



SMART CURRENT SOFTWARE GUIDE

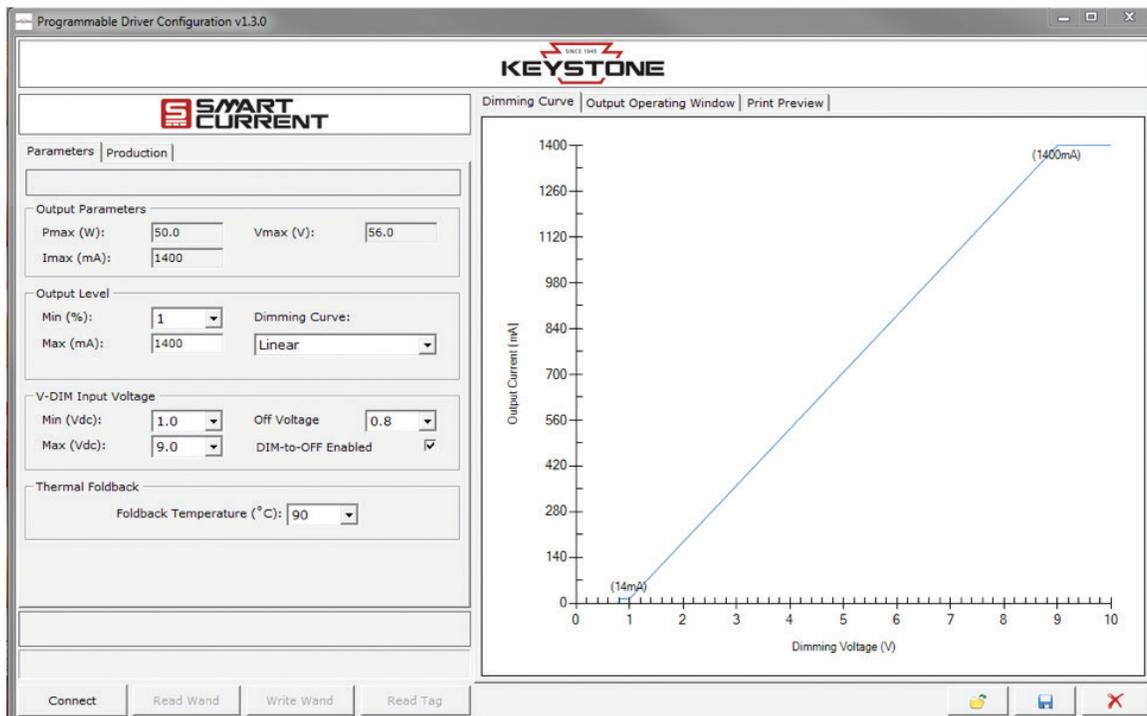
SYSTEM REQUIREMENTS

1. Designed for use with computers running Windows 7 or newer
2. Microsoft .NET Framework 4.0 runtime
3. FTDI D2XX Driver—CDM v2.12.24 or above
4. DYMO Label™ Software: <http://www.dymo.com/en-US/>

GETTING STARTED

1. **DOWNLOAD** software (.msi file) from <http://keystonetech.com/programmable-driver-software/>
2. **INSTALL** on local computer.
3. **CONNECT** Smart Current Cradle (KTLD-SC-PGMR-1) to computer via USB cable.
4. **OPEN** Smart Current Software. (Main interface shown in Figure 1).

Figure 1



5. **CLICK** the *Connect* button in the lower left hand corner with the mouse. The button will turn yellow and say “Connected”. You are now ready to program the Keystone Smart Current LED drivers.



