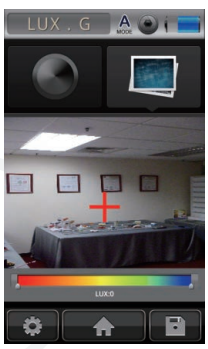
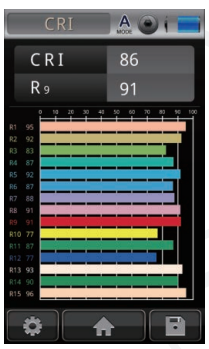
UPRtek

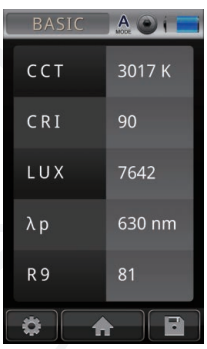
The Art of Illumination and Lighting Design

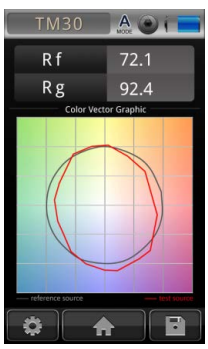
Learning how to communtcate with a light is a great knowledge. Can you imagine how the lighting designer communicate with their clients with feelings of light in the past?

It only depends on the designers experience. Nowadays, lighting designers are using 3D software DIALux to simulate and analyze the actual situation then provide the LUX and select a proper light. But, do you think this is enough? A professional lighting designer is now using tools to quantify the quality of the light source, such as CRI/Ra, CCT, CQS, TM-30-15 and LUX Image…etc. The all-purpose handheld spectrometer will increase your efficiency with less efforts, numbers will help you to talk to your clients.





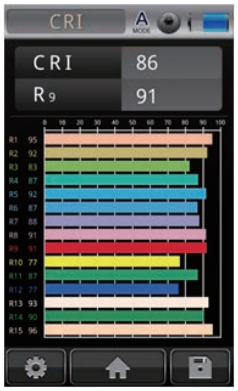




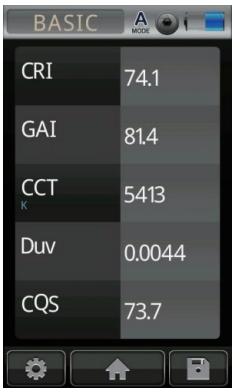
Recommended Measurement Functions

Light Quality Index

Evaluate different light source effectively, and the objects perceived color which affected from the light.



▲Color Rendering Index(CRI/Ra)

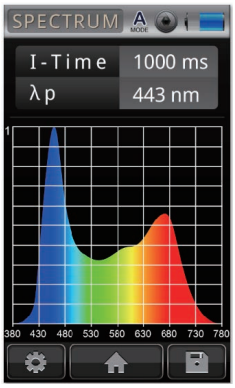


▲Gamut Area Index (GAI)
Correlated Color Temperature (CCT)
Delta uv (Duv)
Color Quality Scale (CQS)

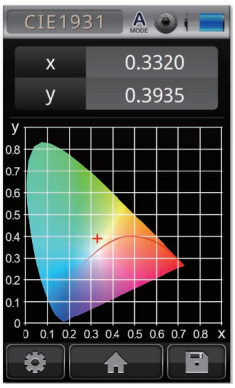
▲TM-30-15 Color Vector Graphic

Comprehensive Evaluation Model

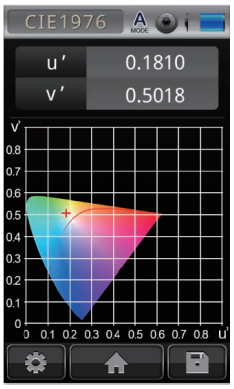
Identifies the distribution of light intensity and chromaticity coordinates objectively.



