

# OtO Photonics

## Light Source Operation Manual

### Deuterium-Halogen Light Series (LS-DH Series)

LS-DH-1  
LS-DH-2  
LS-DH-3



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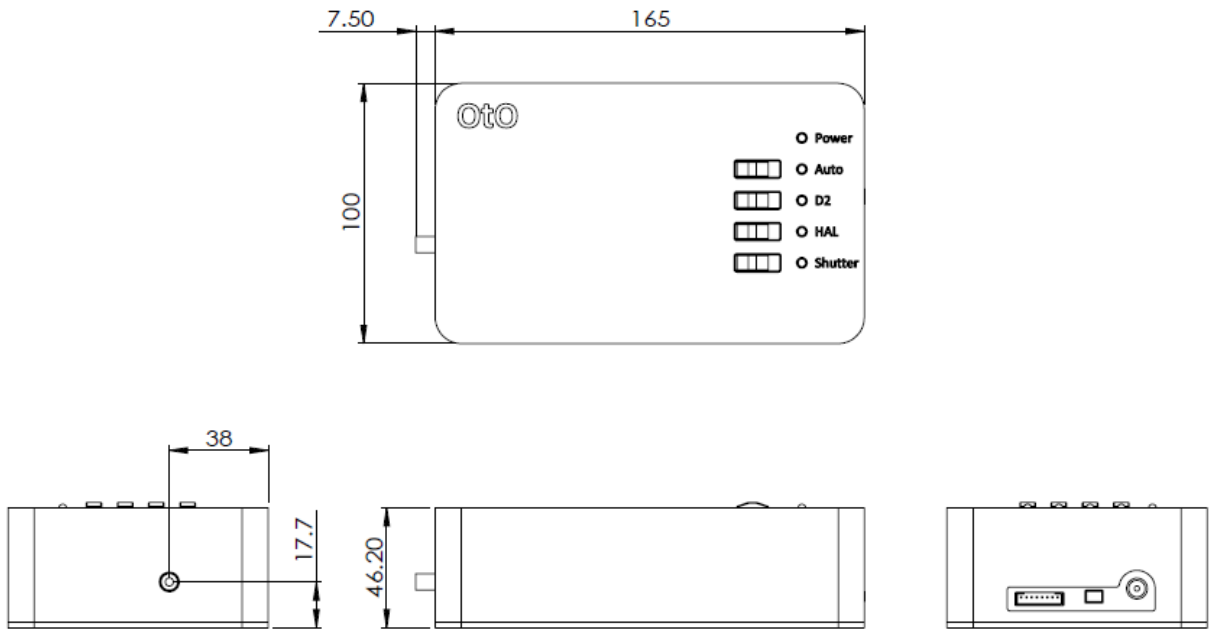
## Deuterium-Halogen Light Series Operation Manual

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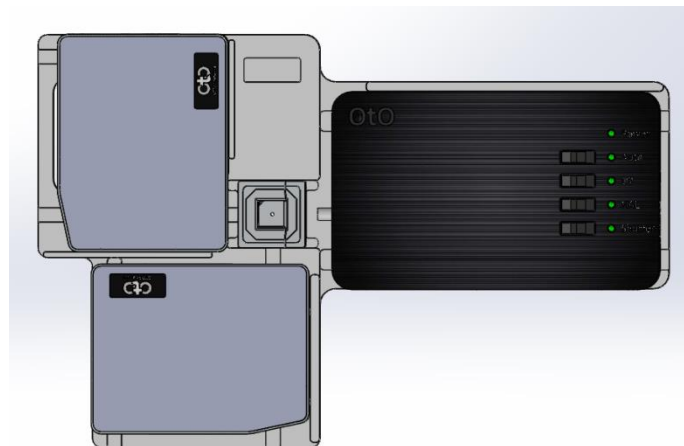
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## Deuterium-Halogen Light Series Operation Manual

