

# FTI 3000 Manual

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Specifications	3
Configuration Parameters and Test Conditions	4
Diode String Configuration and Naming Conventions	5
Cabling Option 1 & 4	6
Cabling Option 2	8
Cabling Option 3	9
Translation Board	9
Lambda Power Supply Configuration	10
Launching Burner Application Configuration Tab Operation Tab Phase Meter Light Pole Status Adding run-time comments System Health Diode String Status Diode Location Translator Failure Symbols Plotting Tab Channels Tab Excel and Minitab backup file naming convention Quick Keys	12 13 16 18 19 22 23 24 25 29 32 33 34 35
Launching BIAG (diagnostics) Application Connection Tab Diagnostic Tab Calibration Tab	36 38 39 46

#### **Specifications**

- Tj (°C) Result is based on the Vf measurement and the Kfactor and Vf@25°C entry parameter accuracies (\*3).
- Vf (V) +/- 0.5% of measured value.
- Vz (V) +/-0.8% of measured value (\*2).
- IHeat (A) +/-10% of measured value (\*1, \*2, \*4).
- \*1) Measurement is not calibrated.
- \*2) Measurement is not used for temperature regulation.
- \*3) Tj °C = 25 + ((Vf@25°C Vf measurement) / Kfactor).

\*4) IHeat current is adjusted up or down to change the Diode Vf in order to maintain prescribed temperature.

#### Meter Accuracy

 100mV Range
 0.15% of Value +/- 1mV

 1V Range
 0.15% of Value +/- 1mV

 10V Range
 0.15% of Value +/- 4mV

 40V Range
 0.15% of Value +/- 4mV

 400V Range
 0.3% of Value +/- 10mV

 800V Range
 0.3% of Value +/- 200mV

#### Maximum operating condition

Maximum 600V.

2.5A per IHeat current source.

#### **CONFIGURATION PARAMETERS AND TEST CONDITIONS:**

This section refers to a *Configuration tab* which will be described later in this manual. *Regulation* and *Filler* diodes will also be defined later in this manual.

The following conditions cause a diode failure status:

Exceed Vz minimum or maximum limit.

- Limit is based on Vz Tolerance Configuration tab entry parameter.
- Measurement is Vz.

Exceed maximum total wattage of all active strings.

- Limit is based on Max Watts Configuration tab entry parameter.
- Measurement is the sum of heating current \* Vz of all active diode strings.

Exceed Tj minimum or maximum limit.

- Limit is based on *Temperature Tolerance* **Configuration tab** entry parameter.
- Tj is computed using measured Vf and Vf@25°C and Kfactor **Configuration tab** entry parameters.

A failure will turn on the Yellow light and continue burn-in testing. It is possible for a diode to return to normal passing condition. For example, air movement change across the diode and either the air movement ceases or the heating current eventually adjusts accordingly.

The following conditions will cause a diode string to be removed from test:

Voltage on high-side (Vtop) of *Regulation diode* is too high.

- Limit is based on Vz, Vz tolerance and String Length Configuration tab entry parameters (plus additional tester operating voltage margin).
- Measurement is high-side (Vtop) of *Regulation diode* voltage.
- Possible reasons: Power supply voltage is too high or *Filler diode*(s) are shorted.

Voltage on high-side (Vtop) of *Regulation diode* is too low.

- Limit is based on *Vz*, *Vz tolerance* and *String Length* **Configuration** *tab* entry parameters.
- Measurement is high-side (Vtop) of Regulation diode voltage.
- Possible reasons: Power supply voltage is too low or *Filler diode* is open.

Heating Current is too high.

- Current Range selection is based on *Vz*, *Vz tolerance* and *Max Wattage* **Configuration** *tab* entry parameters.
- Measurement is *Regulation diode* heating Current Source.
- Possible reasons: Incorrect entry parameter or too much air flow across *Regulation diode*.

Vf is below 0.2V or above 0.9V.

- Measurement is Vf.
- Possible reasons: *Regulation diode* failure.

Tester module temperature exceeds 70°C.