▲Spectrum Mode



▲CIE1931 Mode



▲CIE1976 Mode

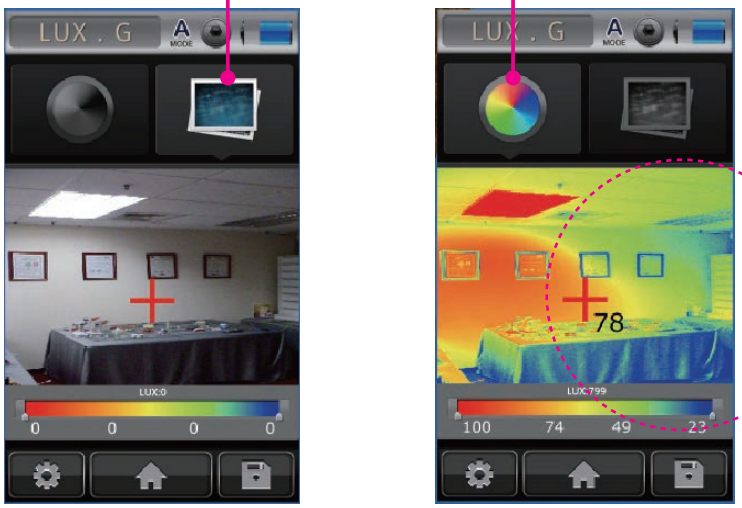
Recommended Measurement Functions

LUX Image

Visualizing the real-time lux distribution by using UPRtek spectrometer can improve the working quality and efficiency for lighting designers and also project owners satisfaction.

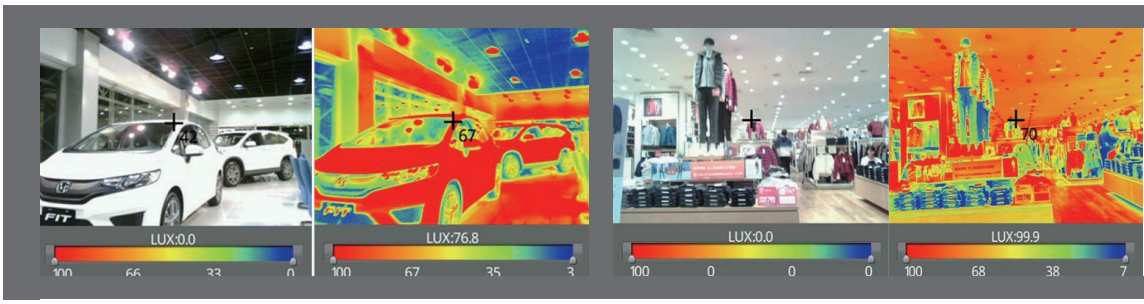
Photo of the Scene:
Just little difference with light intensity distribution.

LUX Image Distribution:
Light intensity: Left>Right

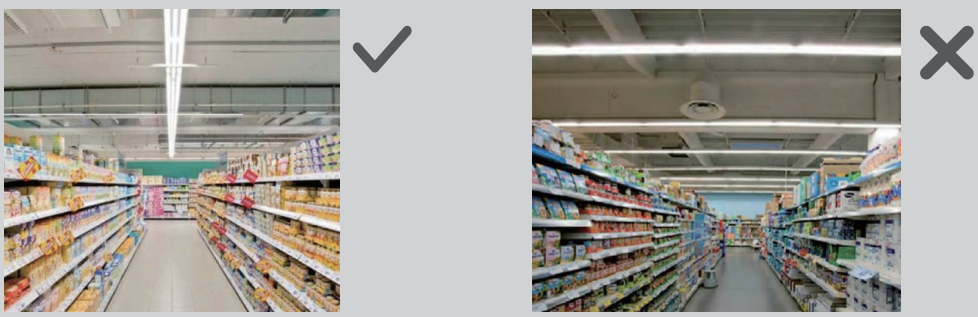


Suggest increasing the light intensity on the right side to balance the light.

Successful Cases: Lighting design and light distribution design complement each other.