### ● Drawing of LS-DH Series



### ● Drawing of LS-DH Series & Measurement Platform



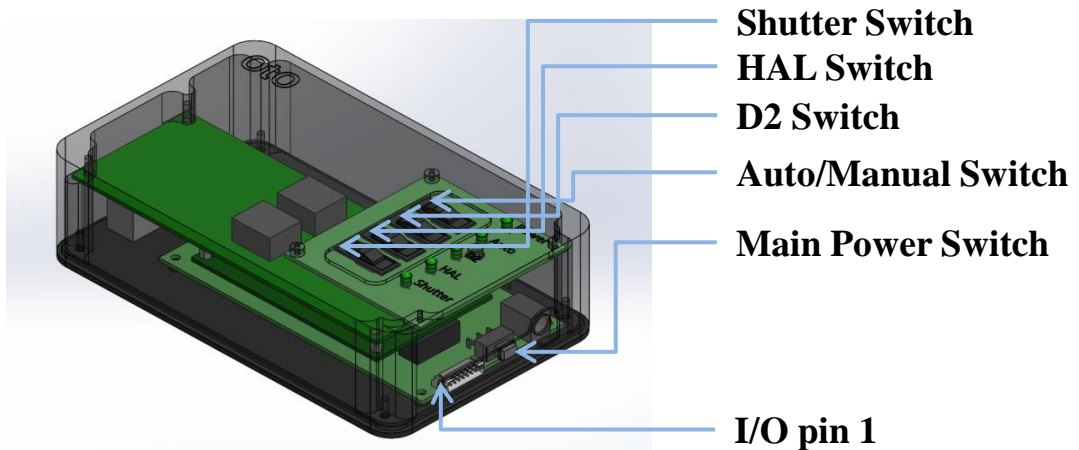
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## Deuterium-Halogen Light Series Operation Manual

### ● Operation Selection Features

#### ➤ Manual Mode Operation step

- Step.1 After plugging the +12V power to the Deuterium-Halogen (DH) light source, user can turn on the main power by the Main Power Switch. The Power Green LED will be lightening “ON”.
- Step.2 Then user can select the Auto/Manual Switch. Once the manual mode is selected; that means the switch is at the left position.
- Step.3 After manual mode is selected, user can turn on/off the D2, Halogen, or Shutter function by sliding the switches.