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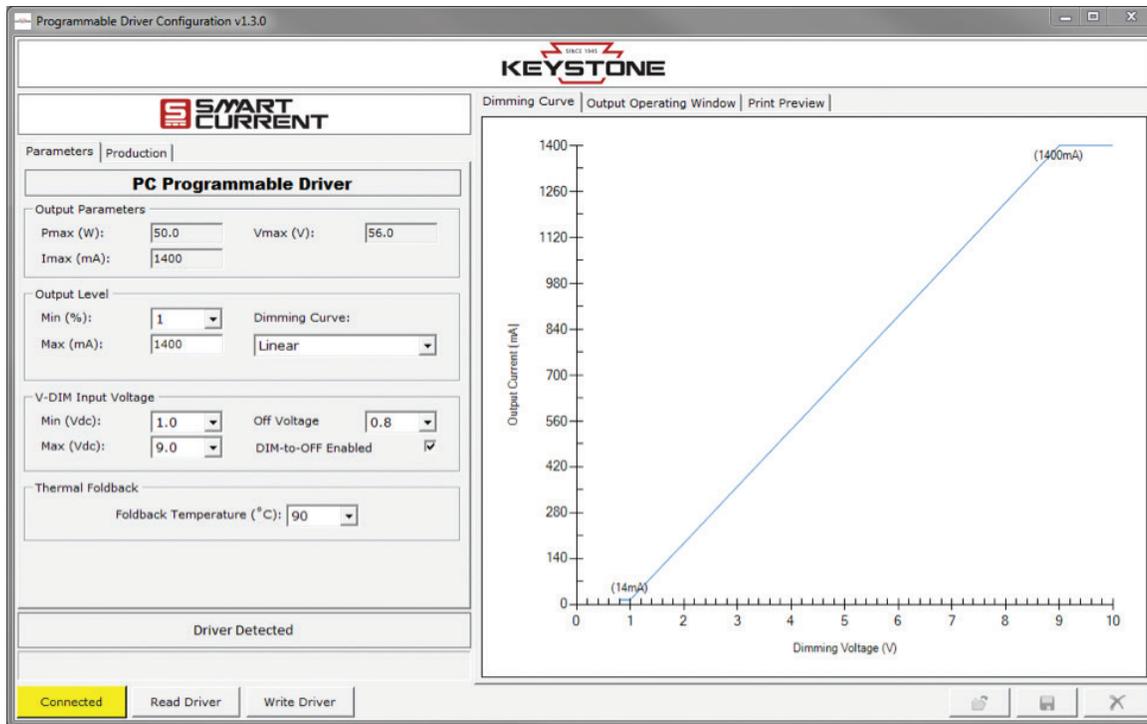
USING THE SOFTWARE

1. **INSERT** LED driver into the Smart Current Cradle. The message “Driver Detected” will appear. (Figures 2 and 3).

Figure 2



Figure 3



2. The *Read Driver* button will be enabled. **CLICK** this button. In the *Parameters* tab of the main interface, the fields will populate with driver values for the connected driver.



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3. The following driver parameters can be configured by user:
 - a. Driver Output Current (user defined field.)
 - b. Minimum Output Current % when dimming (drop-down box)
 - c. Dimming Curve (drop-down box)
 - d. Minimum Dimming Voltage (drop-down box)
 - e. Maximum Dimming Voltage (drop-down box)
 - f. Dim-to-Off Enabled (check box)
 - g. Off Voltage (drop-down box)
 - h. Thermal Fold-back Temperature (drop-down box)

