

# 二維彩色分析儀

## 2D Color Analyzer



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## 二維彩色分析儀 2D Color Analyzer

### 特點 Main Features

1. 可測量二維色度、輝度資訊  
**Quantitative measurement of 2D chromaticity and brightness information**
2. 內建光譜儀，可測量頻譜資訊  
**Internal spectrometer can measure frequency spectrum information**
3. 內建多片衰減片，可測量高亮度光源  
**Built-in multi-chip attenuation, measures high-brightness light sources**



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## 2D Color Analyzer



### 比較 Comparison

	量測方式 Measurement Method	資料處理 Data Processing	量測視角 Measurement Angle	動態範圍 Dynamic Range
二維彩色分析儀 2D Color Analyzer	一次量幾百萬點以上 One time measurement of more than several million pixels.	極快, 幾個按鍵即可完成進階運算 Extremely fast, only a few steps required to operate.	極小, 可以ROI合併至大視角 Minimum, Can combine ROI and a large view angle	單一影像可至1000以上 A single image can be up to over 1000
傳統式彩色分析儀 Conventional Style Color Analyzer	一次量一個點的亮度色度 Can only measure of single pixel brightness and chromaticity.	慢, 進階運算繁雜 Slow, too many operational steps required.	少數幾種, 距離遠時太大 With a few types, the distance is far and too big	高, 但為單點 High, but for a single pixel

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應用範圍

Range of Applications



Applications for Industrial FPD, LCD,  
LED, OLED, Display Panel Inspection

1. 被動\主動顯示器色彩與均勻性檢測

Passive-active monitor chromaticity and uniformity inspection

2. LED晶粒\LED light bar色度與輝度檢測

LED \ Light Bar Chromaticity and brightness inspection

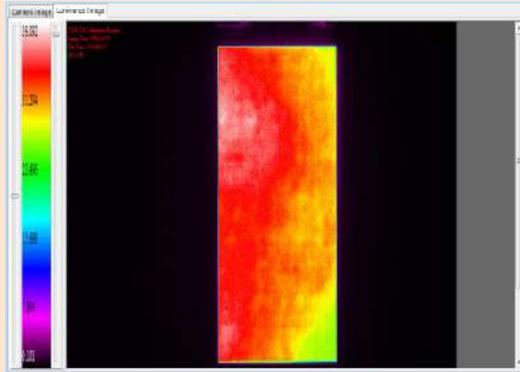
3. 光源色度與輝度檢測

Light Source Chromaticity and brightness inspection

# 二維彩色分析儀 2D Color Analyzer

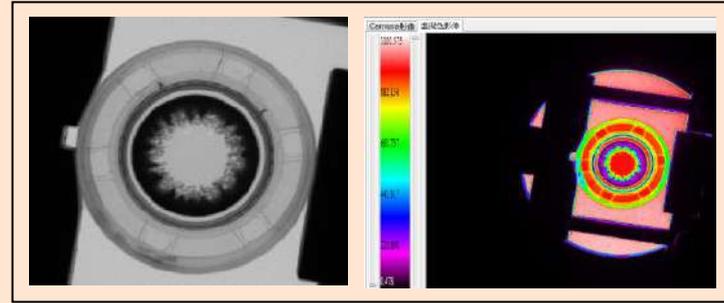
量測實例  
Example Applications

OLED



LED 光條  
LED Light Stripe

隱形眼鏡 (瞳孔放大片)  
Contact lenses (mydriasis)



原始影像      量測影像  
Original Image      Measurement Image

發光鍵盤

Illuminated Keyboard



原始影像      量測影像  
Original Image      Measurement Image



# 二維彩色分析儀 2D Color Analyzer

## 規格 Specifications

CCD resolution CCD 解析度	1392×1040 pixels
CCD A/D dynamic range CCD A/D 動態範圍	12 bits = 4096 gray scale levels
Units 單位	nits 尼特
Luminance range 輝度範圍	0.5~10 <sup>7</sup> nits (with optional ND filters)
System accuracy 系統準確度	輝度 Luminance(Y) ± 3% 色度座標 Chromaticity coordinates(x,y) < 0.0035
Short-term repeatability 短期重複性	輝度 Luminance(Y) ± 0.5% 色度座標 Chromaticity coordinates(x,y) <0.0003
Interface 介面	USB 2.0

