

# Plate Readers



For Edinburgh Instruments  
Photoluminescence Spectrometers



A microplate reader accessory can be added to an Edinburgh Instruments PL spectrometer for automated high-throughput measurements of spectra, phosphorescence lifetimes and fluorescence lifetimes with photon-counting sensitivity.

Two options are offered: the PR2 Plate Reader accessory for the FLS1000 Photoluminescence Spectrometer and the SC-41 Plate Reader Module for the FS5 Spectrofluorometer. Both plate readers utilise the spectrometer's multiple sources and detectors, as well as its monochromator to fine-tune the wavelength and bandwidth.

If the instrument is configured for time-resolved photoluminescence, these measurements are automatically enabled in the plate reader. This, together with world-leading photon counting electronics, makes the PR2 and SC-41 stand out from traditional microplate readers in terms of flexibility and performance.

## Key Features



### Spectral

PL spectra with high resolution enabled by the FLS1000 or FS5 monochromators



### Time-Resolved

Photon-counting fluorescence (sub-ns) and phosphorescence lifetimes



### Plug & Play

Easily exchanged with other sample holders in the spectrometer



### Software Control

Controlled from the Fluoracle® instrument software, no additional packages needed



### Up to 384 Wells

Users can customise plate layouts up to 384 wells

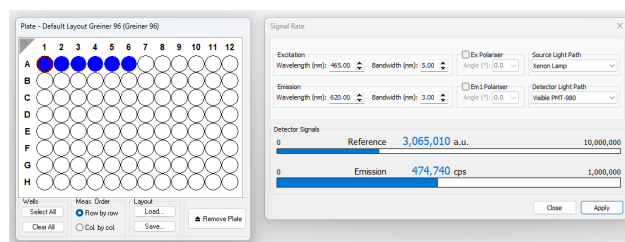
## OPERATING PRINCIPLE

The plate readers are connected to the spectrometer excitation and emission light paths via fibres.

The Fluoracle software allows choosing the source/detector and the type of measurement, spectral or time-resolved.

The user can create and store custom microplate designs in the software. Measurement wells are selected in the plate layout before taking data.

Up to 384 wells can be acquired in one automated measurement, enabling rapid high-throughput photoluminescence experiments.

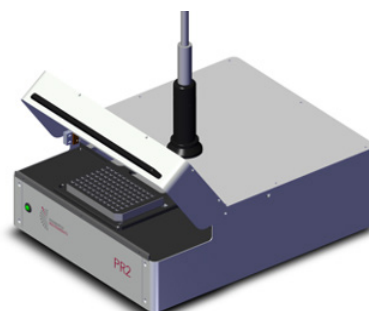


Measurement setup for a standard 96 well plate in Fluoracle.

## PR2 PLATE READER

The PR2 is the microplate reader option for the FLS1000 Photoluminescence Spectrometer. It connects to the spectrometer sample chamber via fibres.

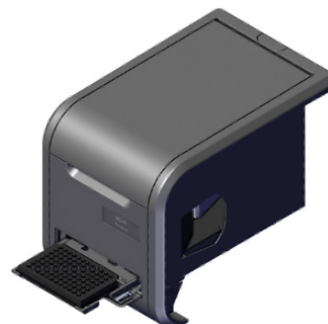
This is the plate reader of choice for demanding applications, benefiting from the FLS1000 premium sensitivity and stray light rejection.



## SC-41 PLATE READER MODULE

The SC-41 is a compact plate reader module for the FS5 Spectrofluorometer.

Swapping between the SC-41 and other sample modules only takes a few seconds, making it ideal for busy labs where saving time and optimising space is crucial.



Typical Performance	PR2	SC-41
REPEATABILITY (96 WELL)	<0.5%	<1.5%
REPEATABILITY (384 WELL)	<5%	<3%
CROSSTALK (96 WELL)	<0.001%	<0.1%
CROSSTALK (384 WELL)	<0.05%	<5%
WELL-TO-WELL REPEATABILITY	<5%	<3%
SENSITIVITY	1 pM fluorescein	40 pM fluorescein
SPECTRAL RANGE	250 - 900 nm or 400 - 2,000 nm (fibre dependent)	Excitation 250 - 900 nm Emission 250 - 1,650 nm
DIMENSIONS	401 x 320 x 135 mm	320 x 245 x 265 mm (internal to FS5)