

B

System Integration



System Integration

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3D ProfileMaster - 3D 非接觸式量測儀

3D ProfileMaster 是一台高精度的同軸雷射表面量測系統，此系統核心採用以色列同軸雷射探頭，可在多種不同材質表面上進行三軸的量測與成像，可根據不同應用提供研究、量測與審查等任務，並保持高精度的真實效能。

此同軸雷射可依照待測物的高低差搭配不同的鏡頭，量測範圍可從 0.12mm 至 180m 並達到微米等級的量測精度。X、Y、Z 三軸為電控移動，提供最簡易的軟體操作使量測過程簡易化，並可依照您的需求提供客製化軟體服務，大大節省量測與報告製作時間。

強大的量測能力像是透明玻璃鏡片、高反射金屬、塑膠、深色橡膠、電路板、液體等等都可幫您達到最佳的量測效果。

3D ProfileMaster 提供半徑、直徑、角度、高度、孔 / 溝深度、曲度、球形曲度、距離與全 3D 的 CAD(Computer Aided Design) 比較等其他量測功能。

產品特色

- * 複雜幾何圖形之 3D 量測
- * 共線技術能應付盲孔
- * 即時在線量測
- * 可替換之物鏡 (16 to 250mm)
- * 手機玻璃厚度
- * 鍍膜檢測
- * 量測速度 3000 ~ 9000Hz

