

Specifications for Rewritable Professional Optical Disc Media

Specifications No.: SD 23/2010
Dated: 15.07.2010

1. SCOPE:

These specifications lay down the performance requirement of Rewritable Professional Optical Disc Media to be used in XDCAM HD422 HDTV Digital Recording Format Studio Recorders and Camcorders for Audio & Video Recordings, Playback and Editing purposes. The disc will be used in broadcast TV Studio environment for programme production and transmission purposes.

2. FEATURES REQUIRED:

- a) The professional optical disc should be compatible with the XDCAM HD422 camcorders & deck.
- b) The professional disc should be offered in the capacities of 23.3GB single layer and 50GB dual layer.
- c) It should achieve a track pitch of 0.32 μ m with 405nm wavelength blue-violet laser optical head for high density recording.
- d) It should have high data transfer rates (72 Mbps on a single head unit, 144 Mbps on a dual head deck) and long recording times (approx. 40 min. or more on 23.3 GB disc and approx. 90 min. or more on 50GB disc).
- e) It should provide quick random direct access to the recorded material. It should also be suitable for a linear editing system.
- f) It should be highly reliable and durable for high performance under tough environmental conditions and extreme temperature. It should have excellent data integrity and an archival storage life of over 50 years.
- g) The disc should have hard coat to make it scratch-resistance and an extremely low electrostatic charge to make it difficult for static electricity to be generated and preventing dust inside the camera from damaging the disc.
- h) The disc should be enclosed in an antistatic plastic cartridge shell with a shutter mechanism to protect the disc against dust and other airborne contaminants, mechanical vibration, surface scratches and X-rays. It should also protect the disc from damage if it is dropped.

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- i) The cartridge should be rugged enough to cope with the knocks and shocks of real-life shooting conditions.
- j) The rewritable professional optical disc should have ultra-low error rates even after 1,000 overwrites and should provide consistently excellent picture and sound quality with proxy and metadata.
- k) The disc should have 2x or more speed and should be pre-formatted for immediate use.
- l) The bill of material is given in **Appendix-I**.
- m) The list of Doordarshan centres for which the media are being procured is available at **Appendix-II**.

3. TECHNICAL SPECIFICATIONS:

S. No.	Description	Parameters
1.	Disc Type	Rewritable
2.	Storage Capacity	23.3 GB & 50GB
3.	Recording Format	Phase Change Recording
4.	Recording Laser wavelength (blue violet)	405nm
5.	Track pitch	0.32 μ m
6.	Data Transfer rate per optical head	86Mbps
7.	Substrate	Polycarbonete
8.	Disc Diameter	120mm
9.	Disc Thickness	1.2mm
10.	Cover Layer Thickness	0.1mm
11.	Cartridge Width	128.6mm
12.	Cartridge Height	130.6mm
13.	Cartridge Depth	9.1mm
14.	Erase/write/read cycles	\geq 1000 times
15.	Read cycles	\geq 1000000 times
16.	Raw byte error rate	\leq 0.0002
17.	Estimated shelf life	\geq 50 years
18.	Estimated archival life	\geq 50 years
19.	Operating Conditions	-5 to 55°C , 3 to 90% RH
20.	Storage Conditions	-10 to 55°C , 3 to 90% RH

4. COMPLIANCE:

- (a) Any substandard product included in the offer may cause the rejection of complete offer with the sole responsibility of bidder.
- (b) The firm should provide the offered un-priced bill of material in electronic form also in addition to the hard copy for ease of technical evaluation.
- (c) **A point-by-point compliance statement from the principal manufacturer in respect of all the points laid down in these specifications is to be enclosed along with the offer in the format**

given below. Mere signature on the copy of the specifications shall not be accepted as a compliance statement.

The figures so mentioned should be supported by record of these in the technical literature enclosed with the tender and reference to the page number of enclosed literature for all features and technical specifications should be mentioned in the relevant column. Offers without the compliance statement or with incomplete compliance statement will liable to be rejected with the sole responsibility of the bidder. **Any deviation from the specifications detailed in the compliance statement is to be highlighted separately.**

Sr. No of DD specs.	DD specs.	Compliance (Yes/No)	Performance Fig. of product Offered.	Reference to the Page Number of enclosed literature	Deviations, in case of non-compliance	Optional items if any reqd. to make the sys. Compliant to DD specs.	Features in the offered Product which exceeds DD specs.

5. ACCESSORIES:

All the essential accessories required to complete the system should be offered by the bidder. **The bidder should certify the completeness of the system in all respect.** All the optional items should be quoted separately. The bidder must provide enough details about such optional items to decide its utility.

6. DOCUMENTATION:

One set of printed technical /user manual for the offered product is to be provided on non-returnable basis along with the tender to facilitate the technical evaluation, otherwise the tender is liable to be ignored. The successful bidder will have to supply one set of printed technical /user manual.

7. GUARANTEE:

The media should be guaranteed for two years of trouble free operation from the date of supply. In case of any failure within this period, the same shall be replaced free of cost to Doordarshan.




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8. ADVANCE SAMPLE & ITS TESTING:

The firms are required to submit advance samples of the offered media for technical evaluation on non returnable basis along with the tender. Offers without the advance samples are likely to be rejected. If required, the firm has to arrange for the technical facilities & the logistics required for the testing of the advance sample on a notice of 3 days.

9. INSPECTION:

The product shall be subjected to inspection by authorized Doordarshan officials at New Delhi.

10. ENCLOSURES:

The bidder must necessarily submit the following enclosures along with the technical bid:

- (a) Compliance statement with respect to all the points of the specifications duly signed by the OEM.

The reference to the page number of enclosed literature for all features and technical specifications should be essentially mentioned in the relevant column of the compliance statement.

- (b) Technical manuals/Detailed technical literature/catalogues for all the offered products for substantiating the model no. and technical specifications.
- (c) **Model specific User list of the offered product.**
- (d) Any other document mentioned elsewhere in the tender document.

The tender is liable to be rejected in the absence of the above enclosures with the sole responsibility of the bidder.

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Handwritten signatures and initials: "P. S. M." and "P. S." with a checkmark.

Bill of Material Required

Sl. No.	Details of Item	Quantity
1.	23.3 GB Capacity Professional Optical Disc Media	3000 Nos.
2.	50 GB Capacity Professional Optical Disc Media	3000 Nos.
3.	User Guide/ Technical Manual etc.	4 Lots

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Appendix-II**LIST OF DOORDARSHAN CENTRES**

Sl. No.	Zone	Location of Doordarshan Centre	Qty.	
			23.3 GB Capacity Disc	50 GB Capacity Disc
1.	North Zone	Delhi	1000 Nos.	1000 Nos.
2.	West Zone	Mumbai	1000 Nos.	1000 Nos.
3.	South Zone	Chennai	500 Nos.	500 Nos.
4.	East Zone	Kolkata	500 Nos.	500 Nos.
TOTAL			3000 Nos.	3000 Nos.

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