

Document Title:	IR Detectors Performance and Status
Document Number:	VIS-LST-ATC-06032-1000
Issue:	Draft 0.3
Date:	23 November 2004

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IR Camera			IR Detectors Performance and Status									Doc Number: VIS-LST-ATC-06032-1000 Date: 23 November 2004 Issue: Draft 0.3 Author: Naidu Bezawada		
Module No.	Grade	Status	QE (%) J / H / K	Non-unif.	Dark (e/s) 0.5V / 0.7V	Noise (e rms) Temp / Pix - to -nix	Full well(ke) 0.5V / 0.7V	Non-lin. (%) 0.5V / 0.7V	Conv. Gain	Mean DC	Persistence	Operability (%)	Comments	
Process - Thin	substrate													
Module - 15	Eng.	Tests completed	59.1 56.6 48.8		1.44	22.0	130	1.90	2.67	3.192			Engeneering grade Large area defect Not to publish data Imperial hardware	
Module - 16	Eng.	Tests completed	76.0 76.0 65.0		2.30	19.5	105	1.30	3.19	3.200			Good engineering grade detector Imperial hardware 15 - 17% high dark pixels	
Module - 18	Eng.	Tests completed	92.7 96.5 96.0		2.37	22.7 25.1	115	1.40	2.91	3.179		93.15	Good engineering grade detector, 40% high dark pixels, Imperial hardware	
Process - Thic	k substrate												r, r	
Module - 22	Sci.	Tests completed Accepted	71.0 74.0 75.0	7.4 7.8 5.9	1.70 2.00	17.4 18.8	102 156	3.20 5.10	3.58 3.75	3.231	<32e in ~45s	99.18	Science grade AR coating - old process Flatness ??	
Module - 23	Sci.	Tests completed Accepted	71.8 73.3 71.6	5.9 5.7 5.6	1.28	17.2 22.5	96 132	3.30	3.81	3.237	17.0	98.68	Science grade AR coating - old process Flatness = 16µm p-v	
Module - 24		ROIC failed Returned to RVS												
Module - 25	Sci.	Tests completed Accepted	86.0 89.4 86.7	5.0 5.2 4.4	0.86	17.9 28.7	90 124	2.24 3.25	3.68	3.239	24.7	98.55	Science grade High QE Robust AR coating Flatness = 24µm p-v	
Module - 26	Eng.	Tests completed Under evaluation	93.2 96.5 91.5	8.3 6.9 7.0	2.30 2.38	16.3 16.7	84 115	3.80 5.60	3.69 4.00	3.245 3.261	37.3	58.10	Engineering grade Flatness = 24µm p-v Limited by high dark ~40% hot pixels	

Module - 27 Cracked

Not shipped

Sold to IFA

VIATA	IR Detectors										Doc Number: VIS-LST-ATC-06032-1000		
IB Comoro	Performance and Status									Issue	e: Draft 0.3 r: Naidu Bezawada		
Module - 28	Eng.	Tests completed Under evaluation	64.1 67.8 67.1	11.9 11.1 10.6	0.89	28.6 58.4	98 135	3.60 4.60	4.08	3.266	26.2	96.28	Engineering grade Flatness = 18µm p-v Numerous defects in the centre, high read nosie
Module - 29		ROIC failed Not shipped											
Module - 30	Sci.	Tests completed Accepted	93.5 96.7 92.6	6.6 6.9 5.9	3.85 4.00	22.2 27.2	146 185	9.00 12.40	2.32	3.148	13.6	93.15	Science grade Large hot pixels High non-linearity Dark current relaxed to accept as science grade
Module - 31	Sci.	Tests Completed Accepted	94.2 97.7 96.5	5.4 4.9 5.1	0.97 1.07	15.5 19.1	93 130	5.7 3.7	3.44 3.68	3.229 3.241	9.6	98.30	Science grade High QE, good uniformity Low noise, high operability
Module - 32	Eng.	Under squeezed Not shipped											
Module - 33	Sci.	Tests Completed Accepted	95.5 98.7 93.8	5.4 6.0 5.2	1.13 1.16	22.7 25.1	97 127	5.9 7.1	3.18 3.51	3.202 3.217	14.2	98.15	Science grade High QE, good uniformity high operability
Module - 34		ROIC failed Not shipped											- ge of - weary
Module - 35	Sci	Tests Completed Under evaluation	92.4 96.3 90.7	4.9 4.8 4.3	0.80 0.81	18.7 21.4	87 120	3.5 5.2	4.39 4.69	3.285 3.299	7.8	97.30	Science grade Except for three large area defects ~1.6% of pixels in total High QE, good uniformity, Low percisence
Module - 36	Sci	Under tests											Low persistence
Module - 37	Sci.	Awaiting tests											
Module - 38	Sci.	Awaiting tests											
Module - 39	Sci	Expected											
Module - 40	Sci	Expected											High dark Waiver reqired
Module - 41	Sci	Expected											
Module - 42	Sci	Expected											
Module - 43	Sci	Expected											High dark Waiver required

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Module - 44

Expected