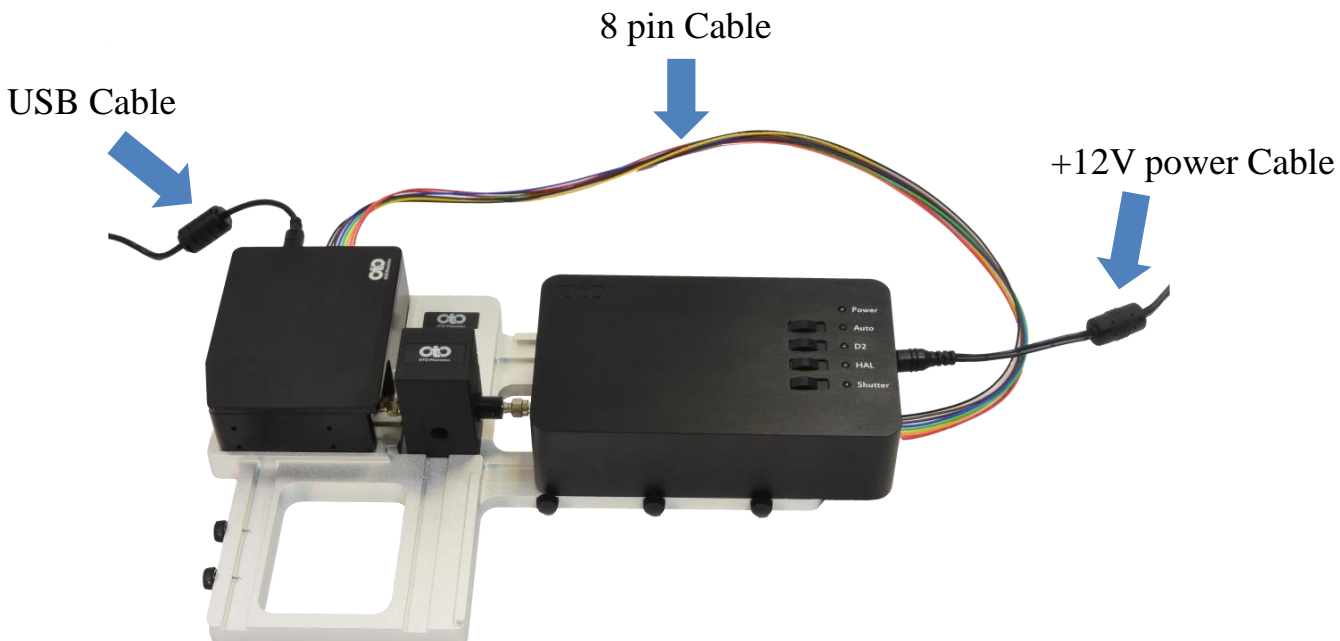


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## Deuterium-Halogen Light Series Operation Manual

### ➤ Auto Mode Operation

- Step.1 Put the Spectrometer and the Deuterium-Halogen (DH) light source on the platform and place them at the assigned measurement position.
- Step.2 Plug in the 8pin cable to link these two devices. Please make sure the cable is inserted correctly.
- Step.3 Plug the USB cable to connect the spectrometer and the PC.
- Step.4 After plugging the +12V power to the DH light source, user can turn on the main power by the Main Power Switch. The Power Green LED will be lightening "ON".
- Step.5 Slide the Auto mode switch to the right position. The "Auto" Green LED will be lightening "ON".
- Step.6 Then user can use the OtO's software SpectraSmart or SDK to send the command to turn on/off the D2, Halogen light source, or Shutter function individually; the corresponding Green LEDs will be turned on/off accordingly.
- Step.7 User needs to consider the warming-up and stable time for DH light source.



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## Deuterium-Halogen Light Series Operation Manual

### ➤ I/O Extension Port Pin# Description Alt Function

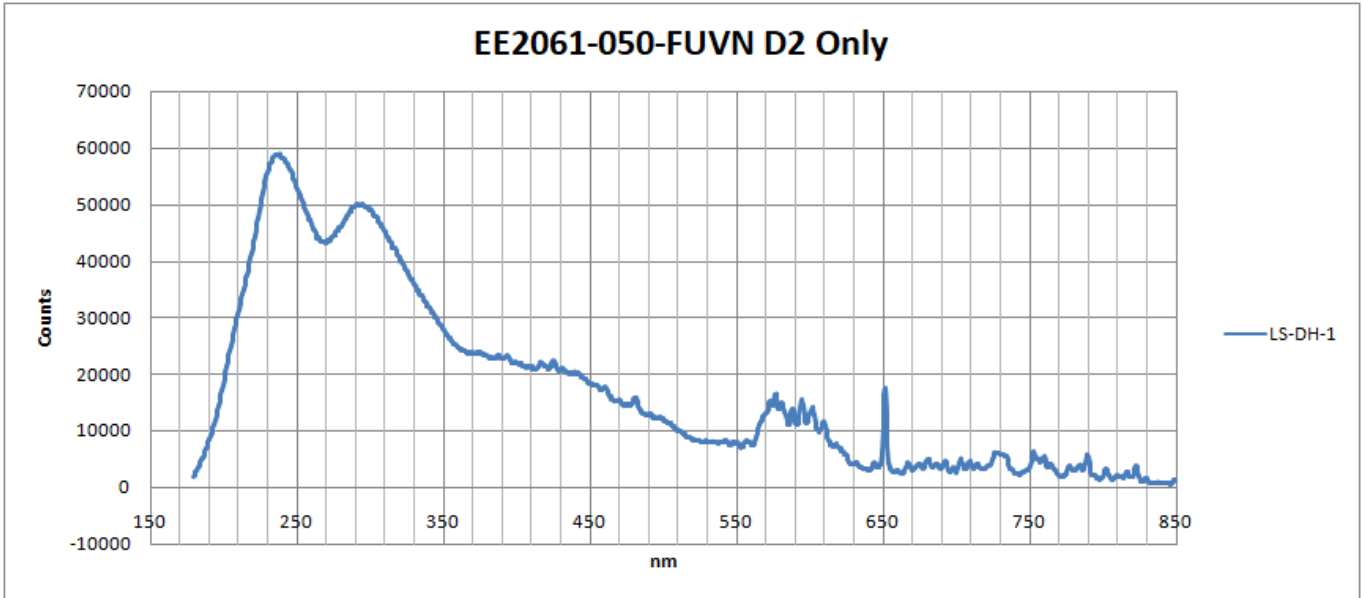
There is one 8pin 2.0mm pitch connector with every DH light source. This 8pin connector can connect SmartEngine (SE) series spectrometer and DH light source directly to operate auto mode. Once the operation mode is selected to Auto mode, D2, Halogen light source and Shutter function will be controlled by the I/O level. (3.3V/5V or 0V).

