LEDPanel

User Manual

V4.0 2018/7/25

目录

1. Hardware

1.1 Accessories

The accessories of LEDPanel are shown in the following list,

Communication cable×1	
Power cable×1	
Adapter×1	
Light panel×1	or
Control box×1	

The connection with cables

When work without connection to PC, the Communication cable is not necessary.

1.2 Control box

There are 4 buttons on control box, ON/OFF, UP, DOWN, POWER.

When work without connection to PC, please connect the hardware and switch on the POWER.
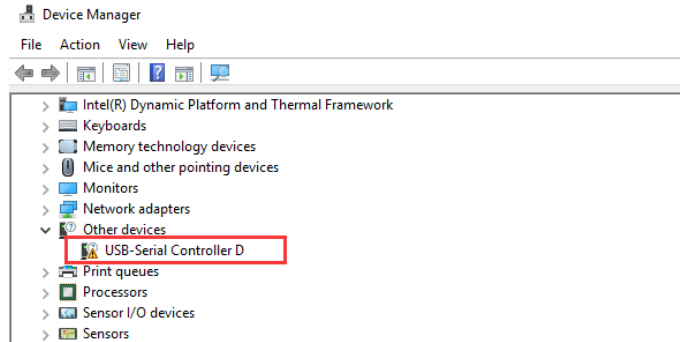
When work with PC, please connect the control box to PC with the communication cable.

3   Driver and Environment files

3.1 LEDPanel Driver

When LEDPanel control box is connected to PC via communication cable in first use, a yellow symbol can be found in Device Manager of the PC,

Please install the driver after antivirus software closed. The driver file "USBDriverInstaller.exe" is provided by THOUSLITE in the folder *Prerequisites\Drivers* for Windows Vista/7/Windows8/8.1/10. After driver installation, the yellow symbol disappears in device manager, which indicates the LEDPanel driver is successfully installed.
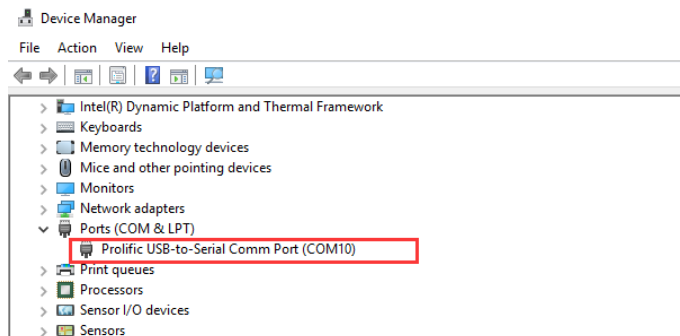
3.2 Measure Device Supported and Driver Installation

Currently, LEDNavigator-LC software is compatible with 3 spectral measure devices, including X-Rite i1 Pro2, THOUSLITE FS, and Konica Minolta CL500A. **We recommend use CL500A for LEDPanel**

If you need to integrate other spectral measure device, please contact us.

X-Rite i1 Pro2(left),THOUSLITE FS (middle), Konica Minolta CL500A (right)

3.3 Software Environment Installation

Software LEDNavigator requires NETFrameWork environment and VC library. If the software cannot be properly opened in the first use, it will pop up a message about missing Dll file, say **Unable to load DLL 'SDCM.dll'.** Please install all the 4 environment files in *Prerequisites\Environment* folder provided by THOUSLITE before running the software again. If the OS reminds the environment files are already installed or cannot be installed, ignore these environment files installation.

- Microsoft.NETFrameWork4.0.exe   <- most of win 7 & win 10 PC already has installed this file
- vcredist_2010.exe
- vcredist_2012_a.exe
- vcredist_2012_b.exe