- Measurement is from a Thermister on each Current Control Module inside the Tester.

FTI 3000 Configuration



#### Cabling Option 1 & 4



Option 1 two full frames or Option 4 of two full frames with alternating diodes and blanks populated on Diode Boards

#### Cabling Option 2



#### Cabling Option 3



Translator



#### Lambda Power Supply Configuration



Baud Rate of all Power Supplies must be set to 2400.

The Burner software component of the FTI3000 system is the module that the operator uses to run and perform the various tests against the diodes

To run the Burner software, double click Burne

After launching the burner software, the following screen will appear

ile Uptions Operations Abo						
onfiguration Operation Plotting C	hannels					
Device Number	3.3V Zener	r 1 W 8	30C	Load	Mod	
Operator ID	Operator			Required nower supp	ly voltage = 21	33 V @ 10 07 4 current
_ot Number	G1				iy voltage - 21	
Number of Diode Strings	100	~		Cabling Option Selection	1 (1-5 String	length) 🖌
String Size	4	~		Max Dead Strings	55.00	<b>\$</b> %
Zener Voltage (Vz)	β.30	*	V	Zener Voltage Tolerance	10.00	🚺 % (3.020∨-3.691∨)
/f@25°C	0.7950	*	V			
< Factor	1.6000	*	mV/℃			
Alpha	0.1000	*	%/°C			
<sup>-</sup> emperature	80.0	*	°C	Temperature Tolerance	10.00	📑 % (72.00 °C - 88.00 °C
Max Power	1.10	*	W			
3um In Time	14.00	*	Hours	Data logging sample rate	120 🛟 Sar	mples/Hour
Comment/Notes Logged at beginning of RUN	Start RUN (	comm	ent.			
	<u>&lt;</u>					

The screen will look slightly different depending on whether a 5 length was selected or a 10 length was selected. The screen capture above shows the **Configuration** tab with a 5 length selected.

The screen is divided into four tabs: *Configuration, Operation, Plotting* and *Channels* 

	/		/		_ /
🚟 Burr	er	/			
Eile 🖌 🤆	)ptior	ns Opera	ations	About	
Configura	tion	Operation	Plotting	Channels	3

١

Various parameters on the *Configuration* tab will be set based upon what is chosen from the *device file* field. The Load button must be pressed in order update the configuration information from the device file.

r 1W 80C	Load Required power supp Cabling Option Selection	Mod ly voltage = 2 1 (1-5 String	1.33 V @ 40.07 A current
r 1W 80C	Load     Required power supp     Cabling Option Selection	Mod ly voltage = 2	1.33 V @ 40.07 A current
r 1 w 80C	Load     Required power supp     Cabling Option Selection	Mod Iy voltage = 2	1.33 V @ 40.07 A current
	Required power supp Cabling Option Selection	ly voltage = 2	1.33 V @ 40.07 A current
×	Cabling Option Selection	1 (1-5 String	
~	Cabling Option Selection	1 (1-5 String	a length)
~	Ne Deel Ohiere		giorigui) 🔛
	Max Dead Strings	55.00	\$ %
V	Zener Voltage Tolerance	10.00	🏮 % (3.020 V - 3.691 V)
V			
🌲 mV/°C			
\$ %/°C			
<b>0°</b>	Temperature Tolerance	10.00	🌍 % (72.00 °C - 88.00 °C)
¢ W			
Hours	Data logging sample rate	120 🛟 Sa	amples/Hour
comment.			
ation data was loade	ed		
	mV/°C     %/°C     %/°C     %/°C     %/°C     w     v     ton data was load	w     w	mV/°C      %/°C      %/%      %/°C      %/°C      %/%      %/°C      %/%      %/°C      %/%/%

The device file field controls the following values on the Configuration tab:

Cabling Option Selection String Size Max Dead Strings Zener Voltage Zener Voltage Tolerance Vf @ 25°C K Factor Alpha (modifies operational Vz = ((Tj – 25) \* Alpha / 100.0) + Zener Voltage) Temperature Max Temperature Tolerance Max Power Burn In Time Data logging sample rate

Almost all of the fields are populated based on the **Device File** field on the **Configuration** tab except for Operator ID and Lot Number. In addition the

Cabling Option Selection field controls translator dialog boxes. This will be discussed later in the manual.