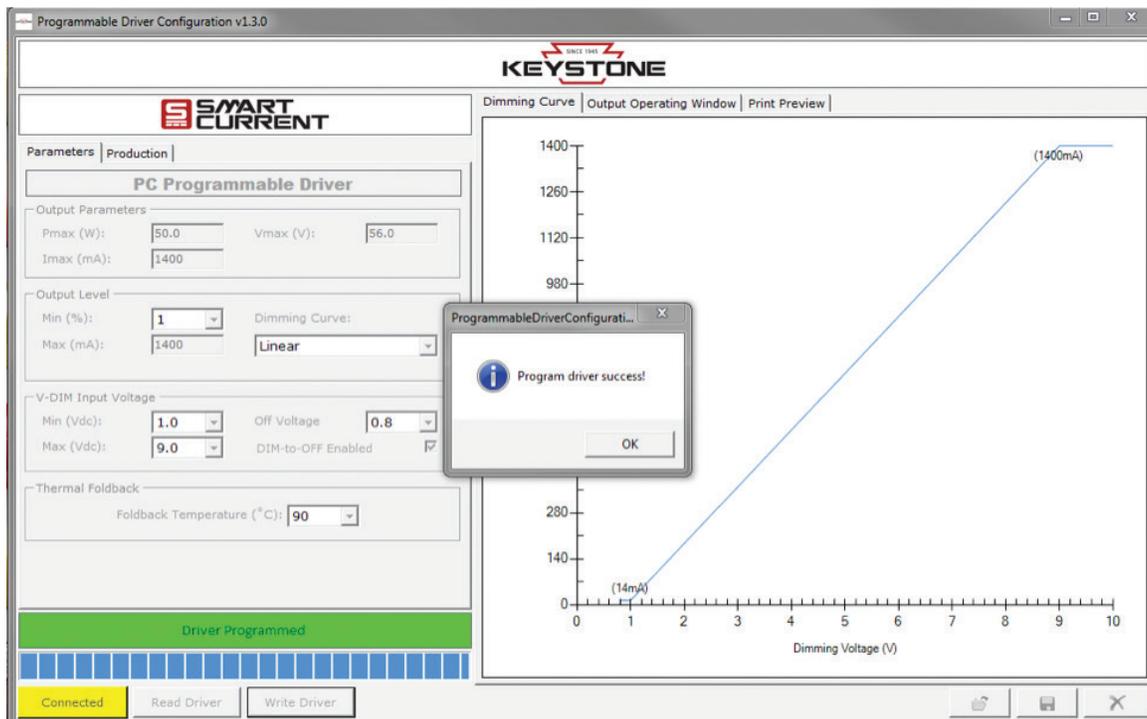
NAVIGATE through the eight configurations and adjust as desired.

Note 1: The *Output Current* field is adjustable in increments of 10mA. If you enter a value above or below the drivers max range of adjustment, an error message will appear

Note 2: The *Dimming Curve*, *Output Operating Window*, and *Print Preview* tabs will adjust according to the driver parameters selected.

4. Once driver parameters are configured as desired, **CLICK** *Write Driver* button. There will be a green status bar along the bottom of the screen for a few seconds, and then a *Program Driver Success* box will appear. (Figure 4). **CLICK** *OK*.