          Microsoft.NETFrameWork4.0.exe
          Please install all the 4 files.txt
          vcredist_2010.exe
          vcredist_2012_a.exe
          vcredist_2012_b.exe
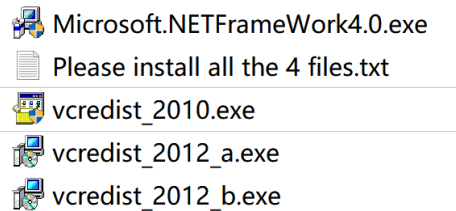
4. LEDNavigator software
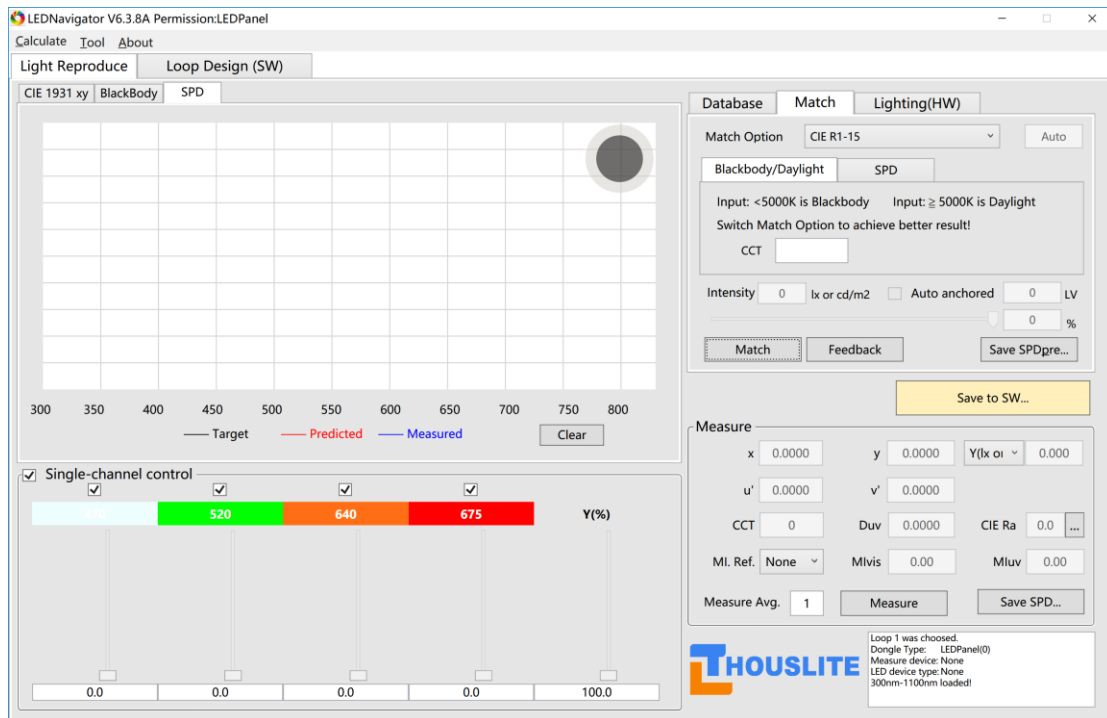
4.1 Setup Database

LED database file stores the characteristic of each LED channel in LEDPanel. The database file is located in the folder *Data/Database*, the suffix name is LED. In first use, please select the RIGHT database or Build New database. Because of the environment change or LED chips aging, it is recommended to build the new database every 6-12 months.


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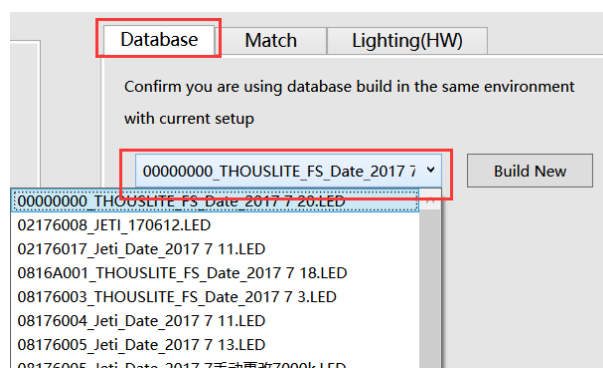
4.2 Single-channel control
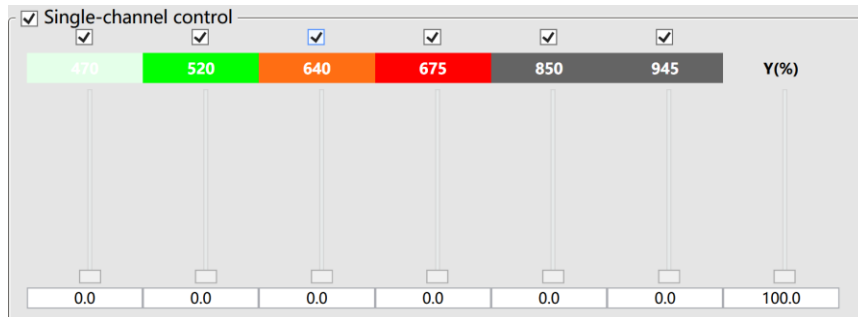
Single channel control

Single Channel Control allows users to set the intensity drive current of each LED channel in LED device. Users could adjust the drive current of each channel by sliding the bars or input the drive value directly. The corresponding SPD curves and color will change correspondingly. The range is from 0-100 with resolution 0.1.

