

When you set things up, run the lamp while looking at the raw output in counts while the software is in Scope mode. It is probably flat-topped at 65536. If so, than this can be fixed.

Access the Setup dialog box at upper left, and choose a smaller value for Integration time; probably 10 mSec. I hope this does it.

However, if your illuminator really exceeds 100 microW/cm<sup>2</sup> nm, getting a reading on the computer display in the irradiance mode is a challenge (although you can export the measurement to Excel accurately even if it exceeds the display full scale. If you have to change the display max default, this is the method:

There are two files in the software package which are unique to each instrument: ILIrrad.cal and SM32pro.ini  
The SM32pro.ini file is text and contains the setup parameters that you want to change.

To access this file, you need to navigate down to the file folder in the Windows Programs folder containing it. A typical path would be (assuming the main hard drive is C:)

C:\Program Files\International Light, Inc\SpectrLight\SM32pro.ini

The contents of the SM32pro.ini file looks like:

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[Options]  
Ver=2.828

[Extend Options]  
Board=USB  
TimeAV=10  
BinningAV=0  
FFT=0  
IntTime=100  
IntervalWL=1.00  
StartWL=220.00  
EndWL=1050.00  
Device=1  
Channel=0  
Gain=2  
ADRange=1  
ColorTemp=3000.00  
Title=RPS900-R 1 cm<sup>2</sup> Aperture  
SubTitle=SM240IM0P1974-EU  
BadPixels=39 166  
NoiseRatio=4.00  
NoiseLine=0.50  
InitSet=537505925  
NoiseCutoff=2  
CalNo=1  
Base=768  
InitColor=2  
RefWhite=100.00  
InitPane=12

Priority=1  
IrradDist=100  
PixelFlip=0  
InitOption=3  
PixelColor=255  
TransColor=9109504  
AbsorbColor=37632  
IrradColor=8519755  
BackColor=14745599  
NoiseHighLow=0  
MaxA=5.0  
MaxI=100.0

[Hg-Ar Line]

LineCount=38  
Line 1=1849.5  
Line 2=2536.5  
Line 3=2967.3  
Line 4=3021.5  
Line 5=3131.6  
Line 6=3341.5  
Line 7=3650.1  
Line 8=4046.6  
Line 9=4077.8  
Line 10=4358.4  
Line 11=5460.8  
Line 12=5769.6  
Line 13=5780.2  
Line 14=5790.7  
Line 15=6965.4  
Line 16=7067.2  
Line 17=7147.0  
Line 18=7272.9  
Line 19=7384.0  
Line 20=7503.9  
Line 21=7514.7  
Line 22=7635.1  
Line 23=7724.0  
Line 24=7948.2  
Line 25=8006.2  
Line 26=8014.8  
Line 27=8103.7  
Line 28=8115.3  
Line 29=8264.5  
Line 30=8406.2  
Line 31=8424.6  
Line 32=8521.4  
Line 33=8667.9  
Line 34=9123.0  
Line 35=9224.5  
Line 36=9354.2  
Line 37=9657.8  
Line 38=9764.5

[SM240]

NI=6023  
Pixel=2080

Timer=252  
BulkOrIso=0  
MinIntTime=1

[SM250]

Interface=PPI  
Base=0x378  
Reg\_Offset=0x00  
PP\_Repeat=1  
Cable=SHORT  
Data\_Bits=16  
Sensor=CCD  
Mode=0x8  
Test=0x6  
Shutter\_Speed=dual  
Shutter\_Bits=0x08  
MaxBinX=8  
MaxBinY=63  
Guider\_Relays=True  
Columns=688  
Rows=513  
Imgcols=659  
Imgrows=494  
BIC=16  
BIR=16  
HFlush=8  
VFlush=50  
SkipC=4  
SkipR=2  
hbin=1  
vbin=63  
Control=True  
Target=-10.00  
Cal=165  
Scale=2.1  
sensor = ICX084AL  
Color=False  
Noise = 10  
Gain = 2  
PixelXSize = 7.4  
PixelYSize = 7.4

[SM260]

ComPort=0  
Speed=2400  
Parity=2  
DataBit=8  
StopBit=0  
FlowControl=0

[SM301]

TempCal=200  
TempCal0=-3.811798337914  
TempCal1=3462.920020089  
TempCal2=-20698.96463541  
TempCal3=-8267379.296770  
OffVolt=0.7

Gain=2  
Pixel=256  
TEC=1  
CAP=2

[Factory Default]

Date=04/08/2005 08:07:51  
Name=240-IMOP1974-EU  
PointCount=9  
Data 1=2537;242  
Data 2=3132;359  
Data 3=3650;461  
Data 4=4047;538  
Data 5=4358;597  
Data 6=5461;805  
Data 7=6965;1082  
Data 8=7635;1203  
Data 9=8115;1289  
BaseAddress=768  
IntegrationTime=35

[Cal 1]

Date=04/08/2005 08:07:51  
Name=240-IMOP1974-EU  
PointCount=9  
Data 1=2537;242  
Data 2=3132;359  
Data 3=3650;461  
Data 4=4047;538  
Data 5=4358;597  
Data 6=5461;805  
Data 7=6965;1082  
Data 8=7635;1203  
Data 9=8115;1289  
BaseAddress=768  
IntegrationTime=35

[Print Page]

Organization=International Light  
Operator=L. E. Schmutz  
Sample=1 kW QTH at 100 cm, 14 sec total scan

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At the bottom of the first batch of parameters in this list is the line:

MaxI=100.0

This sets the Maximum Irradiance to 100.0 microWatts/cm<sup>2</sup> nm .

To increase the full scale default, just change this to your desired maximum, say:

MaxI=500.0

and save the file.

Now, when you switch to Irradiance mode, the window will open up to 500 microWatts/cm<sup>2</sup> nm full scale.

By the way, even if you have data going above the max in the viewing window, if you use the Export button to send the data to a text or Excel file, the data will not be truncated or otherwise adversely affected by the display parameters. (It will, however, export only the wavelength region set by the software).