Figure 4

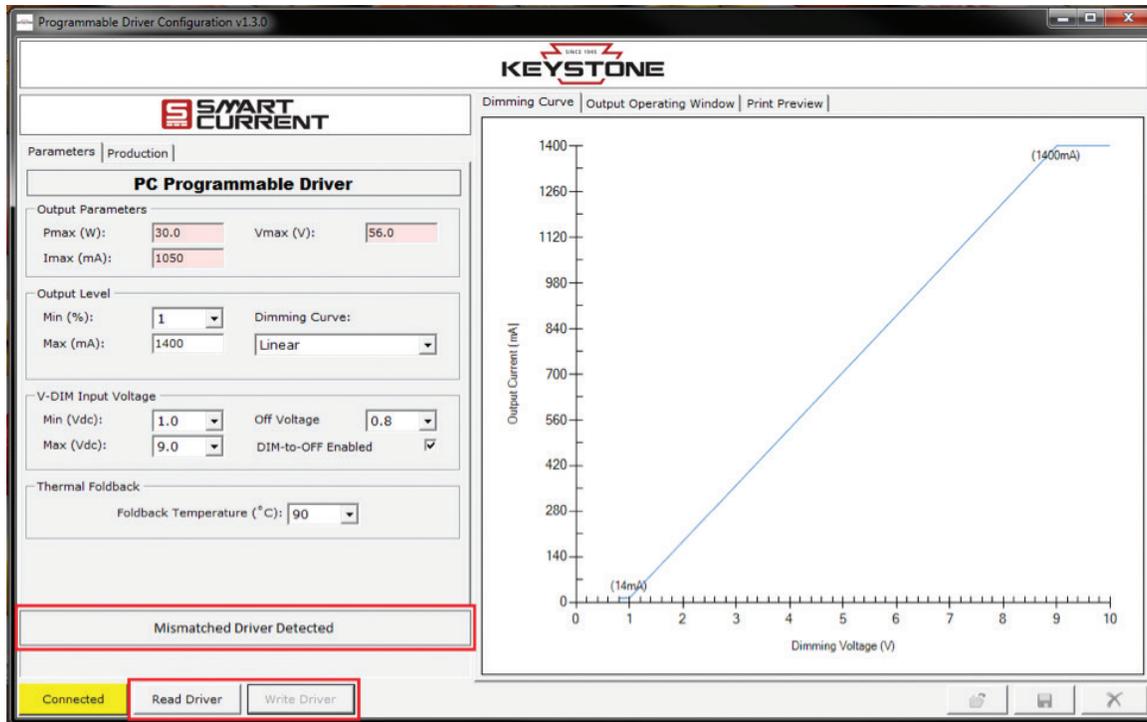




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5. **REMOVE** driver from Smart Current Cradle. Driver is programmed.
6. **INSERT** the next driver for programming. Driver parameters will remain unchanged from previous settings, unless manually changed.
7. If the same driver catalog number is inserted one after another, the *Write Driver* button will still be enabled. If a different driver catalog number is inserted one after another, the *Read Driver* button will be enabled, along with a “Mismatched Driver Detected” message. (Figure 5). User must **CLICK** *Read Driver*, adjust the parameters as needed, and then **CLICK** *Write Driver* in order to program driver.

Figure 5



ADDITIONAL FEATURES

PRINT LABEL

Keystone Smart Current Software is capable of automatically printing labels with critical tracking information during the programming process. To use this feature, a DYMO LabelWriter 450 should be installed on the computer which is used to program the drivers. Label stock “LW” is used, $\frac{3}{4}$ " \times 2" size.

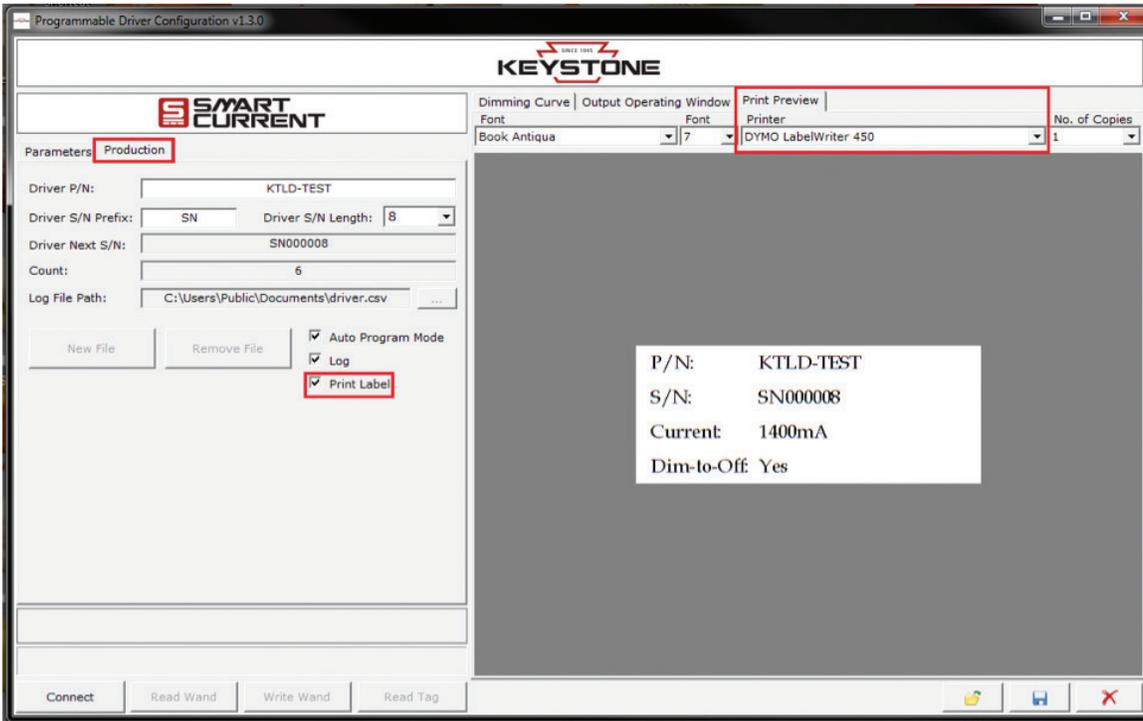
1. **DOWNLOAD** and **INSTALL** the DYMO Label™ Software: <http://www.dymo.com/en-US/>
2. With the printer powered-on and connected to the computer (should show “Connected” in *Devices and Printers* on windows), **OPEN** the Keystone Smart Current Software.
3. Label details are populated from entries on the *Parameters* and *Production* tabs. **SELECT** the *Print Preview* tab to view the label preview and to adjust print options.