The slider *Y%* is used to adjust the drive current of each LED channel simultaneously at the percentage of Y%.
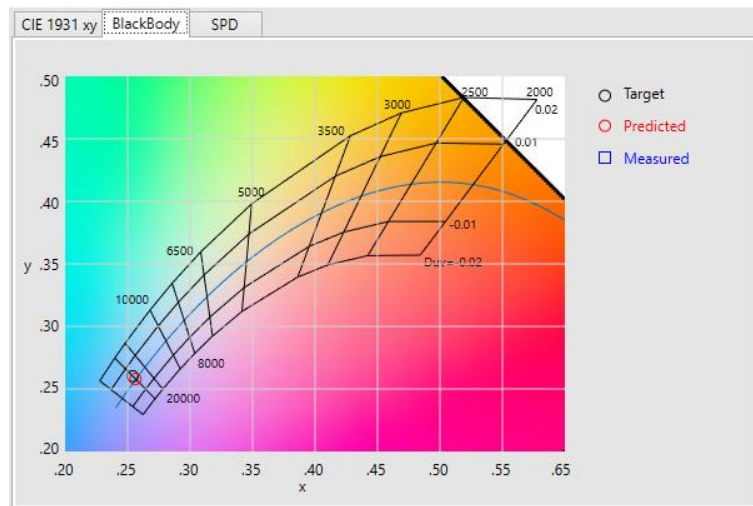
4.3 Graphics area

Graphics area demonstrates the target, predicted and measured light data. It has 3 tabs, i.e. CIE1931 chromaticity diagram, blackbody locus area enlarged CIE1931 chromaticity diagram and SPD diagram. Button *Clear* can clear the curve and points in the Graphic area.
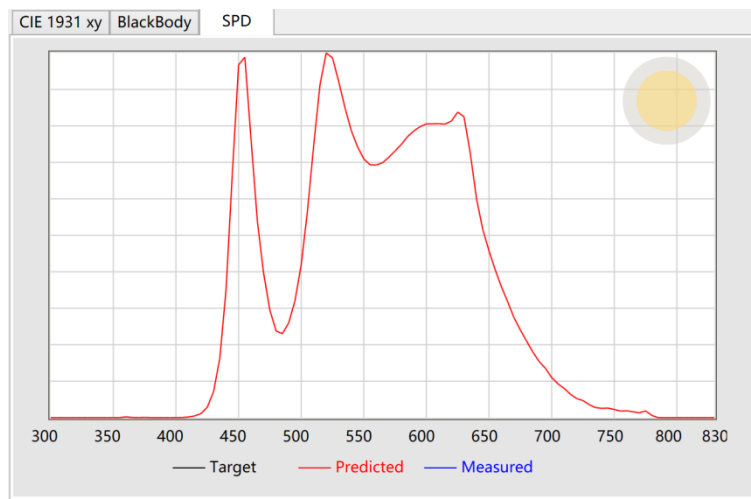
Spectral power distribution
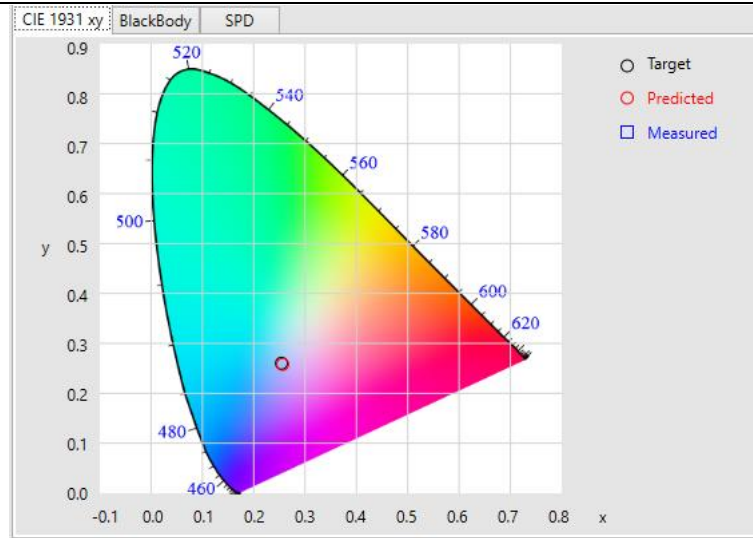
CIE 1931chromaticity diagram

Blackbody locus area enlarged CIE1931 chromaticity diagram

4.4 Measurement

Currently, LEDNavigator software is compatible with three spectral measure devices, including X-Rite i1 Pro2, THOUSLITE FS, and Konica Minolta CL500A.