In addition there is a *Comments/Notes* section in the **Configuration** tab to allow you to enter comments before the test is begun. These comments become part of the log files that are created when the test is completed.

🔀 Burner		1			
Eile Options Operations Abo	ut	/			
Configuration Operation Plotting Cl	nannels				
Device Number	3.3V Zener 1W	30C 🖌	Load	Mod	
Operator ID	Operator		Required power sup	/voltage = 21.33 V @ 40.07 A current	
Lot Number	G1				
Number of Diode Strings	100		Cabling Option Selection	1 (1-5 String length) 🛛 🖌	
String Size	4		Max Dead Strings	55.00 🗘 %	
Zener Voltage (Vz)	j3.30 🗳	V	Zener Voltage Tolerance	10.00 🔅 % (3.020 ∨ - 3.691	∨)
∨f@25℃	0.7950	v			
K Factor	1.6000	mV/℃			
Alpha	0.1000	%/°C			
Temperature	80.0	°C /	Temperature Tolerance	10.00	°C)
Max Power	1.10	w /			
Burn In Time	14.00 🗘	Hours	Data logging sample rate	120 Samples/Hour	
Comment/Notes Logged at beginning of RUN	Start RUN com	ent.			
Device 3.3V Zener 1W 80	c configuration c	lata was loaded .			

If the **Mod** indicator is visible, it indicates that one or more parameters have been modified and not saved.

These settings can be saved by going to the *File – Save* menu (Engineering mode only).

Burne	er	
File	Options	
5	ave Ctrl+S	itting Channels
E	<u>×</u> it	8.2V Zener 80degC
Oper	ator ID	Operator ID
Lot N	lumber	T1

The **Operation tab** is where the testing is started.



\_ 8 ×

The above screen shows the **Operation tab** during the middle of a test. When the tab is initially clicked, in order to run the test, the operator must click the **Run** button in the **Power** section of the tab. Notice in the image below the **Diode Power** indicator is off, since the test has not begun.

Burner
File Options
onfiguration Operation Plotting Channels
Power
Tester Power Run Diode Power
OFF
System Health



To begin the running of the test, click

icon on the operation tab.

*Note:* The phases can also be run through by manually sliding the slider on the phase meter (Engineering or Maintenance modes only). Usually this is done for diagnostic purposes.

Once the *Run* icon has been clicked, the *Phase* indicator will change from 0 to indicate that the test is currently running. /



# **CAUTION NOTICE:**

When the Diode Power Supplies are on, the *Diode Power* indicator will be bright Red. This means that there is high voltage present/and extreme caution should be exercised to prevent electrical shock hazard.



Even if the indicator is not red, extreme caution should still be maintained as the software can get disconnected from the actual Power Supply state. Always check the meter indicator on the Power Supplies for voltage status.

The *Phase Meter* shows you what phase the test is currently in.



There are three phases of the test:

- Phase 1 Diode check (checks regulation diode).
- *Phase 2* Ramp up ramps up power supplies in voltage increments then ramps up Diode temperature to operating condition (preheat).
- Phase 3 Data starts getting recorded (regulation mode).

NOTE: Any diode failure in *Phase 2* will terminate the test regardless of the *Max Dead Strings* **configuration tab** parameter. This is so that the failure can be remedied before going into regulation mode, *Phase 3*.

The test can have different statuses to alert you as to how the test is proceeding. The status lights correspond with the light pole on top of the system.



The statuses are as follows:

:

Light Color	Meaning
White	System idle.
Blue	Diode check or Ramp-up in progress.
Green	Test is running successfully.
Yellow	Requires attention. Regulation mode is still running.
Red	Warning, requires immediate attention. Regulation mode abnormally terminated.
Flashing Green and White	Test is complete.

The meaning of each status can also be obtained by clicking on the status light in the window.