軟體功能

- * 表面粗糙度
- * 深度 (高度、厚度)
- * 長寬尺寸
- * 角度
- * 曲率半徑



Collinearity



Time saving



3D Imaging



In line inspection

量測技術 - 獨特的能力



OEM 設計開發可依需求開發量測功能結合現有檢測設備



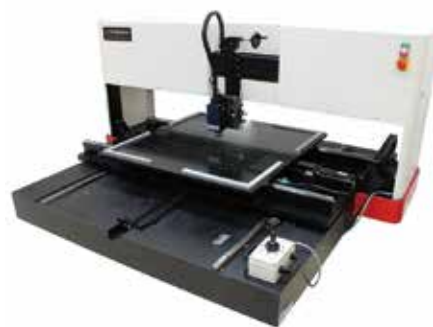
量測功能健全應用於不同材質表面 - 透明、半透明、高反射率、粗糙面皆可量測



超大的角度量測量測角度可至 170 度可使難以量測之處保有高精度再現性



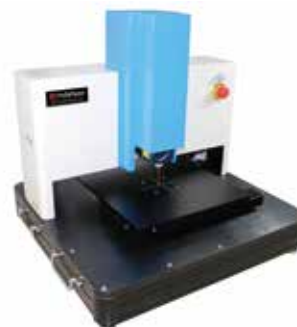
表面量測無死角可量測深孔比 1:10 配合特殊光學鏡組可做側向表面掃描



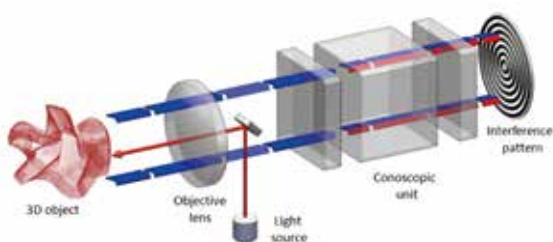
09IAE-909020-G-3D



09IAE-303010-G-3D

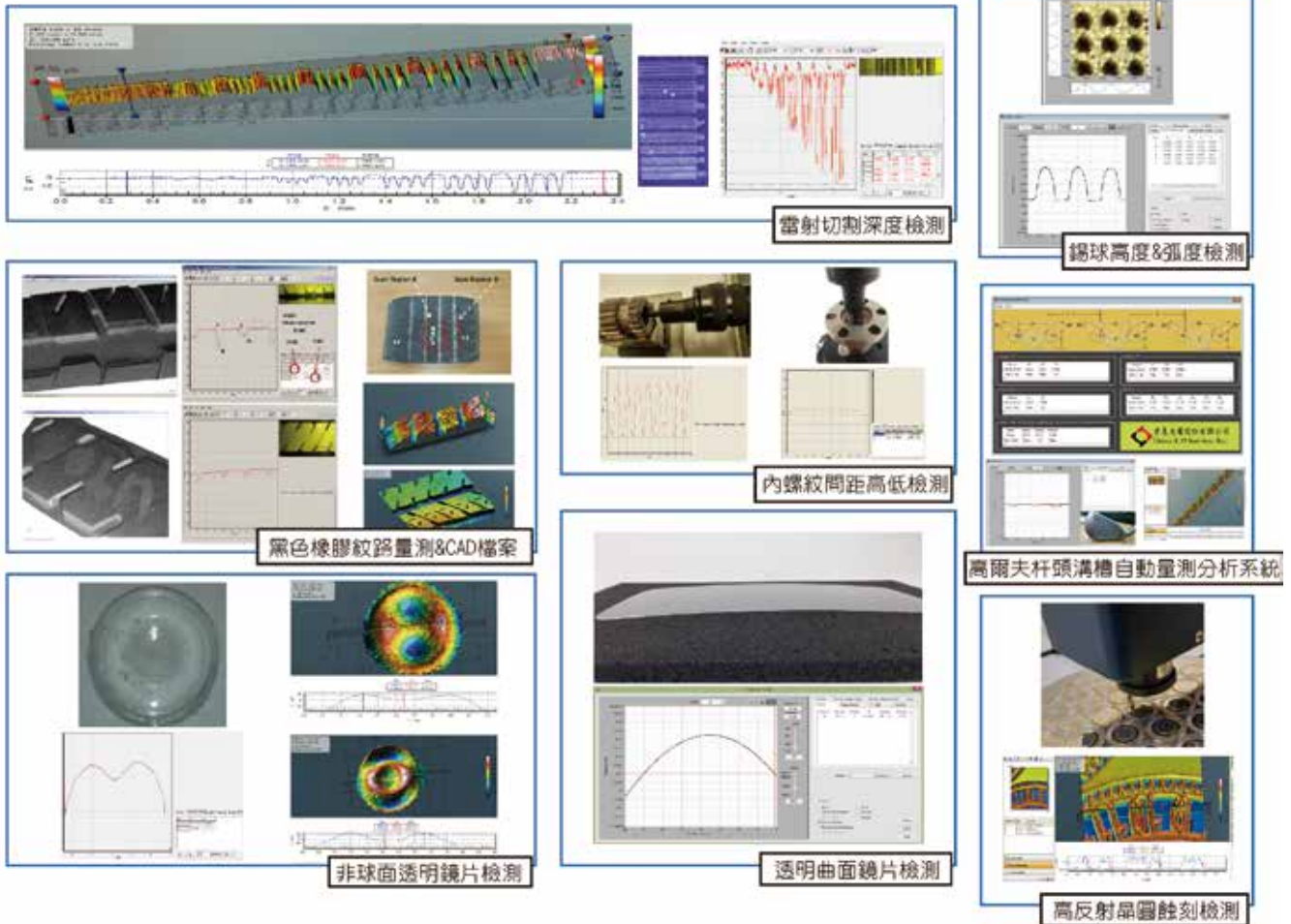


09IAE-303010-A-3D



Conoscopic Holography 是利用光學干涉方式量測物體表面三維變化，使用同軸共線收光方式可以量測到表面複雜的幾何圖形及深度過深的孔洞 (孔深比 1:10)，搭配高頻的掃描速度收集大量的單點資料使每次量測更加精準，針對不同材質，斜面，曲面，幾何圖形，皆可量測

3D 量測應用



硬體規格

XY Stage

檯面尺寸	390 x 390mm / 510 x 510mm / 900 x 900mm
行程	150mm / 300mm / 900mm
解析度	up to 0.1um
重複精度	± 1 count, depends on encoder resolution

Z Stage

行程	100 mm
解析度	0.01mm
底座	花崗岩 或 組合型鋁座
電源需求	110V/220V

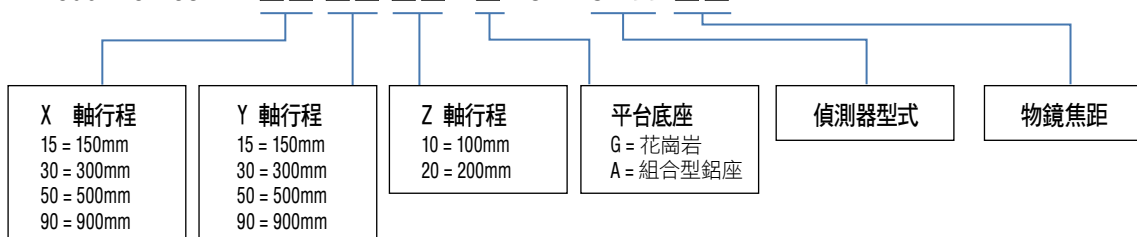
偵測器規格

Scanner Type	Lens Size	Precision	Working range(mm)	Repeatability(um)	Laser spot size(um)	Cover angle(deg)
R type for Reflective	25mm	0.5um	1	0.06	< 5	5
	50mm	2um	5	0.1	16	3
C type for Diffusive	25mm	3um	1.8	0.06	27	150
	50mm	6um	8	0.1	37	170
	75mm	10um	18	0.3	47	170

* Higher working ranges are available.

訂購資訊：

Model No : 09IAE- - - 3D - CPXX-



* 其他行程或規格可依客戶需求訂製

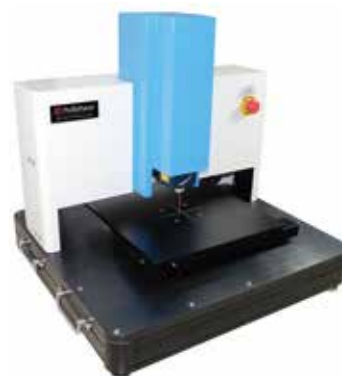
3D ProfileMaster - 3D None Contact Profile Measurement / Inspection System



09IAE-909020-G-3D



09IAE-303010-G-3D



09IAE-151510-A-3D

- * High standard quality control usage
- * Up to 0.2um precision
- * Full inspection process & auto analyzed functions
- * Able to measure all kinds of materials
 - transparent and dark samples
 - high reflective and diffusive
 - measuring range up to 180mm (Z axis)

It's here to make things better



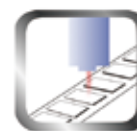
Collinearity



Time saving



3D Imaging



In line inspection



Able to measure objects ranging from sub-microns to half a meter, using interchangeable lenses



Capable of measuring angles very close to normal incidence, as high as 85°. This unique capability permits the reproduction of complex shapes with high fidelity to the original model without distorting the profile.



Measure different types of surfaces, such as reflective, translucent, and diffusive, with no need for coating measurement enhancing materials.



The sensor's collinear operation allows measurement of deep and narrow slots, grooves and blind holes.