Once the measure device is setup, measurement could be conducted by pressing *Measure*. The result will be shown in the below image. Meanwhile, the SPD curve will be illustrated in the Graphics area. The measured SPD data, which could be loaded as SPD source file in *Match* in section 4.6, could be saved by pressing *Save SPD…*, as shown in the below image.

Measurement area

4.5 Generate light

There are 2 ways to generate your light.

1. Input your desired CCT

2. Load in your desired SPD


The file to load should conform to standard format. The file should be a csv file. The first

column represents wavelength. It should be from 300 to 830, with an interval of 5. The second column is the radiant power at each wavelength (5nm interval).

After input your desired CCT or load in your desired SPD, please press "Match" button to generate] light. You could drag the slider in the following area to change the light intensity or mark "Auto anchored" and input your desired intensity directly.
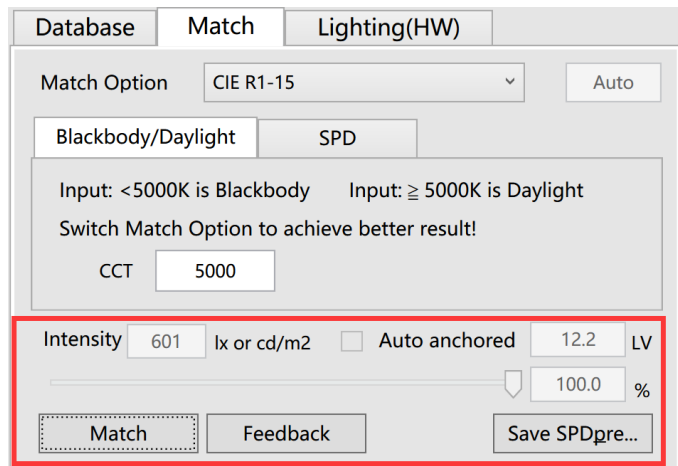
4.6 Store light in control box

Users could edit the light's CCT and illuminance in the textbox in this area. Press "Save Edit" to save the change. **Be noted that it is the input numbers rather than the light will be saved by pressing "Save Edit".** Press "Save Light" to save current light into one of the 4 storage slot in current page. Press "Up" or "Down" to switch pages.

The light you save into the storage slot is actually an array of driven value. The driven value is identical to the values of the sliders "Single Channel Control" area.

4.7 Store light in software

After generate your desired light, you could press "Save to SW…" to save the light into the software. The saved light is shown in the "Loop Design (SW)" page. In the "Loop Design (SW)", users could save unlimited light sources into software. Press Load… button to open a history Loop file, and press *Clear* to clear previously loaded loop file.