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4. **SELECT** “DYMO LabelWriter 450” under the *Printer* drop-down menu under the *Print Preview* tab.
5. **SELECT** the *Print Label* checkbox under the *Production* tab to enable printing automatically after each driver is programmed. (Figure 6).

Figure 6





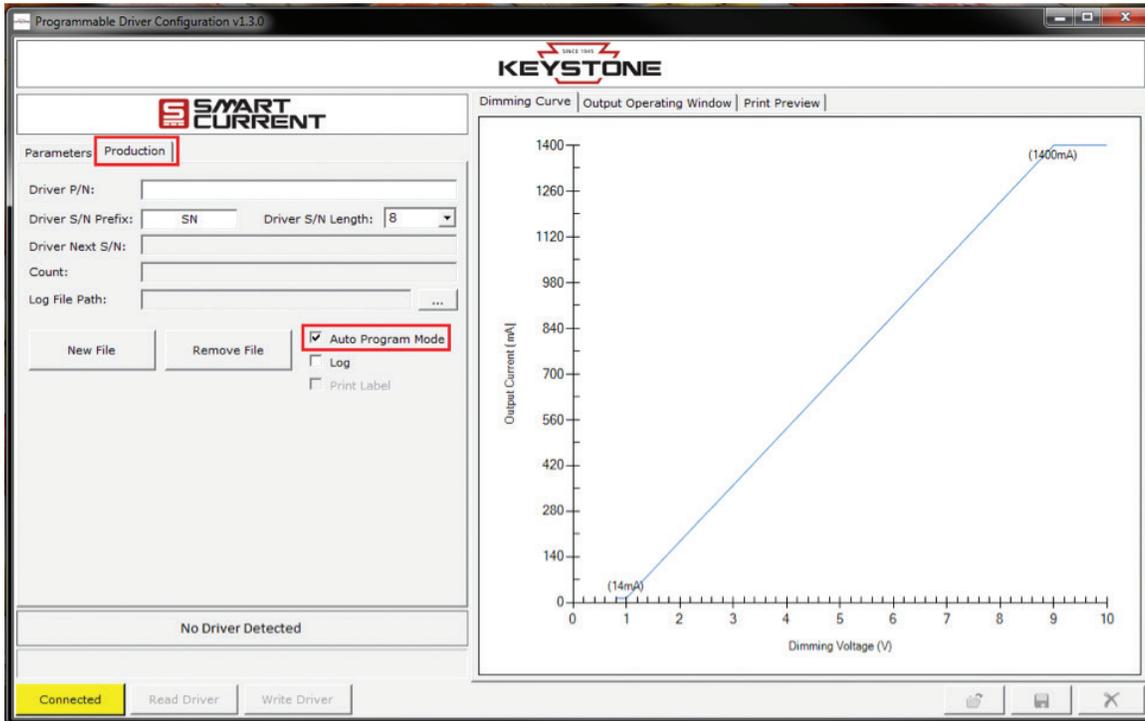
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AUTO-PROGRAM MODE

Keystone Smart Current Software features an auto programming mode to quickly program drivers once they are detected in the Smart Current Cradle, without needing to click *Write Driver* every time. To enable this mode:

1. **NAVIGATE** to the *Production* tab, and **CLICK** the box to select *Auto Program Mode*. (Figure 7).

