

DVD+R FORMAT VERIFICATION REPORT

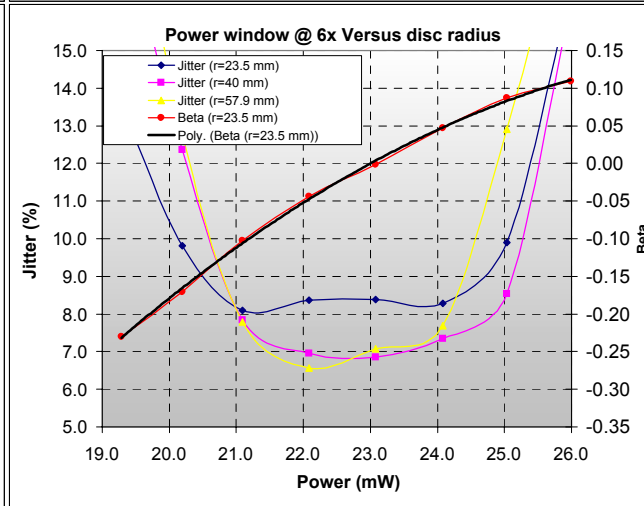
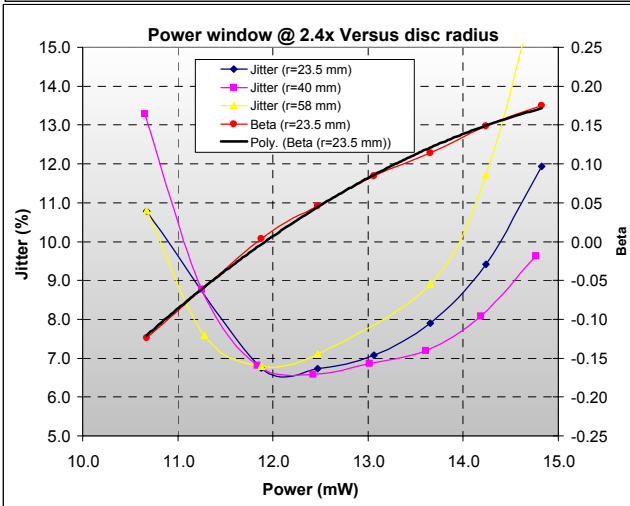
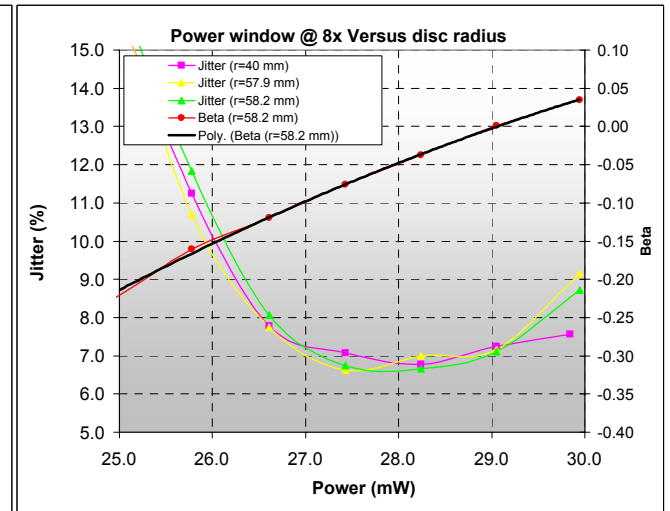
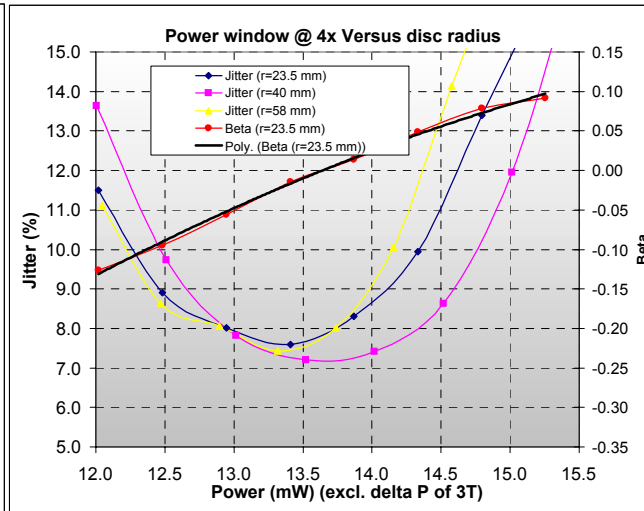
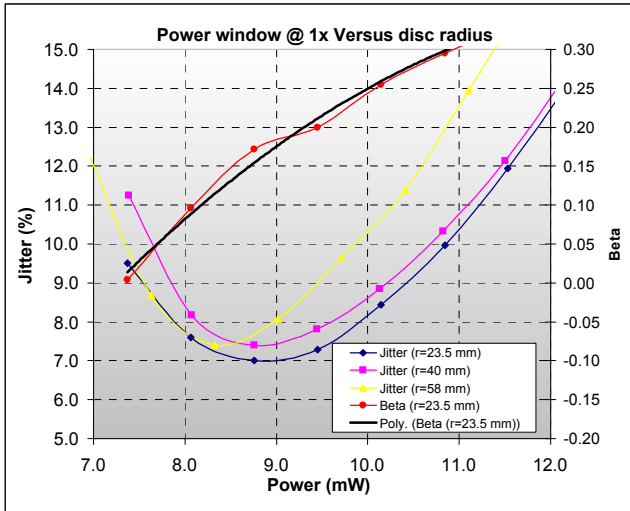
Company:	Maxell
Evaluation disc nr:	DVDR031114
According to document:	Version 1.2 (1x - 8x)
Date:	19-May-04