When one of the status lights is clicked, a dialog box will pop up indicating the meaning of that light

#### White:



Blue:



Green:



#### Yellow:



Red:



Once the test has reached Phase 3 data then will be logged for the test. The logged data is stored in two locations, in flash memory on the board and also as a text file in C:\DiodeBurnIn\Folder# where the folder number corresponds to the lot number listed on the *configuration tab*.

Additionally the progress meter will indicate how much progress has been reached during Phase 3.



During the testing, there are three other windows that can give you information regarding the testing of a specific diode.



*Window 1*: Provides text messages with information about the diode being tested. Additionally comments can be entered at the bottom of the window, by typing the comment in and then clicking the *Insert Comment* button (as shown by steps (a) and (b). These comments get stored in the log file that is generated through-out the test.

*Window 2*: Each diode, represented as a block, lights with a color indicating if the test on that diode was successful, encountered a problem, etc. Additionally, clicking on the block brings up a graphical form that translates the location of diodes for that specific diode string. This is talked about later in the manual.

Window 3: Graphical representation of the parameter the diode is operating at.

Another informational area on the operations tab is the System Health section.



This section advises as to the percentage of diode strings that are in tolerance and the number of dead strings for each of the three phases.



There is a drop down box that allows you to choose exactly which test on the diode is to be viewed. All tests are continually performed on the diode.

The *String Status* area of the *Operation Tab* allows you to click in the *String Click Selection* radio buttons in order to choose which graphical representation of the diode(s) location. The *Cabling Option Selection* field on the *Configuration* tab controls what the *Translator* dialog boxes display.

String Status	
+U +1 +2 +3 +4 +5 +6 +7 +8 +9	
20	
30	
40	
60	
70	
90	
Obies Olist, Ostarian	
String Click Selection	
- Right Click for waveform	
- Left Click for	
Regulation Diode	
O Filler diodes	
O All diodes in string	
Translated error	

Right-clicking on the box will select that corresponding diode string for waveform viewing.

Below is a diagram of the *Translator* graphical form with all the components marked.



Clicking on the String selection box can be used to translate the location of the corresponding diode string.

Choosing All diodes in string results in





Selecting Regulation Diode results in





Selecting Filler diodes results in





Translator Diode failure symbol definitions and meanings:





Right-clicking on a box in the String Status grid displays the results in the test window and indicates which string measurement is displayed.





Clicking on the String Number text will toggle the active string number selection item. Note the Asterisk preceding the number. This shows which wave form is the active item.

The *Plotting* tab shows the waveform for the various tests that have run against the diodes



The **Bar Chart** shows a particular measurement result for all active diode strings under test. The Green bar shows the current state of the diode string, and the Gray bar shows the minimum and maximum history range. The history length is the same length as the **Waveform Graphs**.

To change the **Bar Chart** measurement result type, click on any of the waveform graphs.

The *Waveform Graphs* show only a particularly selected diode string. To change the diode string selection, click any where on a bar in the *Bar Chart*, or go to the Operation tab and select the diode string from the *String Status* grid.

The **String Number** in the Legend shows which diode string is actively shown in the **Waveform Graphs**. Click over the desired **String Number** Legend to make that **String Number** the active item when selecting the desired **String Number**. Note the Asterisk (\*) preceeding the String Number text. This shows which Waveform is the active item.

The *Channels tab* (Engineering and Maintenance modes only) allows you to select which diodes are to be tested.

10		•	_																		
Conf	igura	ition	[ Cł	hann	els	Op	eratio	on													
	0	☑	1	☑	2	☑	3	☑	4	•	5	•	6	☑	7	•	8	☑	9	1	i
☑	10	•	11	☑	12	☑	13	•	14	•	15	•	16	☑	17	☑	18	•	19	Set All	
☑	20	•	21	☑	22	☑	23	•	24	Г	25	•	26	☑	27	•	29	•	29	Clear All	
V	30	₽	31	☑	32	☑	33	₽	34	₽	35	₽	36	☑	37	☑	38	₽	39	A.1-	1
~	40	•	41	₽	42	•	43		44	▼	45	•	46	▼	47	₽	48	Г	49	Auto	
~	50	☑	51	₽	52	☑	53		54	☑	55	•	56	☑	57	₽	58		59		
~	60	☑	61	•	62	•	63	•	64	•	65	•	66	☑	67	₽	68	₽	69		
~	70	•	71	•	72	•	73	•	74	Г	75	•	76	▼	77	₽	78	Г	79		
V	80	₽	81	☑	82	☑	83	₽	84	•	85	•	86	☑	87	₽	88		89		
~	90	☑	91	₽	92	☑	93	•	94	•	95	•	96	☑	97	₽	98		99		