Working distance (cm) 工作距離	Field of view (cm) 視野
45	12.2
55	14.7
65	17.2





## 二維彩色分析儀 2D Color Analyzer

### 軟體功能

### Software Function

- 可連接電源驅動器  
Connect the power driver
- 設定電壓與電流  
Set up the voltage and current
- 進行單次量測或連續量測  
Choose a single measurement  
or continuous measurement

The screenshot displays the software interface for the 2D Color Analyzer. It features a top navigation bar with tabs for 'Parameter Setting', 'Measurement', 'Analysis and Output', and 'Information'. The 'Measurement' tab is active, showing the following settings:

- Measurement Method:** Radio buttons for 'Single Measurement' (unselected) and 'Continuous Measurement' (selected).
- Power Supply Selection:** A dropdown menu showing 'KEITHLEY\_2400' and a 'Connect Instrument' button.
- Power Mode:** A dropdown menu showing 'Constant Current' and a 'Connection Status' indicator (a grey circle).
- Limited Power Setting:** Input fields for 'Voltage [V]' (0) and 'Current [A]' (0).
- Mode Selection:** Radio buttons for 'Time Mode' (selected) and 'L-I-V Mode' (unselected).
- Buttons:** 'Time Measurement Setting' and 'L-I-V Mode Setting' buttons.
- Execution Buttons:** 'Measurement Execution' and 'Stop Measurement' buttons.
- Results:** Three digital displays showing 'Voltage [V]: 0.000000', 'Current [A]: 0.000000', and 'Power [Watts]: 0.000000'.

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Power Supply

時間間隔	5	單位	秒[sec]	電流設定 Current Setting			
起始電流(A)	0.0001	電流間隔(A)	0.0001	終止電流(A)	0.0002		
						OK	Cancel

Power Supply

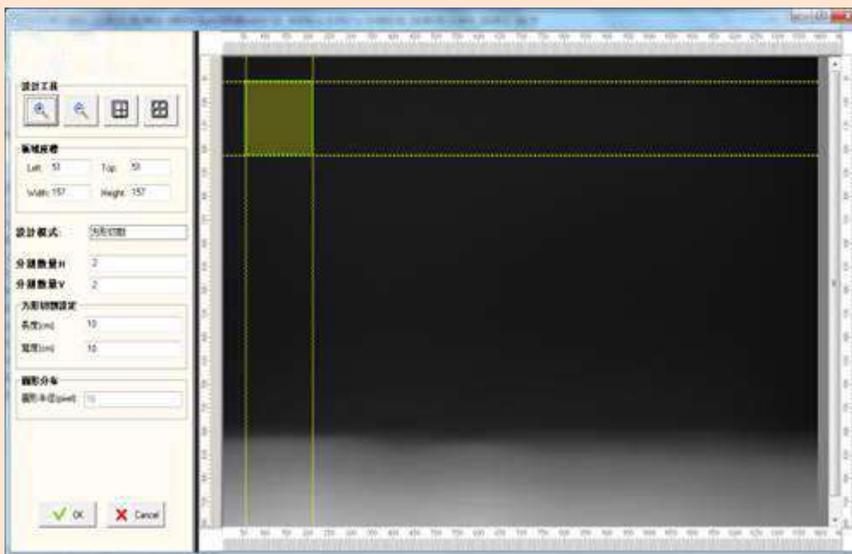
時間間隔	5	單位	秒[sec]	電壓設定 Voltage Setting			
起始電壓(V)	1	電壓間隔(V)	0.5	終止電壓(V)	2		
						OK	Cancel