DISC PARAMETERS

Clause #	Parameter	Specification	Result
10.2	Hole of assembled disc (d2)	15.00 mm min	15.00
11.3	Dynamic imbalance	2.5 g · mm max	0.7
12.2	Thickness of transparent substrate [mm]	0.58 to 0.62 if n>1.56	0.59
12.4	Birefringence	60 nm max	49.4
12.5	Angular deviation α in radial direction	0.70° max	-0.46
12.5	Variation of α over one revolution	0.80° peak-to-peak max	0.30

WRITE PERFORMANCE Versus RADIUS



POWER WINDOW SIZES VS RADIUS

	1x (ADIP)	2.4x	4x	6x	8x
Inner diameter	16.2%	± 11.5%	± 7.9%	± 9.4%	n.a.
Middle diameter	13.3%	± 12.8%	± 7.0%	± 9.6%	± 6.7%
Outer diameter	11.8%	± 11.2%	± 6.9%	± 8.2%	± 6.6%
Net power window	9.8%	± 10.0%	± 5.9%	± 8.2%	± 6.5%
Required power window size: at least ± 6.0% (net power window at least ± 5.0%)					

WRITER AND READER RESULTS

Clause #	Evaluator conditions	Writer		Reader	
		Specification	Actual	Specification	Actual
9.2.a	Wavelength [nm]	650 to 665	658	645 to 660	653
9.2.b	Numerical aperture	0.64 to 0.66	0.65	0.59 to 0.61	0.60
9.2.e	Light intensity at rim of pupil in radial direction	35% to 50%	38%	60% to 70%	65%
9.2.e	Light intensity at rim of pupil in tangential direction	45% to 60%	53%	>90%	97%

Writer																
Clause #	Parameters	Specification	Speed = 1x			Speed = 2.4x		Speed = 4x			Speed = 6x			Speed = 8x		
			24.1	40.0	56.6	40.0		25.1	40.0	57.6	24.1	39.1	56.7	40.1	57.7	
30.2.5	Jitter [%] (multi track)	≤ 9%	7.3%	7.4%	7.4%		6.6%		7.8%	7.5%	8.0%	7.9%	7.2%	7.7%	7.2%	7.3%
28.2.a	Push Pull before	0.30 to 0.60	0.49		0.37											
28.2.a	Variation in Push Pull before	< 0.15	0.14													
28.2.b	Push Pull after	0.40 to 0.80	0.52		0.48											
28.2.c	Push Pull ratio	0.6 to 1.0	0.95		0.78											
28.3	Track cross before	> 0														
29.2.4	Track cross after	> 0.13														
28.4	Normalized wobble signal before	0.15 to 0.25	0.24		0.19											
28.5	Narrow band SNR of wobble before RBW=1KHz	> 45dB	53		53											
28.5	Narrow band SNR of wobble after RBW=1KHz	> 38dB														
30.2.2	Modulation I14/I14H	≥ 0.60	0.66	0.63	0.63		0.76		0.82	0.84	0.81	0.77	0.77	0.79	0.77	0.78
30.2.2	Modulation I3/I14	≥ 0.15	0.32	0.33	0.33		0.30		0.29	0.27	0.28	0.31	0.31	0.30	0.29	0.29
30.2.2	(I14Hmax-I14Hmin)/I14Hmax (PBS, speed)	≤ 0.25 disc														
30.2.2	(I14Hmax-I14Hmin)/I14Hmax (PBS, speed)	≤ 0.15 revolution	0.07		0.06											
30.2.3	Signal asymmetry	-0.05 to 0.15	0.11	0.11	0.14		0.00		-0.01	0.00	-0.02	0.03	0.04	0.06	-0.01	0.01
30.2.4	NSL jump (speed)	≤ 0.35 ECC to ECC		0.12												

Reader															
Clause #	Parameters	Specification	Speed = 1x			Speed = 2.4x		Speed = 4x			Speed = 6x			Speed = 8x	
			24.1	40.0	56.6	40.0		25.1	40.0	57.6	24.1		56.7		57.7
12.3	Reflectivity	45% to 85%									46.5%		48.6%		49.7%
31.2.3	Jitter [%] (multi track)	≤ 9%	8.5%		8.8%	6.4%		7.7%	8.2%		8.7%	7.3%	7.0%		6.9%
31.2.1	Modulation I14/I14H	≥ 0.60	0.69		0.66	0.76		0.75	0.81		0.83	0.84	0.84		0.83
31.2.1	Modulation I3/I14	≥ 0.15	0.24		0.24	0.24		0.24	0.19		0.20	0.23	0.21		0.22
31.2.2	Signal asymmetry	-0.05 to 0.15	0.11		0.12	0.05		0.03	-0.02		0.01	0.05	0.07		0.01
31.2.4	Track Cross after	≥ 0.10									0.27		0.25		0.24
31.2.5	DPD2 amplitude (normalized to Forum Std.)	0.5 to 1.1	0.8		0.8	0.7		0.8	0.8		0.8	0.7	0.8		0.8
31.2.5	DPD2 asymmetry	-0.20 to 0.20	0.01		0.01	0.00		0.01	0.01		0.02	0.01	0.00		0.00