Figure 7



2. **INSERT** driver into Smart Current Cradle.
3. If the driver catalog number matches the driver that was used for the latest *Read Driver* button click, the driver will be programmed with the configuration selected on the *Parameters* tab. No need to click *Write Driver*.
4. **REMOVE** driver and **INSERT** another into the cradle for programming.



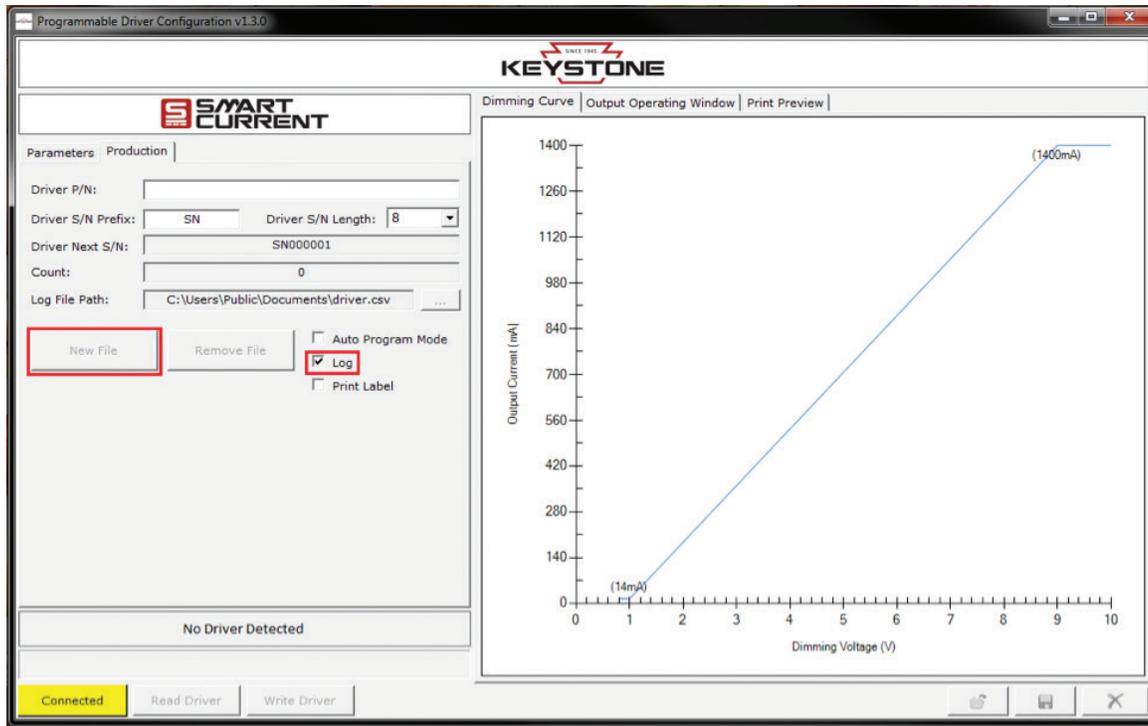
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PRODUCTION LOG

Keystone Smart Current Software includes a production log feature to track driver programming and can be used to export data to Microsoft Excel for the purposes of tracking and label printing. To enable this feature:

1. **NAVIGATE** to the *Production* tab, and **CLICK** the box *New File*. **ENTER** file name and **DEFINE** file path on computer in the window that pops up. **CLICK** *Save*, and then **CLICK** the box to select *Log*. (Figure 8).

Figure 8



2. If other log files exist on computer that you would like to add to instead of creating a new file, **SELECT** the file via the button for *Log File Path*.
3. *Driver Part Number* and *Serial Number* fields can be adjusted as desired by user; the serial numbers will be accumulated automatically based on the prefix and number length selected.
4. Proceed with driver programming. The selected log file will be updated once a driver is programmed.
5. The log file is made in .CSV format, which can be opened in Microsoft Excel for additional functionality with the data, such as exporting to a label printer. (Figure 9).