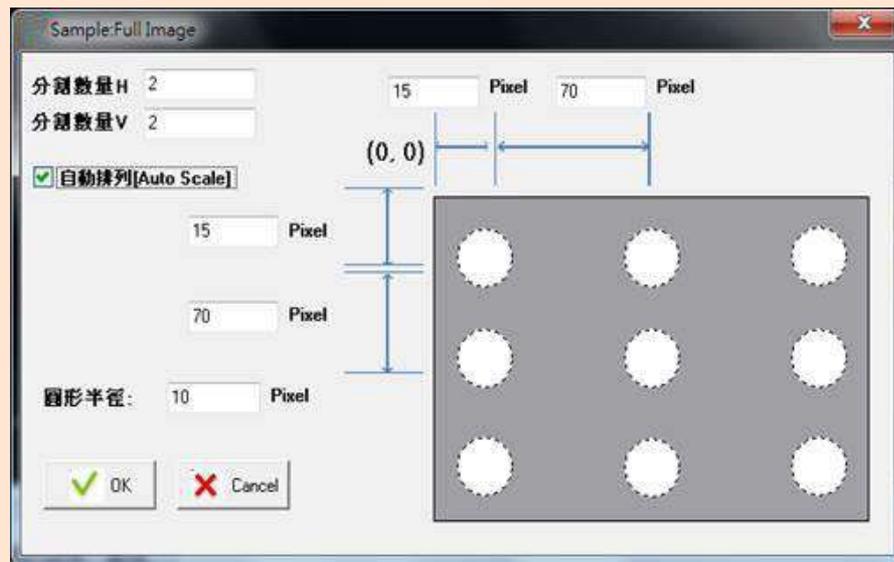
# 二維彩色分析儀 2D Color Analyzer

軟體功能  
Software Function

多種量測模式  
Measurement Modes



自選待測區域  
Optional test area



圓形分佈  
Circular distribution

# 二維彩色分析儀 2D Color Analyzer

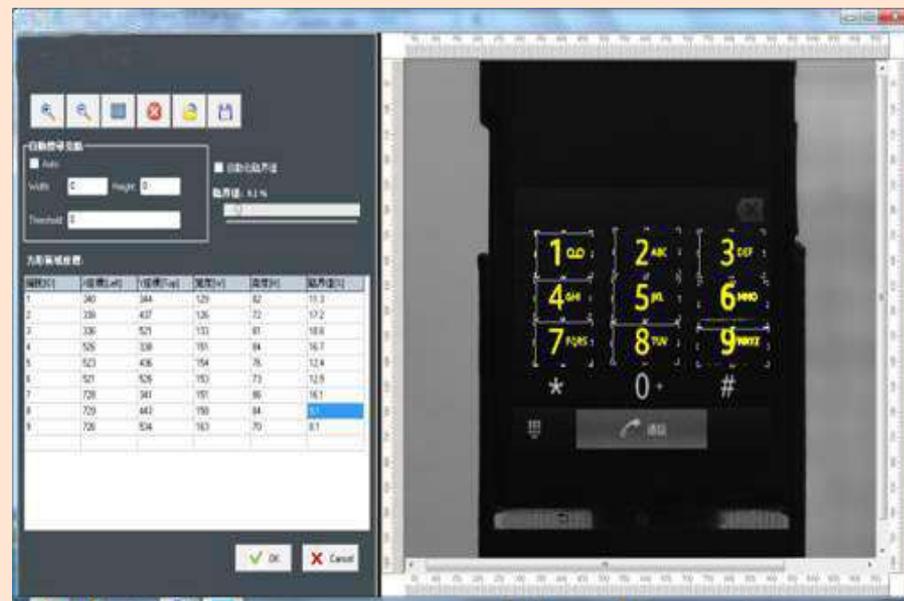
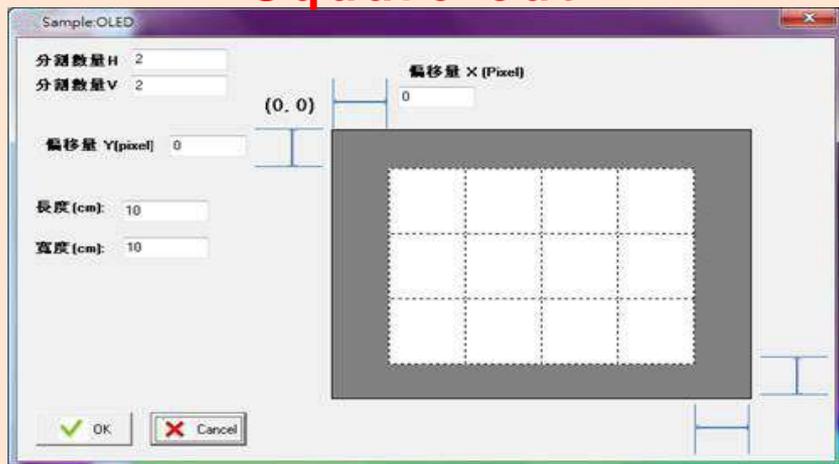