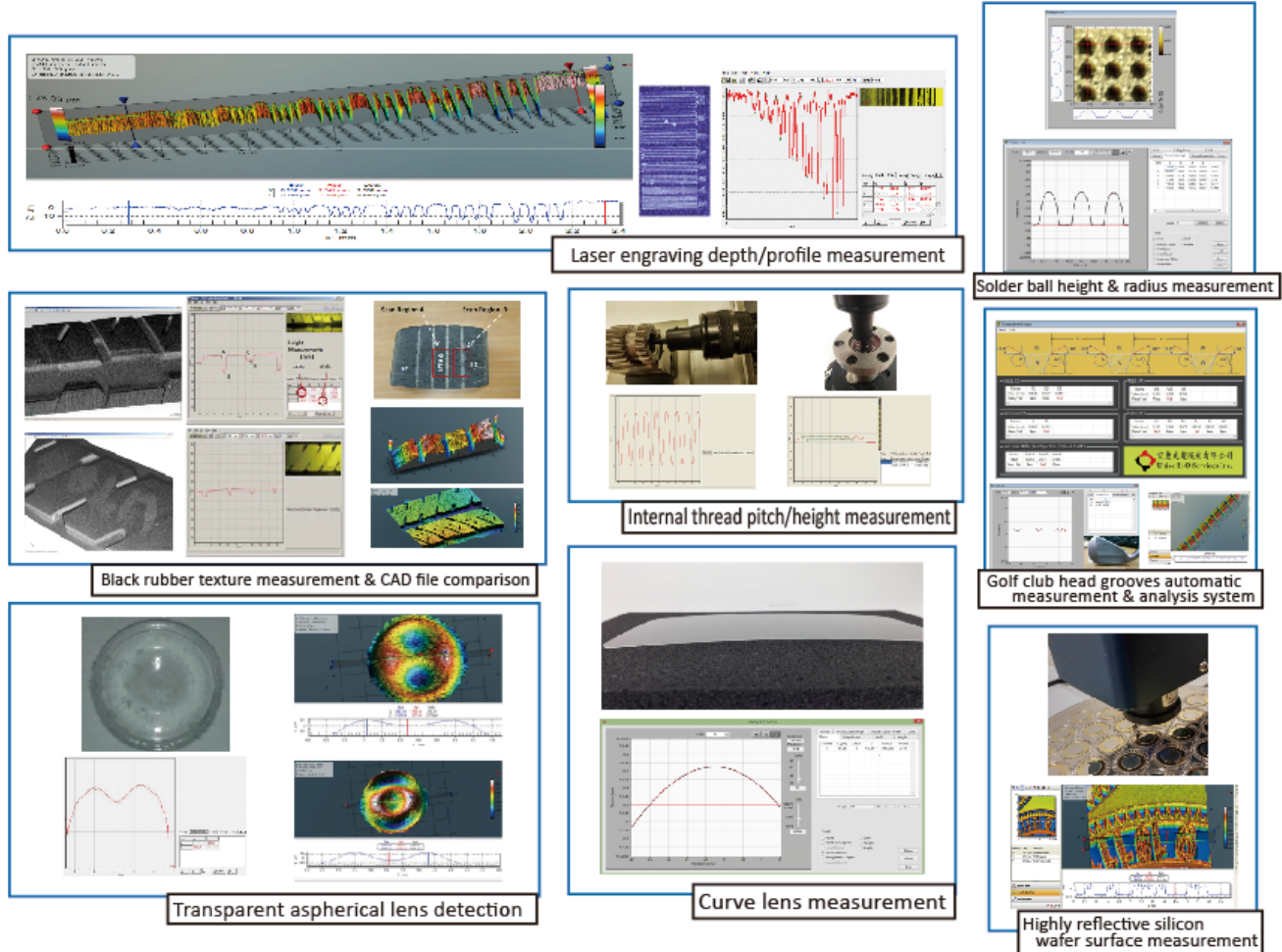
Analyzing Functions

- * Parameter, angles, depth (height), roughness (Ra, Rq), radius, distance 3D CAD comparison and auto analysis

Scanning Functions

- * X, Y Single/Multi line (snake move)
- * Full scan 3D imaging

3D Measurement Applications



Hardware Specification

XY Stage

Stage Size	390 x 390mm / 510 x 510mm / 900 x 900mm
Travel Range	150mm / 300mm / 900mm
Resolution	up to 0.1um
Repeatability	± 1 count, depends on encoder resolution

Z Stage

Travel Range	100 mm
Resolution	± 0.01mm
Base	Granite or Aluminum
Power	110V/220V

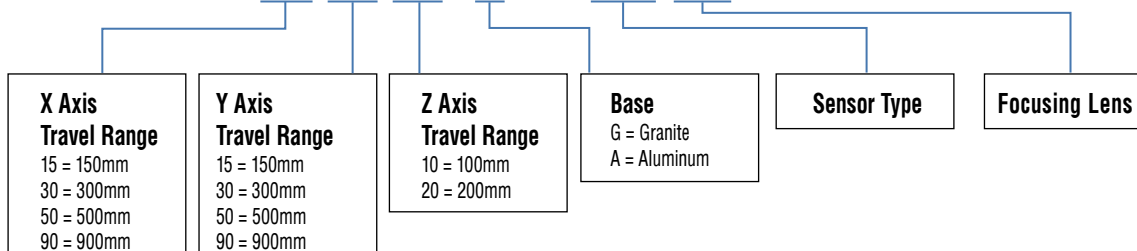
Sensor Specification

Scanner Type	Lens Size	Precision	Working range(mm)	Repeatability(um)	Laser spot size(um)	Cover angle(deg)
R type for Reflective	25mm	0.5um	1	0.06	< 5	5
	50mm	2um	5	0.1	16	3
C type for Diffusive	25mm	3um	1.8	0.06	27	150
	50mm	6um	8	0.1	37	170
	75mm	10um	18	0.3	47	170

* Higher working ranges are available.

Ordering Information:

Model No : 09IAE- - - 3D - CPXX-



*All of the mechanical parts (Stage size, travel range and mechanical precision) an analyzing software and holding mounts can be customized base on requirement.