Pin No.	Direction	Pin Name	Function Description
1	NC	NC	NA
2	NC	NC	NA
3	NC	NC	NA
4	Input	Shutter	High: Open Shutter Low: Close Shutter
5	Input	D2_ON	High: Turn on D2 LS. Low: Turn off.
6	Input	HAL_ON	High: Turn on Halogen LS. Low: Turn off.
7	NC	NC	No connection inside the LS-DH-1.
8	GND	GND	GND

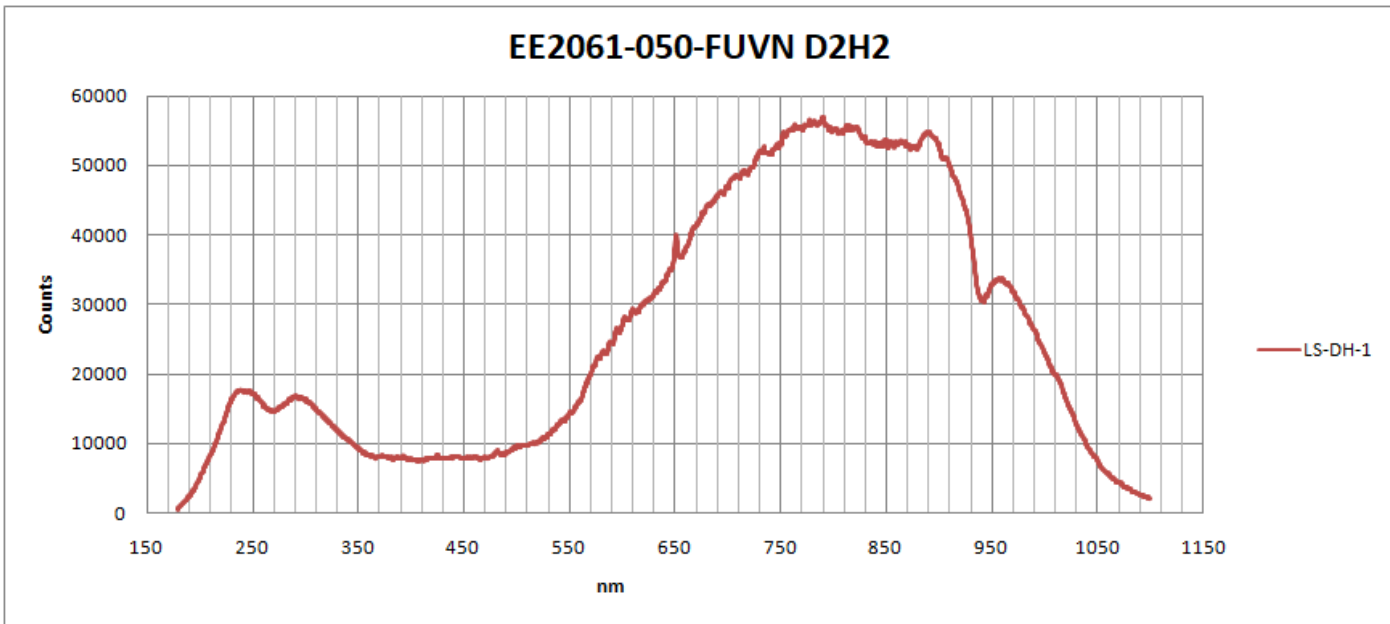
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## Deuterium-Halogen Light Series Operation Manual