Figure 9

A	B	C	D	E	F	G	H	I	J	K
Date [Time]	Driver P/N	Driver S/N	Programmed I-OUT (Max) (mA)	Programmed I-OUT Percentage (Min) (%)	Dimming Curve	V-DIM (Min) (V)	V-DIM (Max) (V)	V-DIM (Off) (V)	Dim-to-Off	Thermal Foldback Temp (Celsius)
2018/02/07 [12:19:57]	KTLD-30-UV-SC1050-56-VDIM-L7	SN0002	850	5	Inverse Log	1	9	0.9	Y	90
2018/02/07 [12:20:05]	KTLD-30-UV-SC1050-56-VDIM-L7	SN0003	850	5	Inverse Log	1	9	0.9	Y	90
2018/02/07 [12:20:11]	KTLD-30-UV-SC1050-56-VDIM-L7	SN0004	850	5	Inverse Log	1	9	0.9	Y	90
2018/02/07 [12:20:16]	KTLD-30-UV-SC1050-56-VDIM-L7	SN0005	850	5	Inverse Log	1	9	0.9	Y	90
2018/02/07 [12:20:21]	KTLD-30-UV-SC1050-56-VDIM-L7	SN0006	850	5	Inverse Log	1	9	0.9	Y	90
2018/02/07 [12:20:29]	KTLD-30-UV-SC1050-56-VDIM-L7	SN0007	850	5	Inverse Log	1	9	0.9	Y	90



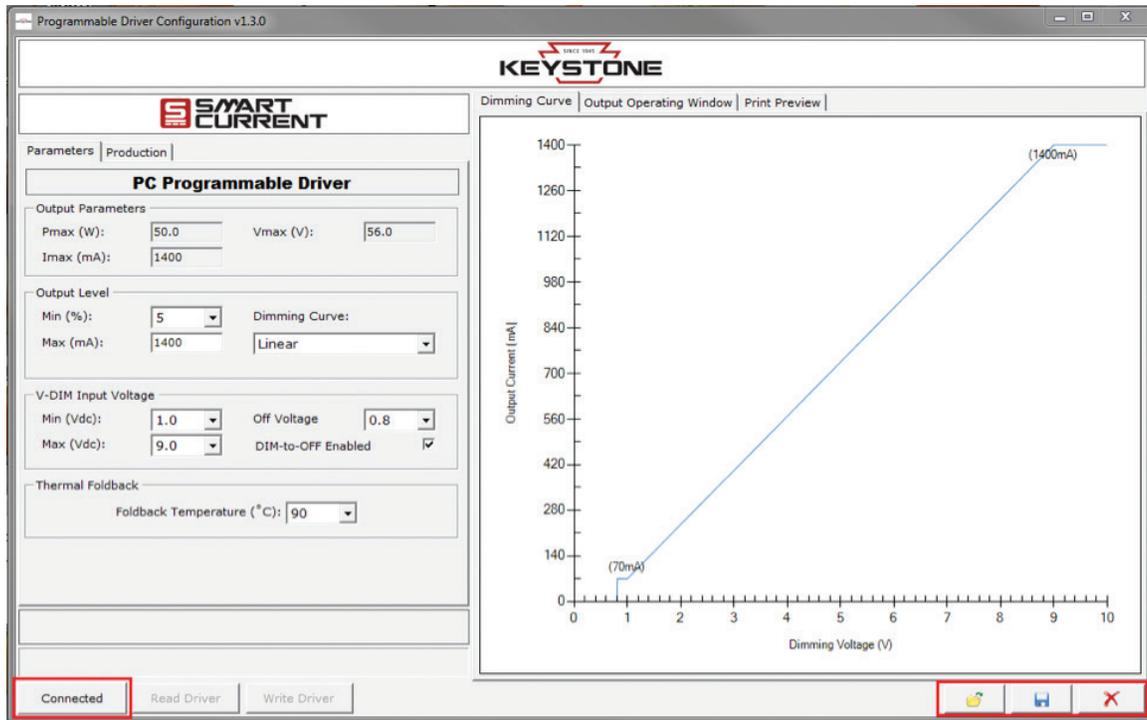
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SAVE/LOAD CONFIGURATION DATA

Keystone Smart Current Software allows the users to save new driver configurations and load previously saved configurations. To take advantage of this feature:

1. To disconnect the Smart Current Cradle, **PRESS** the *Connect/Connected* button in the lower left corner. This will allow access to the *Load, Save, and Delete* configuration buttons. (Figure 10).