MTF 分料機

型號：09MLMS-MTF



產品特性

- * 可以對應一至四台 MTF 機，各別讀取原始檔案，用來得到產品等級的資訊。
- * 自動讀取 MTF 機料盤的條碼，用來對應 MTF 機的原始檔案 (Best、Pass、Medium、Fail)。
- * 根據產品等級 (Best、Pass、Medium、Fail)，自動吸 / 放產品並分類於指定的料盤。
- * 讀取原始檔案後，在 PC 螢幕上即時以顏色顯示料盤上產品的等級和數量。
- * 雙 MTF 機入料盤，一盤正在分料時則另一盤待命，使分料不間斷。
- * 如果設備重新啟動 (電源關閉)，可以記憶產品放置的最後座標。
- * 吸嘴的材料是由橡膠製成，這是一個標準的商業產品。
- * 吸嘴有聯繫邊緣傳感器，重量可調範圍為 20 克 ~ 50 克。
- * Z 軸取放機械手臂可以偵測吸料是否正常。
- * 托盤堆疊系統，退料時會確認堆疊塔是否已達上限。退料時會確認產品是否擺放正確，避免堆疊時傷害產品。
- 取料盤時會確認料盤是否擺放正確。
- * 用戶可以根據自己的需要混搭不同的夾具 / 托盤 / 噴嘴。
- * 分料機包含空氣調節器和空氣罐。
- * 設備的動作區域有外罩保護。
- * HEPA 盒：安裝在上方，供應從上而下的高效正壓氣流，氣流由測邊的孔洞流出。

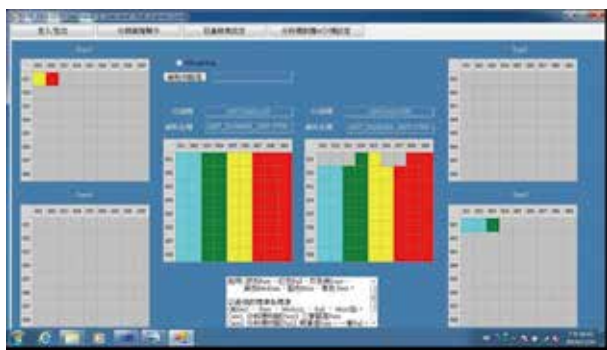
選配： 併排並且串連分料機和 MTF 機。僅拆除 MTF 機後方背版，裝配機器人手臂達到更多擴充的效果。使用雙軸 (X、Z) 機器人手臂，提高速度和效率。



內部架構



軟體介面



產品規格

產品型號	09MLMS-MTF
樣品大小	10mm (Max)
Z軸取放機械手臂數量	1 (Standard), 2 (Option)
Z軸取放機械手臂行程	30mm
每樣品分料時間	1 sec
每小時分料數量	More than 4 K/H (two PP Arm)
料盤數量	4
料盤大小	170 mm x 170mm
托盤可堆疊高度	300 mm, Maximum Loading 5Kg
Z軸取放機械手臂精度	± 20um
Z軸取放機械手臂吸力	20g ~100g
MTF機入料盤數量	2 station
滿料盤堆疊區	4 Set
空料盤堆疊區	4 Set
控制器	1 PC
操作介面	Window interface + Mouse & Keyboard
工作電壓以及電流需求	200-240 Volt, 10A
氣壓需求	5 kgs
外觀大小	1900 x 950 x 2000mm
總重量	300 kgs

Micro Lens Mapping Sorter for Trioptics MTF Tester

Model No : 09MLMS-MTF



Feature

- * The multiple sets of classified information can be read from multi-MTF Tester.
- * Automatically read the barcode of MTF Tray, according the result from MTF tester. (4 classes)
- * The product can be sort and which can be picked & placed automatically.
- * Distinguishing the degree from color of MTF tray.
- * Using the double MTF Tray, one is classified, another one ready to replace, the production process will not be interrupted.
- * If the equipment to restart, we can reserve the last coordinates.
- * The material of nozzle is made of rubber and it is a standard commercial product.
- * PP-Z has a Contact Edge Sensor, adjustable weight range: 20g ~ 50g.
- * The method of checking lenses placed successfully (Check Module Jam at Pocket). Before PP-Z places a lens, it will check the value of flow sensor. After PP-Z places a lens, it will re-check the value of flow sensor in the correct state, and the contact edge sensor should not leave.
- * Sorting tray stacker system will check whether the sorting tray stack tower is full. In order to avoid lenses crushing, the sorting tray stacker system will check that whether lenses protrude the sorting tray before stack the sorting tray. Sorting tray loader system will check the success of loading sorting tray.
- * The user can mix different fixture/tray/nozzle according to their needs.
- * The sorter contains air regulator and air tank.
- * We have a guard incrustation to cover motion workspace.
- * HEPA Box: Mounting on the incrustation, the HEPA supply positive pressure airflow from top to bottom. The airflow can outflow the equipment by the holes on both sides of baseplate and upside.

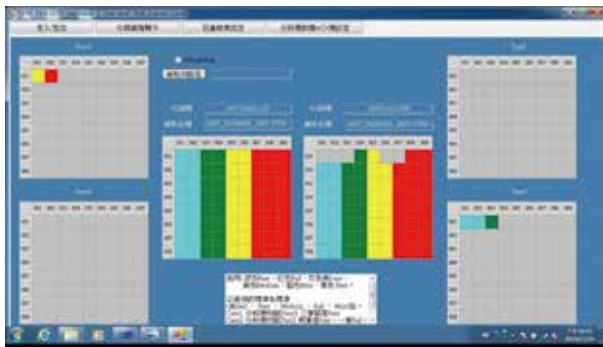
Option : Sorter and MTF Tester used side by side in series. We can combine with the robotic arm to expand ours equipment. If we would like to do it, we just remove MTF tester back-end incrustation to correction sorter and MTF tester. Using the biaxial layout of robot arm between X and Z axis to enhance the much higher speed and efficiency.



Internal Hardware



Software Interface



Specifications

Model No.	09MLMS-MTF
Lens Size (Diameter)	10mm (Max)
PP Head Number	1 (Standard), 2 (Option)
PP Z Axis Stroke	30mm
Sorting Time per sample	1 sec
Units per hour	More than 4 K/H (two PP Arm)
Bin Number	4
Tray Size (LxW)	170 mm x 170mm
Tray Stacking Height	300 mm, Maximum Loading 5Kg
Robot Pick Place Accuracy(X,Z)	± 20um
Pick Force	20g ~100g
MTF Tray	2 station
Output Stacker	4 Set
Empty Tray	4 Set
Controller	1 PC
Interface	Window interface + Mouse & Keyboard
Power	200~240 Volt, 10A
Air	5 kgs
Dimension (LxWxH)	1900 x 950 x 2000mm
Total Weight	300 kgs