軟體功能  
Software Function

多種量測模式  
Measurement Modes

設定量測臨界值，過濾背景值干擾  
Setting measurement thresholds & Filtering background interference

方形切割  
Square-cut



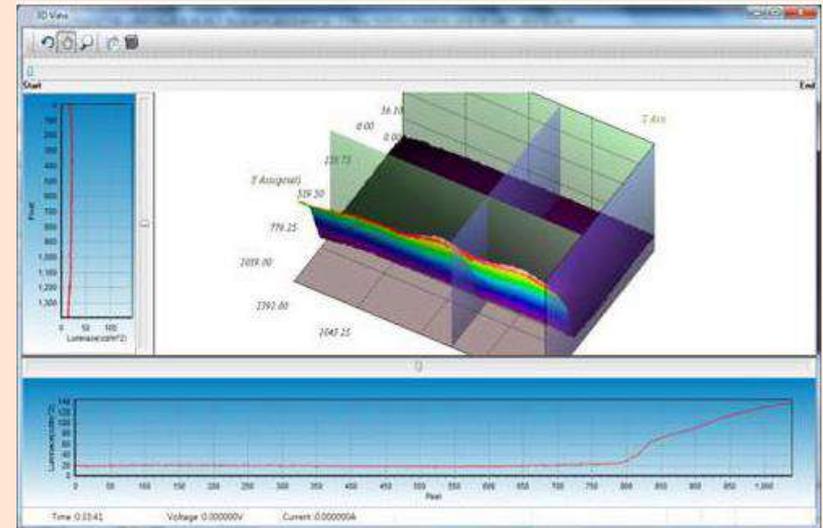
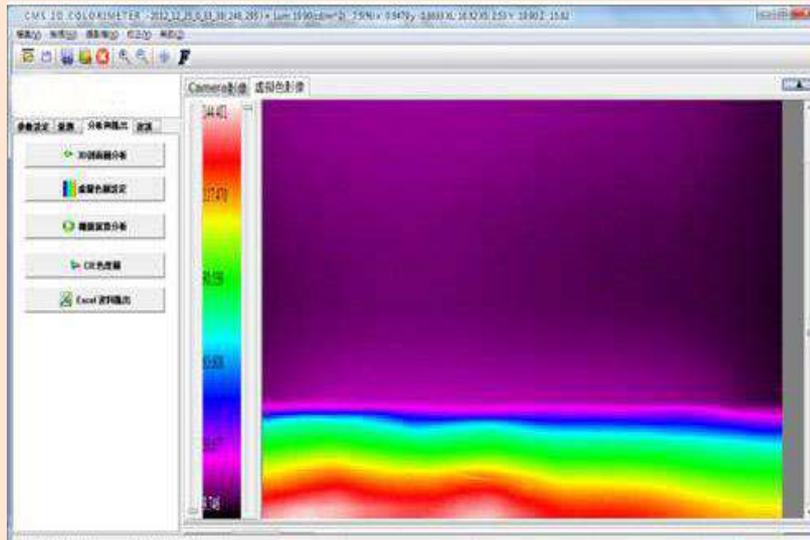
# 二維彩色分析儀 2D Color Analyzer

