RESEARCH DESIGNS & STANDARDS ORGANISATION
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RDSO/M&C/NDT/108/**2007, (Rev-2), July 2020**

SPECIFICATION FOR ULTRA-VIOLET INTENSITY METER

Amendment History:

S. No.	Amendment date	Version	Reasons for Amendment
1.	1991	NA	First issue specification No . M&C/NDT/7/91 APPD.
2.	March 2007	NA	First revision of specification No . RDSO/M&C/NDT/108/2007, Rev-I, March 2007.(Specification renumbered)
3.	September 2012	NA	Reaffirmed
4.	…..07.2020	1.0	The Specification should be generic & preferably reference to National Standard. (Reference: PED/QA (Mech)'s note no. QAM/Spl. DG/Misc., dtd. 15.06.2020).

1. SCOPE :

This specification covers the requirements of solid state intensity meter used during fluorescent dye inspection under ultraviolet light. The equipment shall be able to measure easily and accurately the intensity of black light (ultraviolet lamps) on a digital display read-out.

2. ACCURACY:

The equipment shall have an accuracy of ± 5% when measured against a reference standard.

3. RANGE:

The measuring range shall be between 0-19, 990 micro watts per square centimeter.

4. CALIBRATION:

The equipment shall be calibrated once in three years minimum against a pyroelectric system for maximum precision, excellent linearity of scale and cosine response.

5. FILTER:

The intensity meter shall be provided with a specially controlled filter to allow radiation having wave length between 330-390 nm only.

6. DISPLAY:

The equipment shall have a minimum 4 digit LED display and minimum concession rate of three readings per second.

7. RESOLVING POWER:

The metre shall have a resolution of 10 $\mu W/cm^2$ or better.

8. BATTERY:

For operating the equipment, it shall be provided with 4x1.5V rechargeable Ni-Cd battery complete with **charger** with a life-cycle of 1000 recharging. It shall also have indicator for battery condition or 'AA' alkaline.

9. CONNECTOR CABLE:

The read-out unit shall be connected with the sensor through a 1 m long cord. The cord shall be of high quality flexible material.

10. GENERAL:

The equipment's electronic **circuitary** shall be housed in an attractive casing of polymeric material having high strength and abrasion resistance. To facilitate storage and usage on shop floor, the entire set shall be supplied in a proper carrying case complete with foam pads etc. to resist shock or impact.

11. WEIGHT & DIMENSIONS :

The equipment shall not weigh over 1 Kg and dimension shall not exceed 20 **c**m long x 10 **c**m width x 6 **c**m height.

12. GUARANTEE:

The equipment shall be guaranteed for trouble free operation for a minimum period of 2 years and shall be repaired / replaced in the event of any manufacturing deficiency within this period.

NOTE : "Firm should comply Make in India policy and Public Procurement (Preference to Make in India) order - 2017 under this specification" and subsequent amendment done time to time.

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