The best way to select which strings are being tested is to click the

Auto button. The auto button pre-selects which strings are tested by checking to see whether a diode has been inserted correctly into that specific position.



By using the Auto button, you can also check to see whether the diodes have been inserted correctly, since if they are not, the box will not be selected.

#### Excel and Minitab backup file naming convention

Whenever a new run is performed and there is an existing Excel and Minitab file in the Lot directory, the previous run files will get renamed in the following convention:

Excel\_*lotID*\_YYYYMMDD\_hhmmss.bak Minitab\_*lotID*\_YYYYMMDD\_hhmmss.bak

Where:

YYYY = Year. MM = Month. DD = Day. Hh = Hour. Mm = Minute. Ss = Second.

For example, Excel\_*lotID*\_20100222\_153238.bak was backed up on Feb 22, 2010 at 3:32:28 pm.

# QUICK KEYS

Any *tab*:

KEY	ACTION
PG-UP	Previous <i>tab</i>
PG-DN	Next <i>tab</i>

#### Configuration tab:

KEY	ACTION
ТАВ	Next parameter.
SHIFT + TAB	Previous parameter.
CTRL + S	Save (Engineering mode only).
CTRL + O	Load settings from file.

#### **Operation tab**:

KEY	ACTION	
F5	RUN	
F7	Stop	
CTRL + M	Enable comment entry.	
CTRL + N	Enable String Number entry.	
SPACE	Toggle String Number selection.	
Numeric numbers 0-9	Change String Number value.	

#### Plotting tab:

KEY	ACTION
F5	RUN
F7	Stop
UP-Arrow	Bar Chart select previous plotting data set.
DN-Arrow	Bar Chart select next plotting data set.
SPACE	Toggle String Number selection Legend item.
Numeric numbers 0-9	Change String Number value.
CTRL + SHFT + K	Clear Plots.

The BIAG (Burn-in Diagnostic) software component of the FTI3000 system is used by the application engineers and maintenance to maintain and test the system.

To launch BIAG, select Biag from the Windows menu system: **START** - **Program Files - FTI - Biag** 



The following screen will appear

🤣 BIAG (c) 2009-2010 Version 1.00	
Elle Help DMM Connected	
PWR Connection Diagnostics Calibration Board Connection List Connected	Reading revision file Done. Connected board list: Device 0 board: Focused Test Inc BI Board
BI Board 70 V	S/N = 76 Device 1 hoard: Focused Test Inc BI Board S/N = 70 (Informational) Detected hardware, Motherboard S/N 70:BI Board=1.1.0, FPGA:5.6.6.0 (Additional BI-Board Information) FIF0:1.0.0, Hodule1:VMeas=1.0.0, Hodule6:Current Control=1.0.0, Hodule1:Current Control=1.0.
Reset/Recovery	Successful connection to: Pocused Test Inc BI Board SN 70 PFGR Rev = 5.6.6.0 (Informational) Detected HP3440IR Meter. DMC Connected
1 € COM Port # Refresh	RERDY

BIAG is made up of three tabs: **Connection**, **Diagnostics** and **Calibration** 

Elle	Help	Ve	rity pas:	sed	
Conne	WR	Diag	nostics	Calil	↓ bration

The Connection tab allows you to turn the power on and off to the board by

clicking the **PWR** icon. Additionally you can select the board from the drop down menu.

