



TM2

TEXTURE METER

TM2 specifications

Laser line sampling frequency	400Hz
Laser line sampling length	100mm
Profile depth measurement range	50mm
Profile depth measurement resolution	<0.05mm
Walking speed range	Up to 10Kph
Survey distance with external USB flash disk	>10km
Batteries – lithium ion rechargeable	36v
Battery operating time	Up to 10 hours
(Battery also replaceable with simple docking system)	
CE approval	YES
ISO Compatibility	ISO 13473 in three parts
Weight	22 kg
Folded size	Length 960mm Width 540mm Height 400mm



Designed & manufactured by W.D.M. Limited

For technical information and sales:

W.D.M. Limited, Staple Hill, BRISTOL, BS16 4NX, England

Telephone +44 117 956 7233

Facsimile +44 117 957 0351

Email tm2@wdm.co.uk

Web www.wdm.co.uk

W.D.M. Limited reserve the right to modify the design without prior notice.

TM2

TEXTURE METER



TM2

The updated **TM2** surface texture meter with the latest electronics is the result of an extensive in-house research and development programme by WDM* to provide all the functionality of a routine texture measurement instrument, coupled with extensive analysis tools.

The **TM2** is recognized as delivering the definitive pavement surface texture measurement standard. The updated **TM2** measures a broad swathe of the road profile transversely over a width of 100mm at very frequent intervals to build a detailed record of the surface, with its average texture depth, and deliver repeatable and consistent results.



It is widely recognised that pavement texture is an extremely important factor in the control of surface friction and subsequent road safety. It is also an important parameter for the determination of factors such as noise emission from vehicle tyres.

The design used in the **TM2** is based on proven concepts, but it's been radically re-engineered to incorporate the latest available technology and measurement techniques.

The updated **TM2** projects a very thin continuous line of light onto the road surface, transversely to the direction of travel.

This procedure creates a broad swathe of road profile measurement across the road surface over a width of 100mm, which is repeated every 2mm at an average walking speed of 3.5kph. 100mm has been chosen to provide the MPD statistical 100mm length (as determined in ISO 13473) and to maintain the low profile of the device. The device is easy to operate and delivers repeatable and consistent results. Dropout levels, often a major problem on new asphalt, are generally low, typically around 5%.

KEY FEATURES

- DELIVERS ACCURATE SURFACE TEXTURE MEASUREMENT AND DATA STORAGE IN A PORTABLE, ERGONOMICALLY DESIGNED PACKAGE.
- MEASURES THE ROAD PROFILE TRANSVERSELY OVER A WIDTH OF 100MM AT VERY FREQUENT INTERVALS TO BUILD A DETAILED RECORD OF THE SURFACE.
- OPTIONALLY STORES RAW TEXTURE PROFILE IN REAL TIME DURING SURVEY.
- CONTINUOUS OPERATING TIME OF UP TO 10 HOURS ON ONE BATTERY CHARGE.
- CALCULATES AND DISPLAYS ROOT MEAN SQUARE TEXTURE DEPTH (RMSTD) AND MEAN PROFILE DEPTH (MPD) TO PROVIDE 10 AND 50 METRE AVERAGES.

Data storage

Survey data is stored on external USB pen drives and 1km of standard texture data providing 10 and 50m results will require only 50Kb of data storage. If 'raw' data is selected, 1km of test data will require 230Mb of data storage.

Power Source

The updated **TM2** and laser sensor unit are powered from a re-chargeable 36v lithium ion battery system capable of operating continuously for approximately 10 hours. The charger supplied with **TM2** provides safe and fast charging. The battery is also supplied with a simple docking system so a spare battery can easily be used, greatly extending the operational use.

Survey detail

The operator can optionally choose to store standard texture data files or all the raw data, which can then be analysed using stand alone replay facilities. A text file facility is also provided, should the data require specific information for later referral.

Check mat

In order to provide reassurance that the updated **TM2** is functioning correctly, a check mat is included with the accessories, which in conjunction with the check mat program, offers a facility for checking the operation of the whole system.

Computer

The **TM2** utilizes a 7" fanless, widescreen WVGA Touch Panel PC, incorporating an Intel Atom N270 1.6GHz Processor. The operating system for the unit is Windows embedded XP. The unit has a resistive touch screen which may be operated by finger or stylus (a stylus is provided) and 1GB SDRAM.

The non volatile storage inside the PC is a write protected 4GB Compact Flash Card. This makes the unit very robust and resistant to program corruption.

Data can be transferred from the **TM2** to a removable USB pen drive for non-volatile storage. The panel PC itself is attached by a one-click operation and is fully manoeuvrable to provide the optimum viewing position.



Accessories

- Battery charger
- Check mat
- Tyre Pressure gauge
- Tyre pump
- M5 security Allen key
- M6 Allen key