XYZαδΦθ 軸立式平面顯示器品質測系統

此立式品質測系統為用來檢測 LCD 模組及背光板，主要用來連結色彩輝度計及精密移動平台，配合程式介面達到自動量測並提高色彩分析功能，以利分析及管理量測數據。由於 LCD 品質測試的量測方式繁多，故本系統中有提供量測模組，可編輯自己的測試方法，以符合 VESA-TCO-03 或 ISO 量測規範。除了平面量測外也有水平視角、垂直視角及方位視角的量測，提供更完整的測試 LCD 模組及背光板的品質。可應用冷陰極燈管、背光板、LCD、PDP、OLED 等產品檢測。

可連結輝度計，Ex：Topcon BM7、BM7 Fast、BM5A、SR3、CS1000 等色彩輝度計或依客戶需求連接至其他量測儀器。

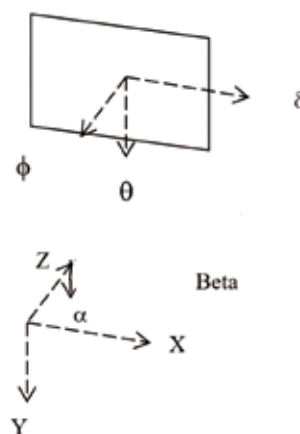
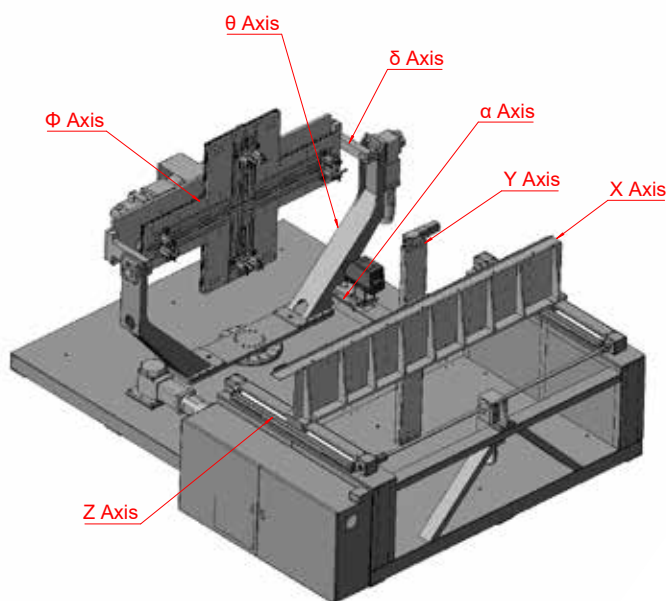


量測內容：

- * 輝度量測 (Luminance) / 含色座標與色溫
- * 色域、色度 (Color Gamut)
- * 視角 (Viewing Angle) / 標準
- * 方位角強度變化
- * 串音 (Cross Talk)
- * 灰階 (Gray Scale)

電控軸：

- X 軸：影像水平軸 (輝度計側)
- Y 軸：影像垂直軸 (輝度計側)
- Z 軸：量測距離軸 (輝度計側)
- A 軸：α 軸量測角度軸 (輝度計側)
- D 軸：δ 軸垂直視角軸 (待測物側)
- P 軸：Φ 軸方位角軸 (待測物側)
- T 軸：θ 軸水平視角軸 (待測物側)



訂購資訊：

Model No : LCD - - SV- XYZADPT

待測物尺寸

60 = 60"
70 = 70"
75 = 75"
80 = 80"
85 = 85"

XYZ α δ Φ Axis Vertical Flat Panel Display (FPD) Quality Measurement System

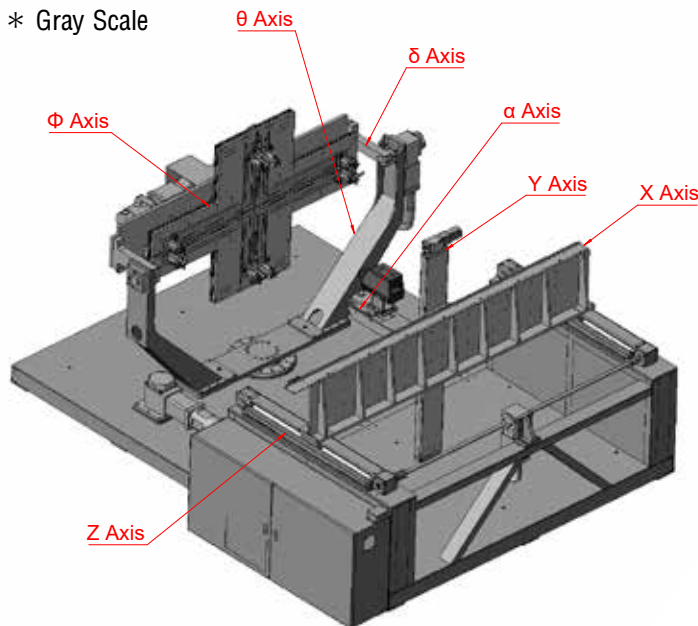
The Vertical Flat Panel Display (FPD) Quality Measurement System is used to check the quality of LCD module and backlight. The system integrated color luminance meter and precision motorized stages with our UFPMS software to perform the automatic measurement and analysis. This system provides several measurement modules, you can use these modules to create or edit your own test process to fit VESA, TCO-03 or ISO criterions. In addition to the plane measurement, the system also can provides horizontal viewing angle, vertical viewing angle and viewing cone thresholds measurements etc., provide you more complete quality measurement solution. It can be used in the CCFL, backlight, LCD, PDP and OLED products.



The system support TOPCON BM7, BM7 Fast, BM5A, SR3 and CS2000 etc., We also can support another color luminance meter depend on customer's requirement optionally.