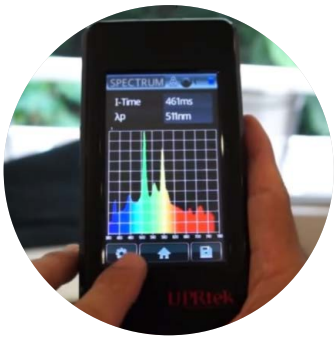
▲Automobile Exhibition Center ▲Apparel Exhibition Center



▲Ideal Shopping Arcade ▲Unfavorable Shopping Arcade

Measurement Description

Multiple measurement solution provider, unlimited capturing the real light output, and making effective communication with customers.



▲Stand-alone Measurement

▲APP Measurement

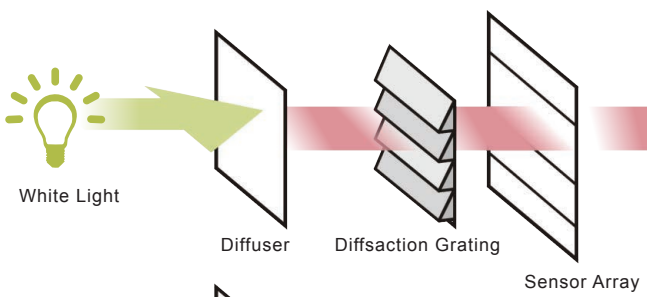
▲PC SW Measurement

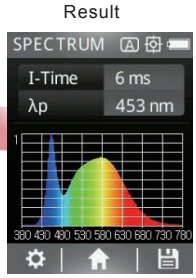
Application Categories

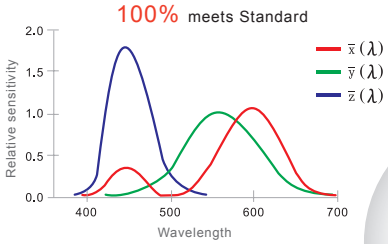
Differences Of Spectral type and RGB Filter Type

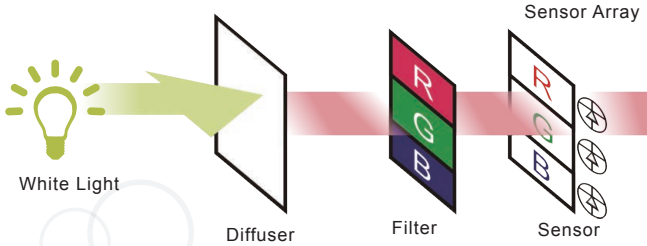
Type	Technology	Components	Concept	Result
 Spectrometer	Spectral Type	Diffuser Diffraction Grating Sensor Array	Light source go through the "Diffraction Grating and Sensor Array" to collect the spectrum and dispers the light for analysis.	Obtain spectral energy and come out the CIE XYZ
Color Analyzer	RGB Filter Type	Diffuser Filter Sensor	Light source go through the "Filter and Sensor" and execute light analysis.	Sensor provides the CIE XYZ directly.

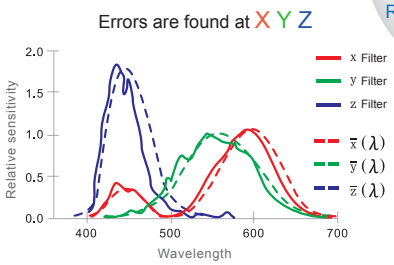
Summary:
1.Spectrum information: Spectrometer (✔) ; Color Analyzer (✖)
2. CIE XYZ accuracy: Spectrometer > Color Analyzer











Visible-region relative spectral response characteristics (f1')
Spectral Type : f1'<1%
RGB Filter Type : f1'<4-5%

Product Features & Competitive Advantages

- In-house RD team, one-step production and direct sale service.
- All in One–One in All design with multi-measurement.
- Professional spectrometer tool with post-analysis software.
- Integration ability on optical, mechanical and electronic for customized service.
- Globalization of marketing and support service system guaranteed.

Test by NIST

Wi-Fi Available on the App Store Google play

UPRtek
United Power Research Technology Corporation
+886-37-580-885 +886-37-580-398 www.uprtek.com sales@uprtek.com
No. 38, Keyih St., Chunan, Miaoli County, Taiwan