### ● Spectrum



Deuterium light source on only (measured by OtO EE2061 spectrometer)



Deuterium and Halogen light source on (measured by OtO EE2061 spectrometer)

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## Deuterium-Halogen Light Series Operation Manual

### ● Software Operation Features

#### ➤ SpectraSmart

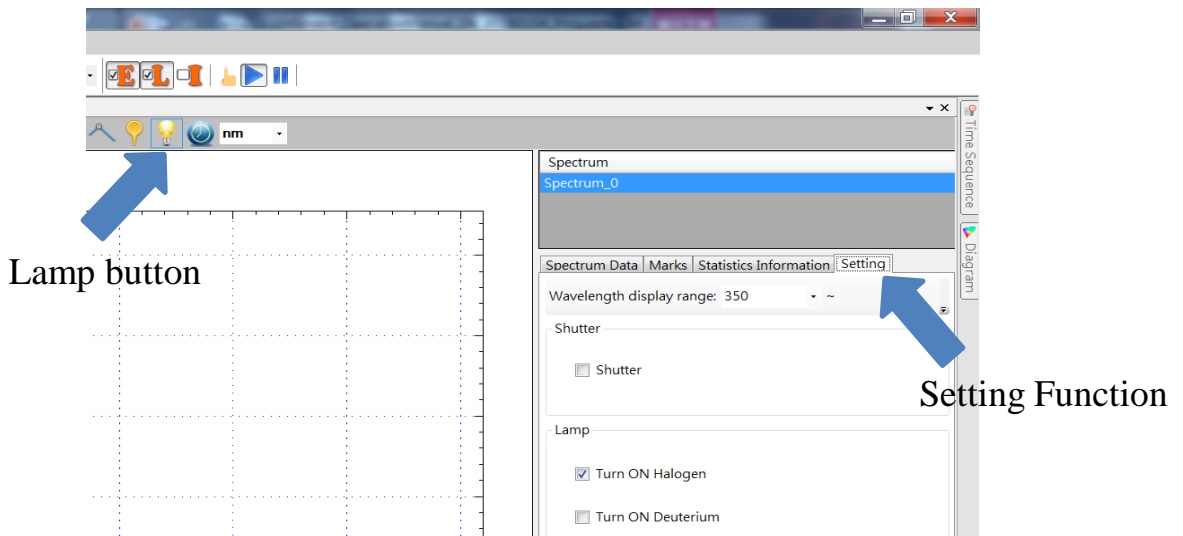
Spectrasmart provides Setting function at the right column window:

1. Enable / Disable shutter of each scan.

2. Turn on Halogen if lamp button as 

3. Turn on Deuterium if lamp button as 

(Halogen and Deuterium lamp can be controlled independently)



#### ➤ Software development commands

UAI\_SpectrometerSetExternalPort and UAI\_SpectrometerGetExternalPort can set the operation status of shutter, halogen and deuterium lamp.

GPIO	Item
GPIO 5	Halogen
GPIO 4	Deuterium
GPIO 3	Shutter