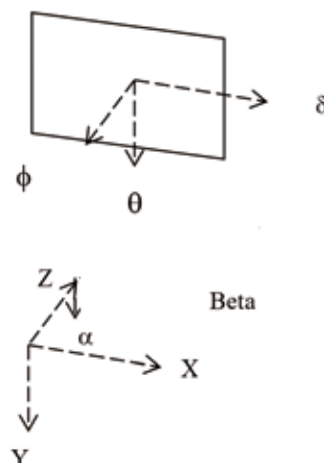
Measurement Functions:

- * Luminance / CIE color coordinate and color temperature
- * Color Gamut
- * Viewing Angle
- * Viewing Cone Thresholds
- * Cross Talk
- * Gray Scale



Motorized Axis:

- X Axis : Horizontal of the screen (LMD)
- Y Axis : Vertical of the screen (LMD)
- Z Axis : Distance of the screen (LMD)
- A (α) Axis : Adjust viewing direction angle (LMD)
- D (δ) Axis : Vertical viewing angle (DUT)
- P (Φ) Axis : Azimuth angle of screen (DUT)
- T (θ) Axis : Horizontal viewing angle (DUT)



Ordering Information :

Model No : LCD - - SV- XYZADPT

Device Under Test Size
 60 = 60"
 70 = 70"
 75 = 75"
 80 = 80"
 85 = 85"

XYZ θ 軸立式平面顯示器品質測系統

型號：LCD-55-SV-XYZDT

此立式品質測系統為用來檢測 LCD 模組、背光板或擴散膜等被動元件（選購配備），主要用來連結色彩輝度計及精密移動平台，配合程式介面達到自動量測並提高色彩分析功能，以利分析及管理量測數據。由於 LCD 品質測試的量測方式繁多，故本系統中有提供量測模組，可編輯自己的測試方法，以符合 VESA、TCO-03 或 ISO 量測規範。除了平面量測外也有水平視角、垂直視角的量測，提供您更完整的測試 LCD 模組及背光板的品質。可應用冷陰極燈管、背光板、LCD、PDP、OLED 等產品檢測。



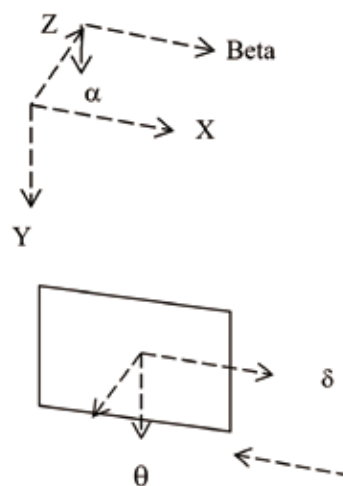
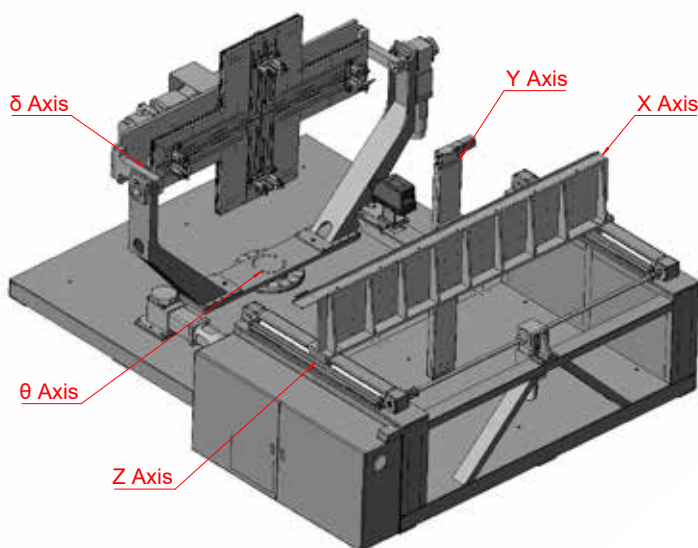
可連結輝度計，Ex：Topcon BM7、BM7 Fast、BM5A、SR3、CS1000 等色彩輝度計或依客戶需求連接至其他量測儀器。

量測內容：

- * 輝度量測 (Luminance) / 含色座標與色溫
- * 色域、色度 (Color Gamut)
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- * 串音 (Cross Talk)
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- Y 軸：影像垂直軸（輝度計側）
- Z 軸：量測距離軸（輝度計側）
- D 軸： δ 軸垂直視角軸（待測物側）
- T 軸： θ 水平視角軸（待測物側）



XYZ α δ Axis Vertical Flat Panel Display (FPD) Quality Measurement System

Model No : LCD-55-SV-XYZDT

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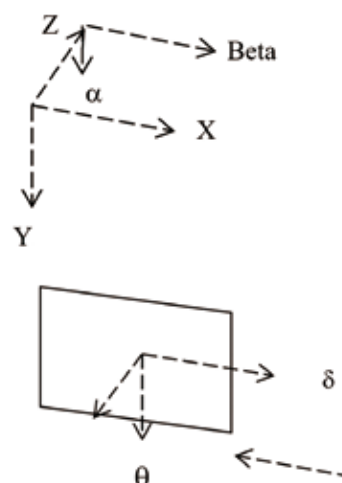
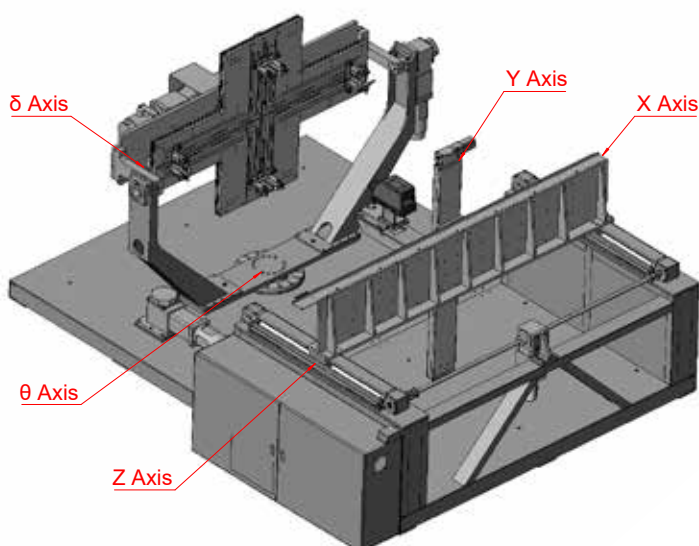
The system support TOPCON BM7, BM7 Fast, BM5A, SR3 and CS2000 etc., We also can support another color luminance meter depend on customer's requirement optionally.

