivery is going to be structurally updated. Datapack changes can be found in the Appendix below.

## List of Affected General Parts:

NOIS1SM1000A-HHC
NOIS1SM1000S-HHC
NOIS1SM1000A-HWC
NOIS1SM1000S-HWC

## Appendix

## STAR1000 Datasheet Revision History

| Document Title: STAR1000 - 1M Pixel Radiation Hard CMOS Image Sensor | | | | |
|---|---|---|---|---|
| **Revision** | **ECN** | **Origin of change** | **Submission date** | **Description of Change** |
| 14 | | TECH PUBS | January 2015 | Page 1, Ordering information is updated.<br>Page 2, Marking information is updated.<br>Page 3, Overview is updated.<br>Page 3, Export clearance is rephrased.<br>Page 3, Limited warranty section is removed.<br>Page 4, document numbers are converted to ONSemi numbers, AD01 is removed, Issue and Date columns are removed.<br>Table 1, test location column is removed.<br>Figure 2 is updated.<br>Table 2, test location column is removed, number of devices field in "Geometrical measurements" is changed, and Moisture resistance Cycling around dew point test methods are updated, Residual Gas Analysis test is added.<br>Page 7, document numbers are converted to ONSemi numbers. Conditions for leak tests are added.<br>Figure 3 is updated.<br>Table 3, test location column is removed.<br>Page 9, document numbers are converted to ONSemi numbers.<br>Table 4, test location column is removed, document numbers are converted to ONSemi numbers, and unbiased Stabilization bake (48h) will be done prior to Electrical measurements.<br>Table 8, die position X/Y tilt, die rotation accuracy are updated and Distance die to glass lid is added.<br>Table 11, stand by current is removed; ADC DNL and INL limits are updated.<br>Table 12, charge to voltage conversion factor is corrected; temporal noise @ 5MHz is updated.<br>Table 13, drift limits table is updated.<br>Table 14, stand by current, average dark signal @85deg, global and local DSNU limit @85deg" are removed.<br>Table 15, average dark signal @-40deg, global and local DSNU limit @-40deg, Temporal noise @-40 deg limits are updated.<br>Table 22, table 23, table 24, stand by current is deleted.<br>All temperature references are changed to 22°C. |

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## STAR1000 Datapack Changes

| Datapack changes |
|---|
| **Description of Change** |
| Appendix 1 of datapacks (Datasheet): Datasheet will not be attached in datapacks. Datasheet is available in MyON<br>Appendix 2 of datapacks (Electro-optical test methods): NPD-0064422: IS_Characterization_Standard_v1.01.pdf replaces the Electro-optical test methods for CMOS image sensors V1_0.pdf. The new file has also characterization information while the previous had only test methods described.<br>Appendix 6 of datapacks (electrical measurements data): STAR1000's 001-66578 and HAS2's 001-64028 will be removed.<br>Addition of measurement units and conversion to datasheet units. Revision controlled. Only Datasheet and calibration parameters included.<br>Test software revision will not be mentioned. Any major change on our testplan will be communicated to the customers via PCN<br>Results per illumination level will no longer be reported. Only result as per the parameter in the datasheet. (For example, the column test at dark, gray and saturation level will not be provided. The results are included in 801 tests.) Also pre-screening measurements will be delivered.<br>Appendix 7 of datapacks and TRC report (spectral response of reference lot): The appendix with the spectral response of the reference lot is removed. All WLAT spectral response excel files have been updated with the reference lot's data<br>Appendix 8 of datapacks (ESCC docs): ESCC docs removed. Replaced by 'NPD-0067186 HAS2/STAR1000 Deviations to the ESCC-9020 (added to the datapack)"<br>Appendix 9 of datapacks (screening reports): A list of the screened devices and their electrical results will be added. ATE bin swaps of the screened devices will be marked.<br>Appendix 10 of datapacks (Assembly LAT data): RGA results: moisture stressed devices results will be removed from the LAT report |