

## Load of measured file (HITACHI U-4100 spectrometer)

### Function Load UDS file

It is necessary to convert U-4100 measured file into a usable format for FILMSTAR, because the measured file is saved as binary format. It is possible to display measured data and convert that data into the target data in optimization of thin film design in FILMSTAR. However, it is possible to load only Ver.1, impossible to Ver. 2.

### Preparation Copy of macro file (.BAS) and initial file (.fbi) to default directory, and configuration FILMSTAR to use this macro program

To use this macro program, it is necessary to copy following 2 files to the directory “Winfilm\Basic32” and configure FILMSTAR.

Macro file ( .BAS ) : T\_Read\_UDS08.BAS

Initial file ( .fbi ) : T\_Ini\_Read\_UDS.fbi

### Step 1 Select UDS file

Execute this macro program, and then “Load UDS file” window is opened (fig.1). Select UDS file you want to load.

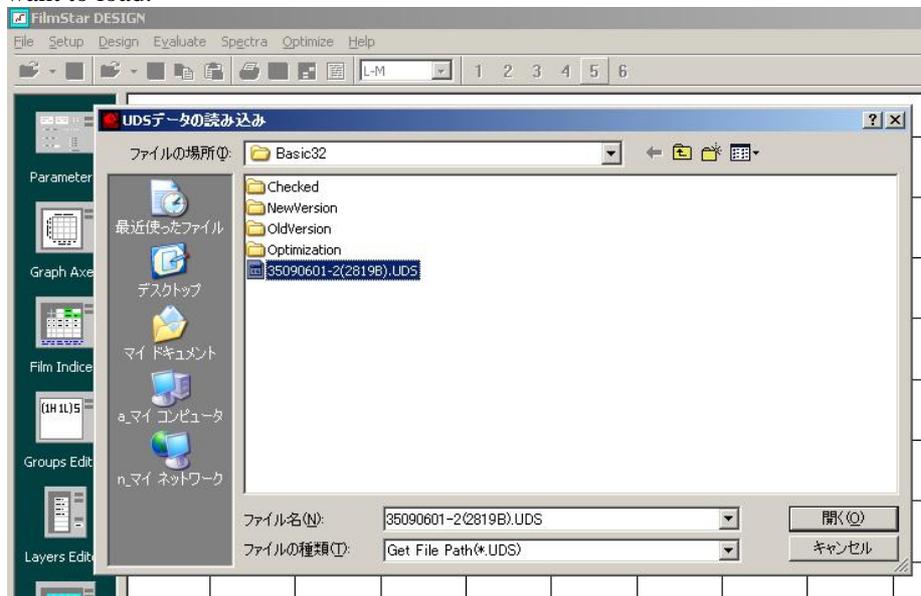


Fig.1 “Load UDS file” window

**Step2** Input parameter

After step 1, “Load UDS” window is opened, and input parameters and click “OK” button (fig.2).

The image shows a screenshot of the "Load UDS" dialog box. On the left, there are three text boxes with arrows pointing to specific controls in the dialog:

- Output to...**: A file is loaded as Target or Spectra. An arrow points to the "Target" radio button.
- New**: When a loaded file is appended to present target, clear this box. An arrow points to the "New" checkbox.
- Plot Spectra**: Changing the plot color, plot the Spectra. An arrow points to the "Plot Spectra ( Color )" button.
- Double under line parameters is active, only when "Target" is selected.**: An arrow points to the "Wavelength[nm]" section.

The "Load UDS" dialog box contains the following controls:

- Output to ...**: Radio buttons for "Target" (selected) and "Spectra".
- New**: A checked checkbox.
- Type**: A dropdown menu set to "Transmittance".
- Tolerance**: A text input field set to "1".
- Wavelength[nm]**: A section with "Min" (300), "Max" (750), and "Step" (0.5) input fields.
- AOI[deg]**: A text input field set to "0".
- Polarization**: Radio buttons for "P", "S", and "A" (selected).
- Buttons**: "Plot Spectra ( Color )", "Cancel", and "OK".

On the right side of the dialog, there is a text box with the following content:

... are automatically set depending on the loaded data.  
Type  
 Data is loaded as transmittance or reflectance. When "Spectra" is selected in , this "Type" should be matched to graph's vertical axis.  
Tolerance  
Wavelength[nm]  
 Min and max wavelength should be in the range of measured data.  
AOI[deg]  
 Angle Of Incidence  
Polarization

Fig.2 “Load UDS” window

## Result

Fig.3 shows the result of loading UDS file as “Target” in step 2 and fig.4 is as “Spectra”. In fig.3 and fig.4, the target and the spectra are displayed by macro program respectively.