Measurement Functions:

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- * Color Gamut
- * Viewing Angle
- * Cross Talk
- * Gray Scale

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- X Axis : Horizontal of the screen (LMD)
- Y Axis : Vertical of the screen (LMD)
- Z Axis : Distance of the screen (LMD)
- D (δ) Axis : Vertical viewing angle (DUT)
- T (θ) Axis : Horizontal viewing angle (DUT)



XYθΦ 軸旋臂臥式平面顯示器量測系統

型號：LCM-25-SV-XYTP

此旋臂立式品質量測系統為用來檢測 LCD 模組及背光板，主要用來連結色彩輝度計及精密移動平台，配合程式介面達到自動量測並提高色彩分析功能，以利分析及管理量測數據。由於 LCD 品質測試的量測方式繁多，故本系統中有提供量測模組，可編輯自己的測試方法，以符合 VESA、TCO-03 或 ISO 量測規範。除了平面量測外也有水平視角、垂直視角的量測，提供您更完整的測試 LCD 模組及背光板的品質。可應用冷陰極燈管、背光板、LCD、PDP、OLED 等產品檢測。

可連結輝度計，EX：Topcon BM7、BM7 Fast、BM5A、SR3、CS1000 等色彩輝度計或依客戶需求連接至其他量測儀器。

量測內容：

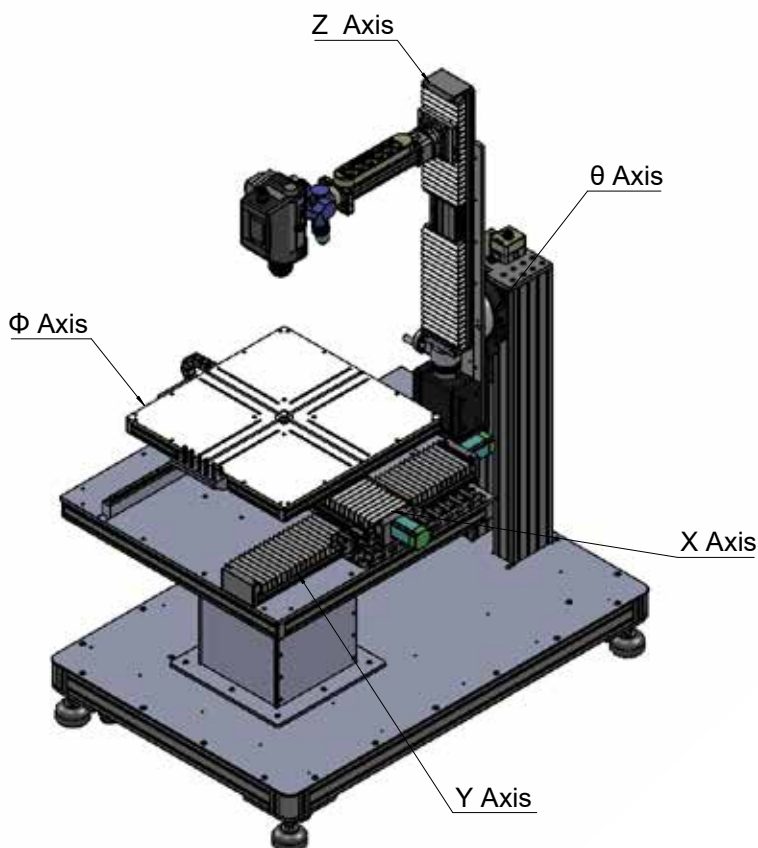
- * 輝度量測 (Luminance) / 含色座標與色溫
- * 色域、色度 (Color Gamut)
- * 視角 (Viewing Angle) / 標準
- * 方位角強度變化
- * 串音 (Cross Talk)
- * 灰階 (Gray Scale)

電控軸：

- X 軸：影像水平軸（輝度計側）
- Y 軸：影像垂直軸（輝度計側）
- T 軸：θ 軸水平 / 垂直視角軸（待測物側）
- P 軸：Φ 軸方位角軸（待測物側）

手動軸：

- Z 軸：量測距離軸（輝度計側）



XY θ Φ Axis Vertical Cantilever Flat Panel Display (FPD) Quality Measurement System

Model No : LCM-25-SV-XYTP

The Vertical Cantilever Flat Panel Display (FPD) Quality Measurement System is used to check the quality of LCD module and backlight. The system integrate color luminance meter and precision motorized stages with our UFPMS software to perform the automatic measurement and analysis. This system provides several measurement modules, you can use these modules to create or edit your own test process to fit VESA, TCO-03 or ISO criterions. It can be used in the CCFL, backlight, LCD, PDP and OLED products.

The system support TOPCON BM7, BM7 Fast, BM5A, SR3 and CS2000 etc., We also can support another color luminance meter depend on customer's requirement optionally.

