



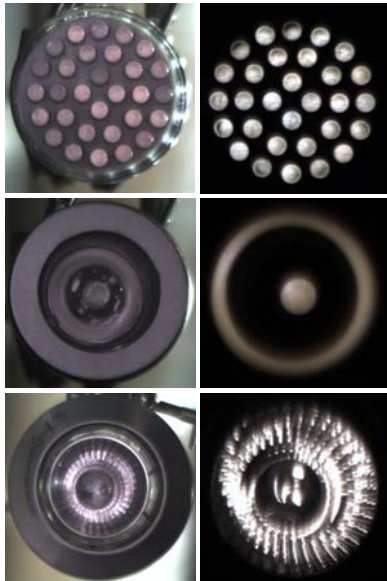
In evaluating sources in accordance with **EN62471:2008/ IEC62471:2006 "Photobiological Safety of Lamps and Lamp Systems"** with regard to retina hazards, one must take into account the imaging properties of the human eye to determine retinal exposure.

To simulate this process, the PSL Profiler consists of a lens-based USB CMOS camera viewer, designed to determine (apparent) source location and (apparent) source size, the source is magnified to resolve best the limiting fields of view 1.7 to 100mrad.

PSL-Source Profiler

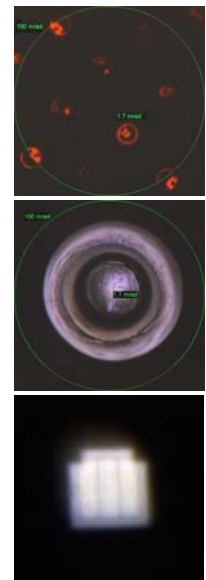
The PSL-Source Profiler consists of a dual-lens system, the position of one of which is adjustable to image the measurement scene from 200mm to infinity onto a CMOS camera. USB read-out of the lens position permits determination of the lens measurement plane distance whilst the captured image is analysed to determine source size. A range of ND filters are employed to attenuate the signal incident on the camera as required.

A simple camera mode may also be used to include an image of the source under test in the PSL wizard measurement report.



Software Interface



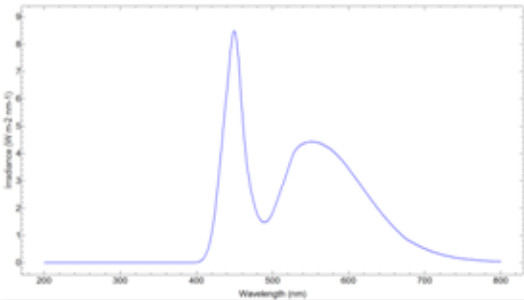
The PSL Source Profiler is interfaced through the PSL wizard which brings together the full measurement process within one application, with all test elements culminating in a final measurement report. Based on guidance in the standard, image analysis software shall determine the 50% emission points of the source to determine source size; feedback from a reader on the translatable lens stage will allow calculation of the apparent source location once the source is brought into



Specification	
Camera:	CMOS, 2048 x 1536
Lenses:	UV grade silica
Lens adjustment:	Manual with USB position readout
Working distance:	200mm to infinity
Spectral Range:	350-1100nm
Software Control:	PSL Wizard, USB control
Mechanical Mounting	M6 threaded holes on base

Example Measurement Report

Below is an example PSL Wizard measurement report incorporating product and emission images taken by the PSL Profiler. Based on Word® document templates, these reports are fully customisable.

EN62471:2008 Measurement Report																					
Test Date:	13/08/2010																				
Device Name:	GU10 LED																				
Operating Conditions:	240VAC																				
Product Image:	Emission Image:																				
																					
Apparent source location:	3mm behind plane of front face																				
Apparent size of the array:	169 mrad																				
Apparent size of component LED	21x21 mrad																				
EN62471:2008 Evaluation																					
Measured at 200mm from apparent source																					
Irradiance-based hazards																					
<table border="1"> <thead> <tr> <th>Hazard</th> <th>Measured value</th> <th>Allotted risk group</th> <th>Risk group limit value</th> <th>Time to exposure limit (s)</th> </tr> </thead> <tbody> <tr> <td>Actinic UV ($mW m^{-2}$)</td> <td>1.3×10^{-3}</td> <td>Exempt</td> <td>30</td> <td>>30000</td> </tr> <tr> <td>Near UVA ($W m^{-2}$)</td> <td>4.0×10^{-2}</td> <td>Exempt</td> <td>100</td> <td>>30000</td> </tr> </tbody> </table>	Hazard	Measured value	Allotted risk group	Risk group limit value	Time to exposure limit (s)	Actinic UV ($mW m^{-2}$)	1.3×10^{-3}	Exempt	30	>30000	Near UVA ($W m^{-2}$)	4.0×10^{-2}	Exempt	100	>30000						
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Spectral Irradiance at 200mm	Overview of EN62471:2008 classification																				
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