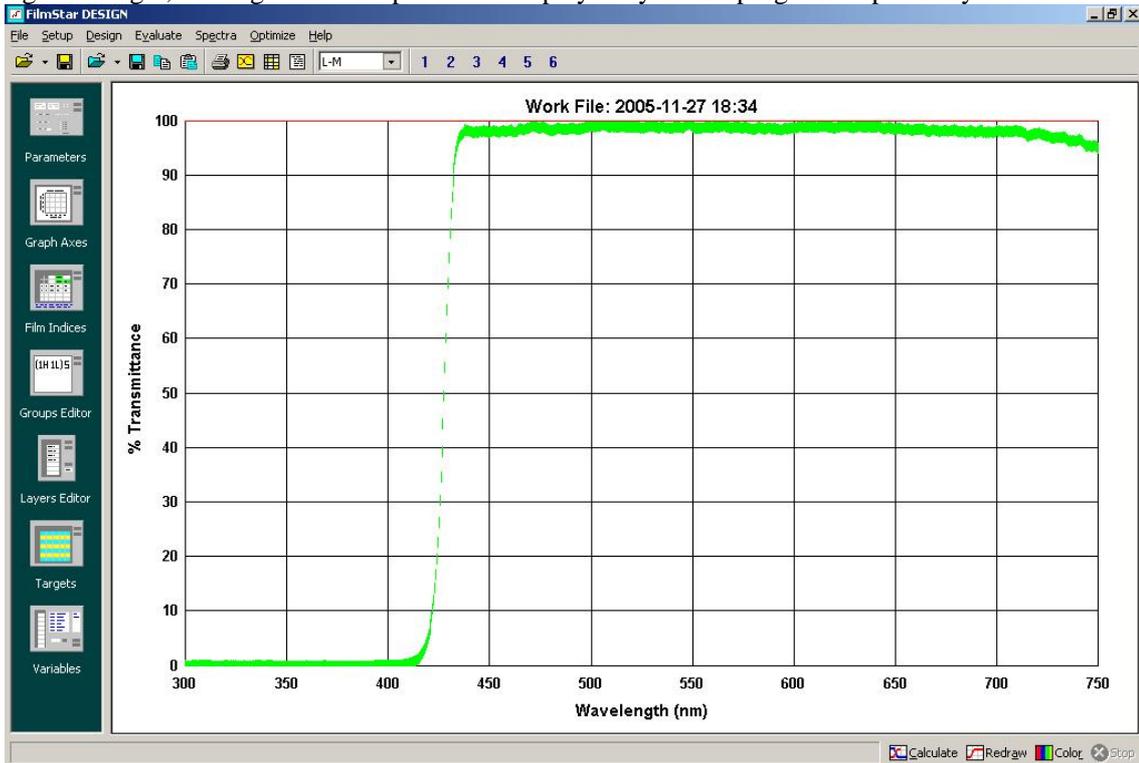


Fig.3 Result of load as “Target”

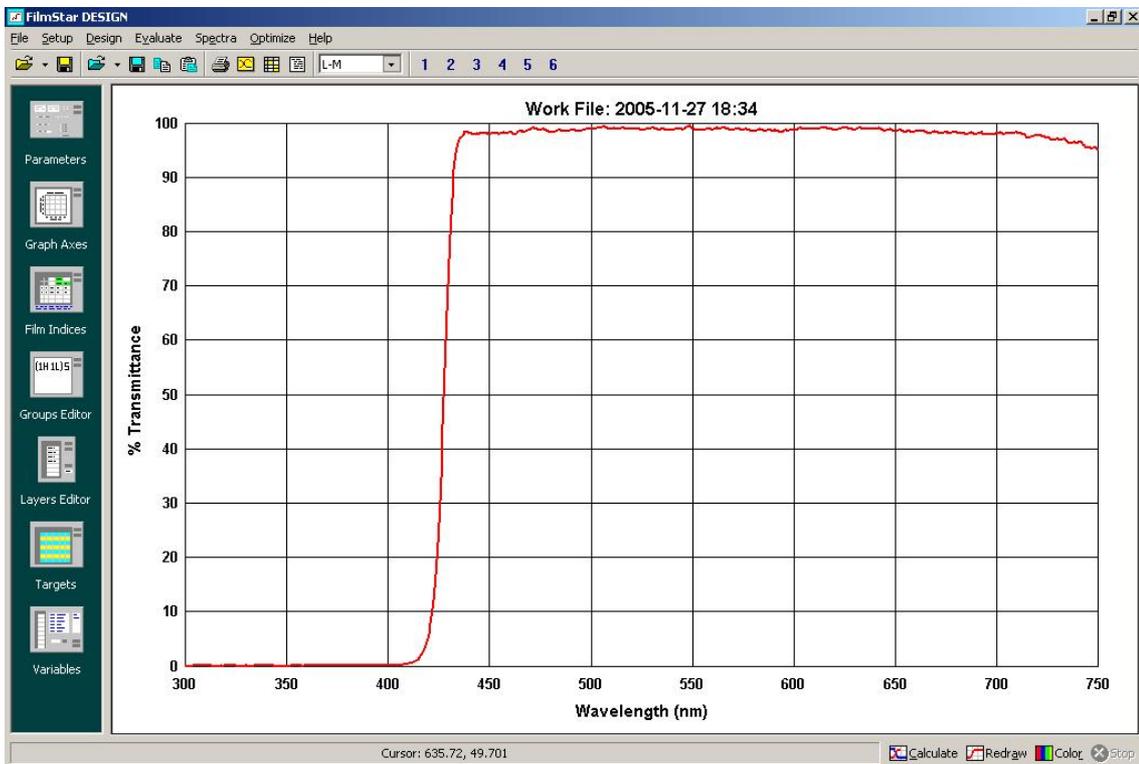


Fig.4 Load as “Spectra”