

TITLE: CCD44-82 SLOWSCAN TEST SHEET FOR ESO	10683
Version: BACK ILLUMINATED, NIMO, DEEP DEPLETED, ASTRO, 2 LAYER COATING	Sheet 1 of 2

Associated Document: CCD44-82 RED Issue C Nov. 2003 PRJ

Device serial number	06383-13-01	Tester (Initials & Clock No.)	NA7635
Grade	1	Date	20/09/07
Test data disc number	N/A	Device Type Number	CCD44-82-1-D42

TEST RESULTS

TEST		RESULT	LIMITS	UNITS
			Scientific Grade	
GAIN MODE 1 (Amplifier Responsivity)	OSL	5.55	3.0 min., 6.0 max.	$\mu\text{V/e}^-$
	OSR	5.79	3.0 min., 6.0 max.	$\mu\text{V/e}^-$
GAIN MODE 2 (Amplifier Responsivity)	OSL	1.28	For information only	$\mu\text{V/e}^-$
NOISE	OSL	1.8	4.0 max.	rms e^-
	OSR	1.6	4.0 max.	rms e^-
NON-LINEARITY (to 100k electrons)	OSL	0.2	5.0 max.	%
	OSR	0.2	5.0 max.	%
CTE (Serial)	OSL	99.9997	99.999 min.	%
	OSR	99.9999	99.999 min.	%
CTE (Parallel)		99.9999	99.999 min.	%
DEFERRED CHARGE		0	3 max.	e^-
SATURATION LEVEL FOR IMAGE AREA		249	150 min.	ke^-
SATURATION LEVEL FOR REGISTER		997	For Information only	ke^-
DEFECTS IN DARKNESS	WHITE POINT DEFECTS (A)	174	5000 max.	n/a
	WHITE COLUMNS (C)	0	For information only	n/a
PHOTO-RESPONSE DEFECTS	DARK POINT DEFECTS (B)	238	For information only	n/a
	DARK COLUMNS (D)	0	For information only	n/a
	TRAPS	1	100 max.	n/a
TOTAL COLUMNS (C+D)		0	30 max.	n/a
TOTAL BLACK AND WHITE PIXELS (A+B)		412	10000 max	n/a
MEAN DARK SIGNAL at -120°C		0.0357	1 max	$e^-/\text{pix}/\text{h}$
AREA DARK SIGNAL (32 x 32 block)		0.0709	For information only	$e^-/\text{pix}/\text{h}$
QUANTUM EFFICIENCY	at 350 nm	55.8	30 min.	%
	at 400 nm	90.6	70 min.	%
	at 500 nm	94.7	75 min.	%
	at 650 nm	95.2	70 min.	%
	at 900 nm	64.8	45 min.	%
	at 1000 nm	13.7	For information only	%
PHOTO-RESPONSE NON-UNIFORMITY	at 400 nm	2.3	3.0 max.	%
	at 650 nm	2.0	3.0 max.	%
	at 900 nm	1.9	5.0 max.	%

CUSTOM TESTS (if applicable)

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OPERATING CONDITIONS

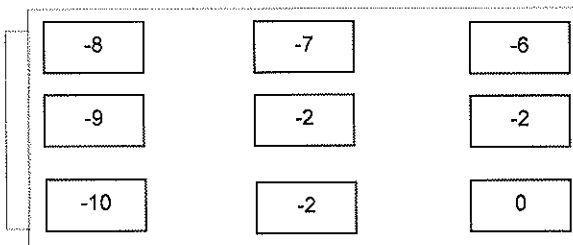
VOLTAGE	VALUE	MIN.	MAX.	UNITS	VOLTAGE	VALUE	MIN.	MAX.	UNITS
VOD	30	27	32	V	VSS	7.7	0	10	V
VOG1	3	2	3	V	VR ϕ (high)	11	9	15	V
VRD	18	15	19	V					
VOG2	4	1 + VOG1		V	V ϕ R (high)	12	9	15	V
VDD	18	22	26	V	Vl ϕ (high)	10	8	14	V

TEST TEMPERATURES

MEASUREMENT	TYPICAL TEMPERATURE	ACTUAL VALUE	UNITS
ALL TESTS	-100	-100	°C

HEIGHT MEASUREMENT (at 21 ± 3 °C)

The shims on this device have been adjusted and this diagram shows the measured deviations from the reference height (in μ m).



Average height deviation $[(\text{Max} + \text{Min}) / 2] = \dots\dots\dots 5.0 \dots\dots\dots \mu\text{m}$ with respect to the reference height. Limit = $\pm 10 \mu\text{m}$ max.

FLATNESS MEASUREMENT

Measured Flatness at 21 ± 3 °C =9.846..... μm

Correlation factor =-2.0.....

Estimated Flatness at -113 °C =7.846..... μm

Limit = 20 μm max.

NOTES

QE measurements to be post calibrated.