SIAG (c) 2009-2010 Version 1.00	
Eile Help DMM Connected	
PWR	
Connection Diagnostics Calibration	
Board Connection	
List Connected	
BI Board 70	Reset/Recovery used for USB disconnects
Connect	
Reset/Recovery	COM Port# used for Calibration and Verification
DMM Port Selection	

To change board selections, first press the Green Connect button so that it turns

Red Connect . Select the desired board ID from the drop-down list and then press the Red Connect button. After the board is connected, the button will turn Green.

**Reset/Recovery** button is used for USB disconnects. If that is the case once the **Reset/Recovery** button is clicked, the power must be turned on and off.

The DMM used for Calibration and Verification is selected with the DMM Port Selection *COM Port #*. Port 0 disables the DMM. The typical COM Port number is 1, but other COM Ports are possible, depending on the computer and hardware setup.

The *Diagnostic* tab is where you get to pick the specific diagnostic that is to be run.

🤣 BIAG (c) 2009-2010 Version 1.00	
Ele Help	
BIAG       (c) 2009-2010       Version 1.00         Ele       Ede         PWR       Connection       Diagnostics         Connection       Diagnostics       Calibration         Diagnostics       Flash State       Run Diagnostics         P RAM Test       1 < Loops         P Rah Test       1 < Loops         P Reh       Storting block (full check)         © Shorting block (full check)       © Cable (not dides)         P Circultry (Diode power must be off)       Clear All         Elear Flash Data       Erase Flash Memory	Reading revision file Done. Connected hoard list: Device 1 board: Porused Test Inc BE Board S/N = 76 (Informational) Detected Hardware, Motherboard S/N 70:BI Board=1.1.0, FPGA:5.6.6.0 (Additional BE-Board Information) FIF0:1.0.0, Module1:Wieas=1.0.0, Module6:Current Control=1.0.0, Module11:Current Control=1.0. Sourcessful connection to: Pocused Test Inc BI Board S/N 70 PFGR Rev = 5.6.6.0 (Informational) Detected HP344011 Meter MM Connected READY
Diede Polarty D Chan Check, Check, Ramp & Regulate Reg 1X Stop Lights Refresh	

Window 1 is where the specifics regarding the diagnostic are chosen.

Window 2 is the output or results of the diagnostic that is/was being performed.

The *Diagnostics* section of the *Diagnostic* tab is where the specific diagnostic to be run is chosen. You can choose the following diagnostic tests: **Flash state**, **RAM test**, **Flash Test**, **Light Pole Interface Test**, **Measurement check** and **Relay**. All of these tests can be run at once.

RAM Test     Flash Test     Itie Pole Interface Test     Measurement check	10	~	Loops
Flash Test     Itie Pole Interface Test     Measurement check	10	Y	Loops
Lite Pole Interrace Test           Measurement check         Image: Comparison of the check	-		1 Mean of Call
Relay		Stop	
Ne selles formulate	, j		
Shorting block (full che	eck)		
C Cable (no diodes)	CON		
Circuitry (Diode power must )	De offj		

*Flash state* indicates the state of the flash memory on the board. *RAM Test* checks the amount of memory. *Flash Test* allows you to test the flash memory on the board. *Light Pole Interface Test* allows you to test the board-to-board light pole interface circuitry. You must use the Lights section to test the light pole driver circuitry and light pole lights.

You can control how many times the test is run through by clicking the



The results of the test(s) will appear in Window 2.

🥩 BIAG (c) 2009-2010 Version 1.00	
Ele Help	
Disprotic:         V Rash State         Plash State         Plash State         Plash Test         Plash Test      <	Reading revision file Done. Connected board list: Procused Fest Inc BI Board S/N = 76 Derice 1 board: Focused Test Inc BI Board S/N 70:BI Board=1.1.0, FGA:5.6.6.0 (Additional Di-Board Information) FIFU:1.0.0, Module1:Wees=1.0.0, Module6:Current Control=1.0.0, Module11:Current Control=1.0. Successful connection to: Procused Test Inc BI Board S/N 70 FFGA F9x = 5.6.6.0 (Informational) Detected NF344012 Meter. DMC Connected Meters = 5.6.6.0 (Informational) Detected NF344012 Meter. DMC Connected

If logging has been enabled, the results shown in Window 2 will be placed in a log file under C:\DiodeBurnIn\Log. At any point in time, if you wish to clear the results from the Window 2, you can right click and clear the results.

