

3M™ EM Eye Meter CTM048

The portable, easy-to-use EM Eye Meter CTM048 serves as a measuring instrument for most ESD signals. The EM Eye Meter CTM048 measures the magnitude of ESD events. This meter also provides filters to estimate the events magnitude for CDM, HBM and MM models.

The EM Eye Meter CTM048 has optional sensors to detect EMF and RF signals.

- ESD Events Detection – The EM Eye Meter CTM048 is capable of measuring the magnitude (rise) of a signal from both ESD and non-ESD events. This meter provides an estimate of CDM, HBM and MM models*.
- EMF Sensor – Enables the EM Eye Meter CTM048 to be transformed into an EMF Meter, Power Density Meter and EIRP Meter.
- RF Signal Sensor – The EM Eye Meter CTM048 measures the amplitude of RF signal.

**Not all ESD events are captured by the EM Eye Meter CTM048. The magnitude of the event can be measured. CDM, HBM and MM Model results are estimated based on proprietary algorithms.*

Features

- Sensor Modular Construction
- ESD*/EMF/RF Measurement
- Reject Most Non-ESD Events
- ESD Event Count
- Portable
- Local and Remote Antenna
- Touch Screen
- microSD™ Card for Data Storage
- Audio Output
- Rechargeable Battery

Key Advantages

- Rejection of most Non-ESD Events
- User-Friendly Interface with Graphic and Touch Display
- Multi-Sensor Capabilities
- ON/OFF Using Touch Screen

Applications

- Electronics Assembly
- Semiconductor Device Manufacturing
- Industrial Robotics
- Back-End Semiconductor Tools
- Tool Clusters
- Design and Communication
- Antenna Tuning



Product Data Sheet

3M™ EM Eye Meter CTM048

Specifications

GENERAL

Audio Indicators	Speaker: Beep or analog audio with selectable volume
External Data Storage	microSD™ Card
Recording Interval	Peaks: 1 – 360 seconds Average signals: 0.1 – 360 seconds
Display	Touch LCD
Size	65 W x 32 D x 105 L mm
Headphone Jack	3.5 mm (1/8 in.)
Power Supply/Charger	Input: 100-240V ~ 50-60 Hz 0.2A Output: 5.0V 1000mA Center: Positive, ID 1.3 mm; OD 3.5 mm

ESD EVENT SENSOR

ESD Event Detection Characterization Modes	Raw input for magnitude and estimated CDM, HBM, MM using proprietary algorithm
Raw Input Resolution	1mV (1mV-15mV) ; 15 mV (15mV-1500mV) (Detection Resolution: 1mV)
Threshold (Display) Resolution	1-10 Volts, 10-990 Volts Raw input: 1mV (1-15mV) and 15mV (15-1500mV)
Distance Detection Range	1.3 cm (0.5 in.) – 38.1 cm (15.0 in.)
ESD Counter Range	0 – 32,767 counts (screen count)
Hardware Setup	Adjustable Brightness, Auto-off-time

Specifications

ELECTROMAGNETIC FIELD SENSOR

Function Modes	Electromagnetic Field	Power Density meter	EIRP meter
Peak range	Min: 0.001 V/m Max: 20.00 V/m	Min: 0.027 nW/cm² Max: 106.1 uW/cm²	Min: 0.001W Max: 5333 W
Average range	Min: 0.001 V/m Max: 20.00 V/m	Min: 2.65 nW/m² Max: 1.06 Watts/m²	
Units	V/m	W/cm²	Watts

Antenna Factor range	-40.0 to 40.0 dBm
Hardware setup	Brightness, Off-time, Antenna factor (AF)
Antenna options	Local, or remote (CTC 111)
Record interval range	1 – 360 seconds
Record average range	0.1 – 360 seconds

RF SIGNAL SENSOR

Unit modes	dBuV , dBm , mV
Dynamic range	Min: -55 dBm Max: 0 dBm
ATT (Attenuation)	00 dB / 20 dB

Product Data Sheet

3M™ EM Eye Meter CTM048

3M is a trademark of 3M Company. microSD is a trademark of SD-3C, LLC Limited Liability Company Delaware.

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.



Electronics Materials Solutions Division Static Control Products

926 JR Industrial Drive
Sanford, NC 27332-9733
Toll-Free: 866-722-3736
International: 919-718-0000
Email: 3mstaticinfo@mmm.com
www.3Mstatic.com

Please recycle. Printed in USA.
© 3M 2014. All rights reserved.
78-9102-1853-2 JHA

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for one year from the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

3M:

[CTM048-28](#) [CTC028](#) [CTC021](#) [CTM048-29](#) [CTM048-21](#) [CTM048-2128](#) [CTC029](#)