軟體功能  
Software Function

2D\3D 顯示模式  
2D\3D Display Mode

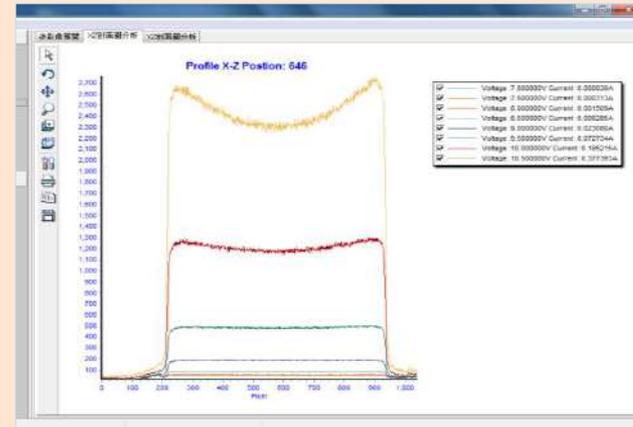
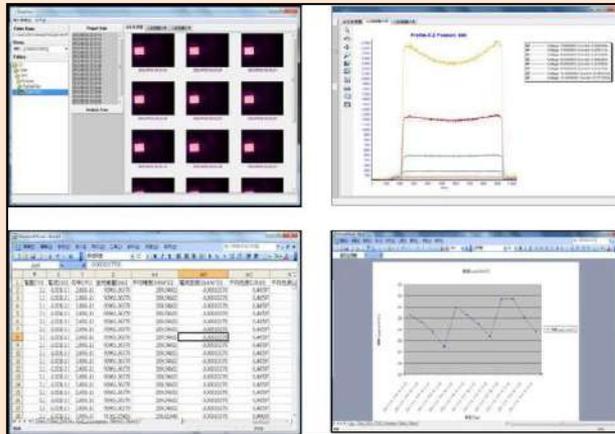
2D 虛擬色(輝度與色度均勻性)  
2D virtual color  
(Luminance & Chromaticity uniformity)

3D 剖面分析  
3D profile analysis



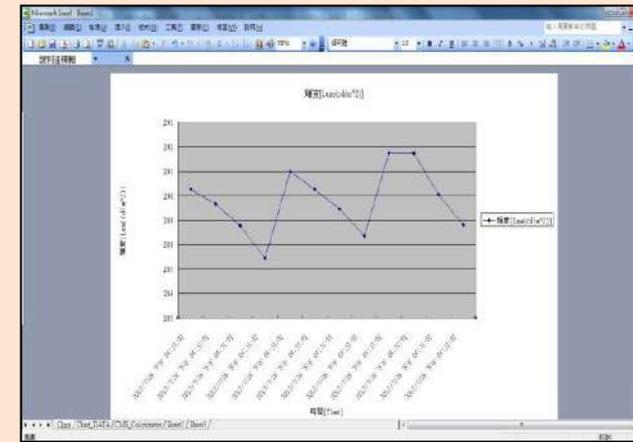
# 二維彩色分析儀 2D Color Analyzer

- 直接顯示量測圖檔，選擇要分析的檔案，並儲存成圖表  
Directly displays measurement image file, chooses important files for analysis, and stores all your completed images.



Microsoft Excel - Book1

W	X	Y	AA	AB	AC	AD	
電壓(V)	電流(A)	功率(W)	光通量(lm)	平均照度(cd/m <sup>2</sup> )	電流密度(mA/m <sup>2</sup> )	平均色度(CIE(u,v))	
2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597	
3	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
4	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
5	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
6	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
7	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
8	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
9	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
10	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
11	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
12	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
13	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
14	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
15	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
16	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
17	2.1	-1.028E-11	2.68E-11	90963.56378	289.54602	-0.00010178	0.44597
18	2.1	-1.028E-11	2.68E-11	91362.05463	290.81446	-0.00010178	0.44609



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