Right clicking in the Diagnostics section also allows you to open the results screen in a more detailed window.

If a diagnostic has passed a test, the following screen will be shown. Indicators appear both on the menu bar and in Window 2 to let you know the diagnostic passed.

🤣 BIAG (c) 2009-2010 🖉 rsion 1.00		
Ele Help Diagnostic passed		
PWR Connection Diagnostics Calibration	##### Start of Diagnostics Test ###### FlashMemoryStatus: Passed	**********
Connection       Diagnostics         V       Flash State       Run Diagnostics         V       Flash State       Image: Closes         V       Like Pole Interface Test       Measurement Check.         Stop       Relay       Stop         O       Shotting Block (full check)       Cable (no dodes)         Clear All       Clear All       Clear All         Clear All       Erase Flash Memory       Diode Polarity         Diode Polarity       0 Chan       Stop         Lights       Refresh       Refresh	Passed FIFO RAM Test: Passed Flash Memory Check: Flash Memory Test: Passed Lite Pole Interface Test: Passed Pass Pass Pass	
		<u>&gt;</u>

Correspondingly, if a diagnostic has failed the following window will appear. Again, indicators on the menu bar and in Window 2 will let you know the diagnostic failed.

The *Clear Flash Data* button allows the operator to clear the existing data out of the flash memory.

The *Erase Flash Memory* button completely clears and wipes out the contents of the flash memory on the board.

Connection Diagnostics Calibration Hardware Revision	
Diagnostics	
Flash State Run Diagnostics	
RAM Test	
🔲 Flash Test 10 💌 Loops	
Lite Pole Interface Test	
Measurement check Stop	
Relay	
O No cables (incomplete)	
Shorting block (full check)	Clear Flash Data button
Cable (no diodes)	
Circuitry (Diode power must be off)	
Clear All	
Liear Flash Data	
Diode Polarity 29 🗢 Chan	Erase Flash Memory button
Check Check, Ramp & Regulate Reg IX	
Stop	
Liebte	
Refresh	
\$	

*Diode Polarity* checks the polarity of the diode. The results correspond to the colors on the light pole.

*Red* indicates a short *Green* indicates the polarity is fine *Yellow* indicates that it is open

Clear Flash Data	Erase Flash Memory		Checks polarity of the diode(s)
Diode Polarity 29	文 Chan		Tests power supply
Check, Ram	o & Regulate Reg 1X Stop		
Lights	Refresh	-[	Checks the regulation diode

The *Check* button (Engineering mode only) checks the same parameters as the Operator(Burner) GUI but only checks the regulation diode.

*Check, Ramp & Regulate* (Engineering mode only) tests power if the power is able to be manually adjusted from the power supply.

**Reg 1X** (Engineering mode only) runs the regulation algorithm 1 time on all channels whether the channel contains a diode string or not. This can be used for debug or diagnostic purposes in which the normal Check, Ramp & Regulate method continually fails.

*Lights* area allows you to click on a specific color to test that color light on the light pole. The *Refresh* button test to see what light is currently on, on the light pole and highlights that color in the box.



The *Calibration* tab is used when an operator utilizes a calibration tool.

🥩 BIAG (c) 2009-2010 Version 1.00	
Eile Help DMM Connected	
PWR Connection Diagnostics Calibration	Reading revision file Done.
Calibration / Verify Calibrate	Connected board list: Device 0 board: Focused Test Inc BI Board S/N = 76 Device 1 board:
Verify	Focused Test Inc BI Board S/N = 70 (Informational) Detected hard (Additional BI-Board Informat
1 V Loops	Successful connection to: Focused Test Inc BI Board SAN 70
Stop	FPGA Rev = 5.6.6.0 (Informational) Detected HP34 DMM Connected
	READY