Figure 10

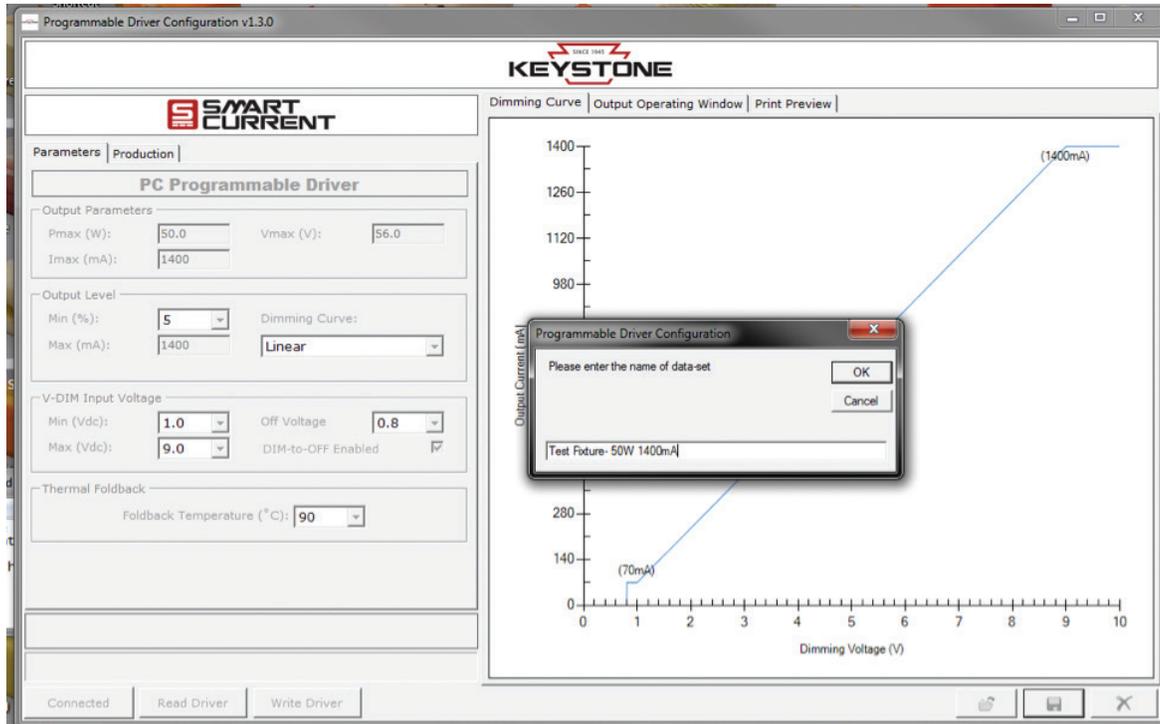




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2. **CLICK** the *Save* button to save the values currently selected in the *Parameters* tab. A box will pop up to enter a name for the saved configuration. (Figure 11).

Figure 11



3. **CLICK** the *Open Folder* button, to load a previously saved configuration.
4. **CLICK** the *X* button, to delete a previously saved configuration. A box will pop up to show the configurations available for deleting.

COMMON TROUBLESHOOTING

1. *Smart Current cradle does not "Connect"?* Please go to windows device manager, find *Other Devices/USB Serial Ports*, or similar. **DOUBLE-CLICK** to open, and then **CLICK** *Update Driver*. Windows should be able to automatically find and install the proper drivers. **CLOSE** and **RE-OPEN** program and try to **CONNECT** again.
2. *Cannot "Read" or "Write" a new driver?* Please be sure to **UN-CHECK** the *Auto Program* box.