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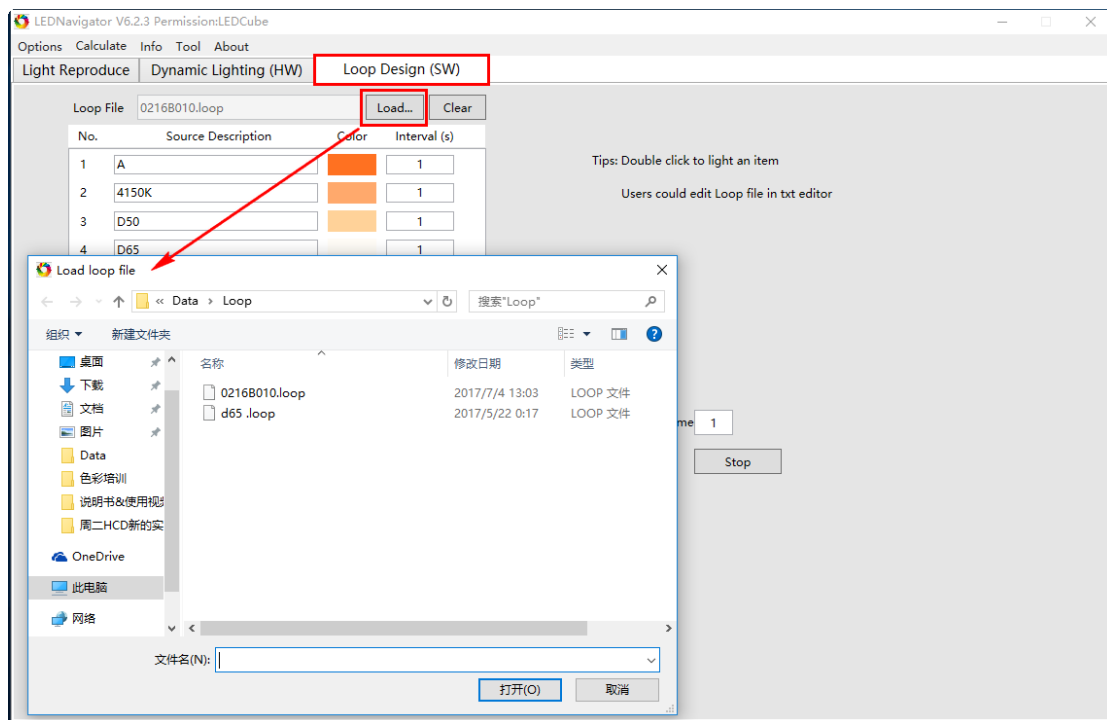
After the loop file is loaded, users could edit the Source Description and the Interval time. Up and down arrow button allows user to modify the sequence of light source in the loop. Press Delete to remove a light source.

It should be noticed that all the changes will not be saved unless users press the *save* button. Press *Save As…* to save the current working loop as a new loop file.

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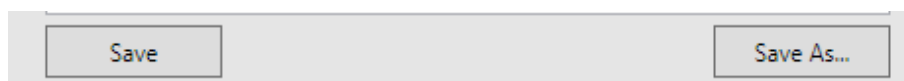
Set the *Loop Repeat Times* to change the loop times for the entire loop.
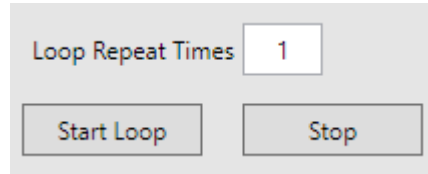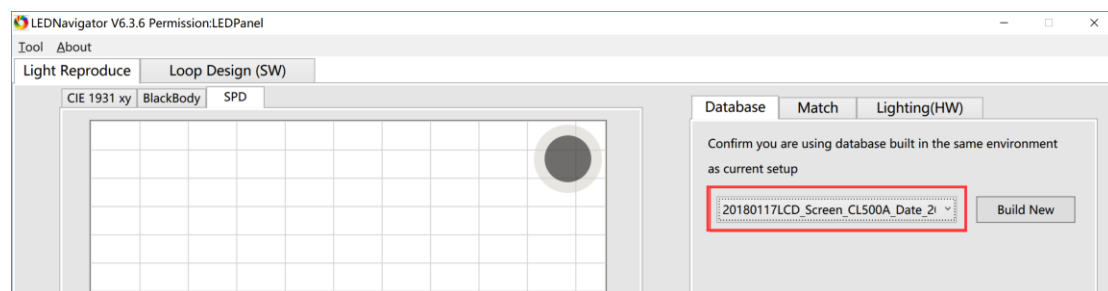

5 Example

5.1 Generate a light with specified CCT

Target: generate a light of 5000K, 1000lx.

1. Connect the PC with LEDPanel. Install the driver and environment files.
2. Switch on control box. Open LEDNavigator.
3. Select the right database. Or Build your own database if you have measurement device.