Measurement Functions:

- * Luminance / CIE color coordinate and color temperature
- * Color Gamut
- * Viewing Angle
- * Viewing Cone Thresholds
- * Cross Talk
- * Gray Scale

Motorized Axis :

X Axis : Horizontal of the screen (LMD)

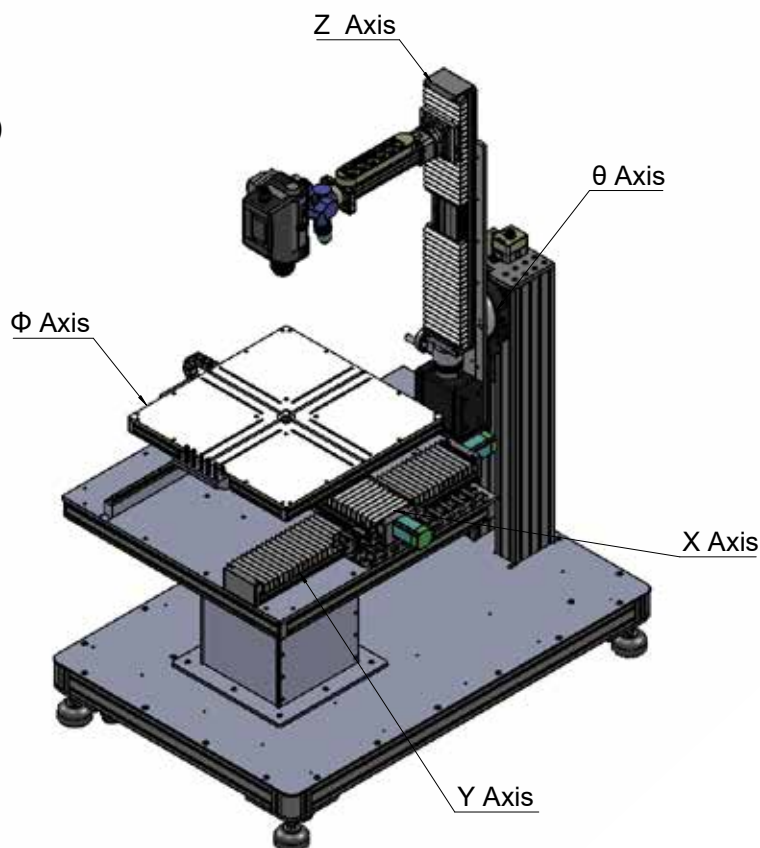
Y Axis : Vertical of the screen (LMD)

T (θ) Axis : Horizontal / Vertical viewing angle (DUT)

P (Φ) Axis : Azimuth angle of screen (DUT)

Manual Axis :

Z Axis : Distance of the screen (LMD)



XY 軸中尺寸臥式平面顯示器量測系統

型號：LCM-25-ST-XY

此臥式品質量測系統為用來檢測 LCD 模組及背光板，主要用來連結色彩輝度計及精密移動平台，配合程式介面達到自動量測並提高色彩分析功能，以利分析及管理量測數據。由於 LCD 品質測試的量測方式繁多，故本系統中有提供量測模組，可編輯自己的測試方法，以符合 VESA、TCO-03 或 ISO 量測規範。可應用冷陰極燈管、背光板、LCD、PDP、OLED 等產品檢測。

可連結輝度計，Ex：Topcon BM7、BM7 Fast、BM5A、SR3、CS1000 等色彩輝度計並依客戶需求連接至其他量測儀器。

量測內容：

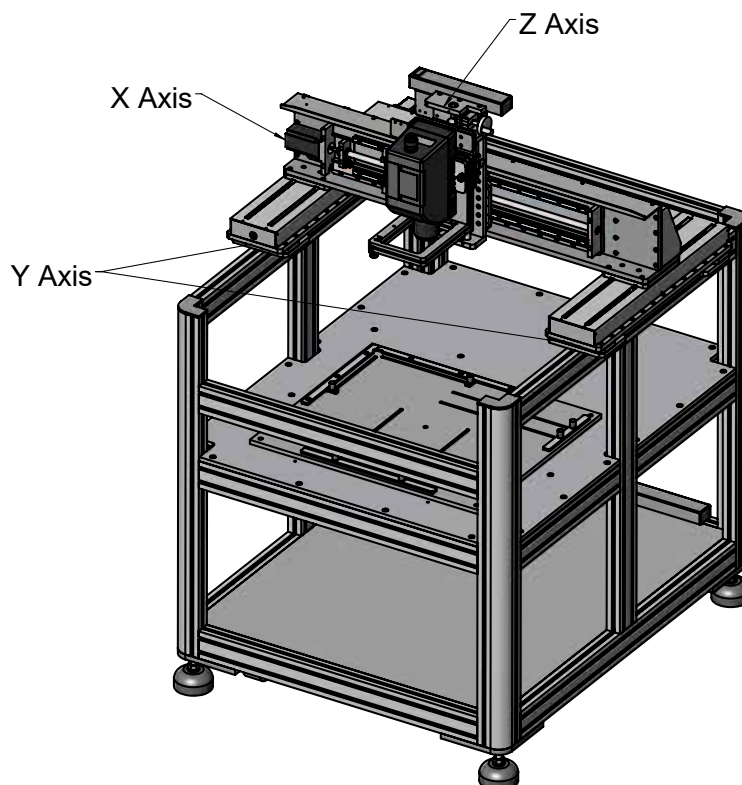
- * 輝度量測 (Luminance) / 含色座標與色溫
- * 色域、色度 (Color Gamut)
- * 串音 (Cross Talk)
- * 灰階 (Gray Scale)

電控軸：

- X 軸：影像水平軸 (輝度計側，平移)
- Y 軸：影像垂直軸 (輝度計側，平移)

手動軸：

- Z 軸：量測距離軸 (輝度計側，平移)



XY Axis Horizontal Flat Panel Display (FPD) Quality Measurement System

Model No:LCM-25-ST-XY

The Horizontal Flat Panel Display (FPD) Quality Measurement System is used to check the quality of LCD module and backlight. This system integrate color luminance meter and precision motorized stages with our UFPMS software to perform the automatic measurement and analysis. This system provides several measurement modules, you can use these modules to create or edit your own test process to fit VESA, TCO-03 or ISO criterions. It can be used in the CCFL, backlight, LCD, PDP and OLED products.

The system support TOPCON BM7, BM7 Fast, BM5A, SR3 and CS2000 etc., We also can support another color luminance meter depend on customer's requirement.

Measurement Functions:

- * Luminance / CIE color coordinate and color temperature
- * Color Gamut
- * Cross Talk
- * Gray Scale

Motorized Axis :

X Axis : Horizontal of the screen (LMD)

Y Axis : Vertical of the screen (LMD)

Manual Axis :

Z Axis : Distance of the screen (LMD)