4. If evertyhing goes well, following message should be noticed:
   a) Dongle Type: LEDPanel
   b) Measure device: CL500A(or other measurement device you connected)
   c) LED device Type: LEDPanel
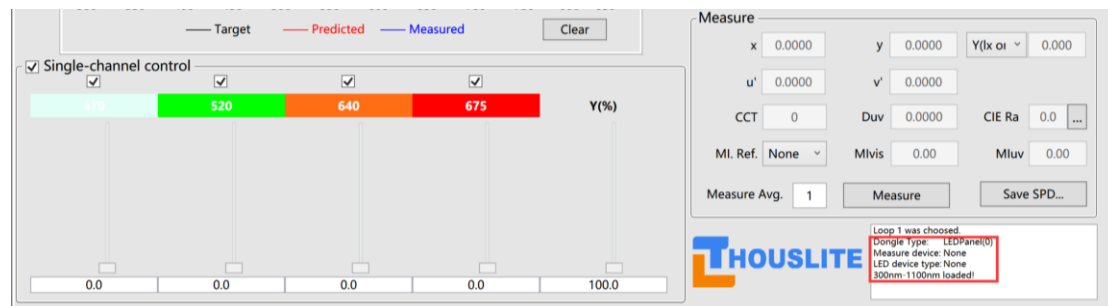
5. Switch to Match page, select Blackbody/Daylight, and input 5000 in CCT area. Then press "Match". Please be noted that if no measurement device is connected, then the Auto anchored will be disabled. Still, you could drag the slider in this are to adjust the light intensity.
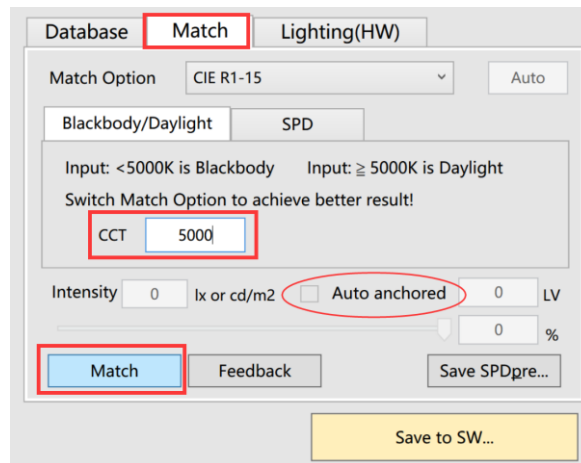
6. If the output light CCT is of obvious difference compared to target CCT, press Feedback to compensate this error.

5.2 Generate a light of desired SPD

Firstly, capture the spectrum of another light source. If you have connected a measurement device to LEDNavigator, you could Press "Measure" to capture the light, then press"Save SPD" to store the data.
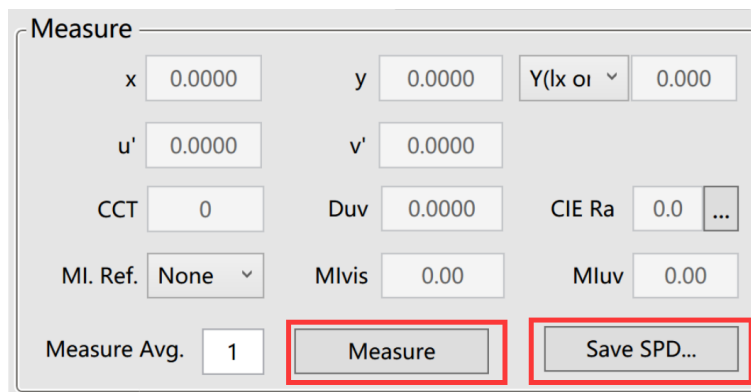
Then switch back to Match page, choose SPD tab page, press "Load…" and load in the file you just stored.
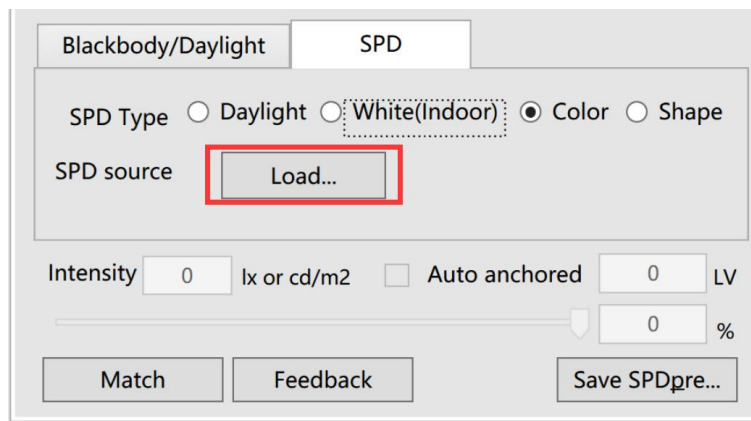
Select SPD Type "Color". Press "Match". Measure the light generated by LEDPanel and check if all

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the parameters conform to what you expected.