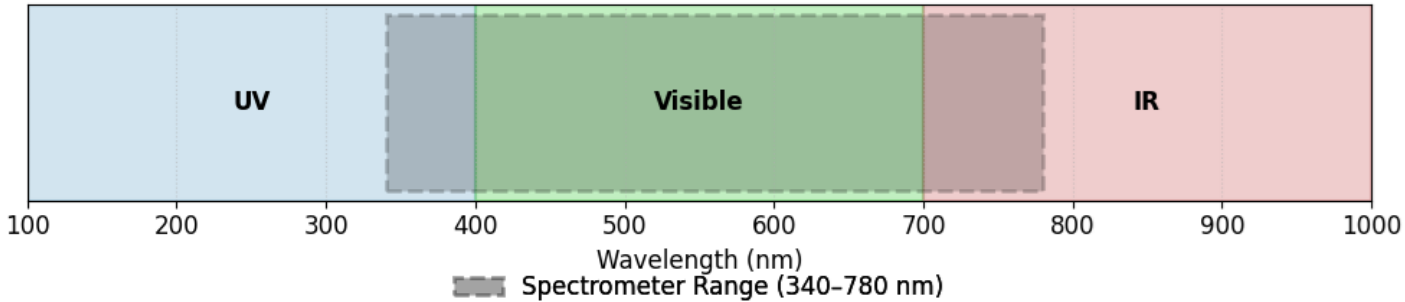


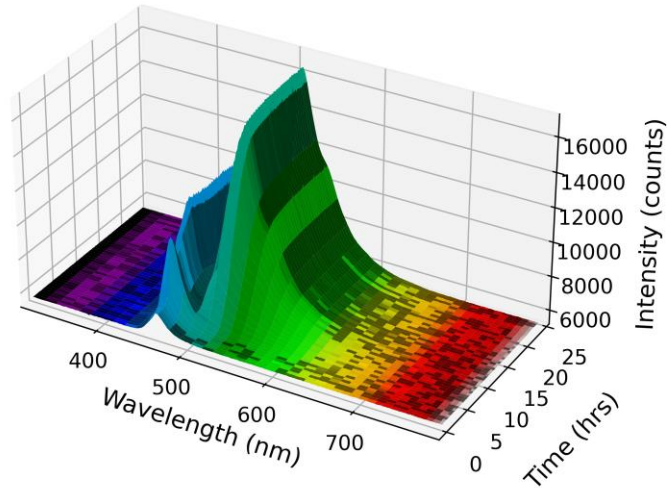
Fluorescence Spectrometer Module

Spectral Response Range of the Fluorescence Spectrometer

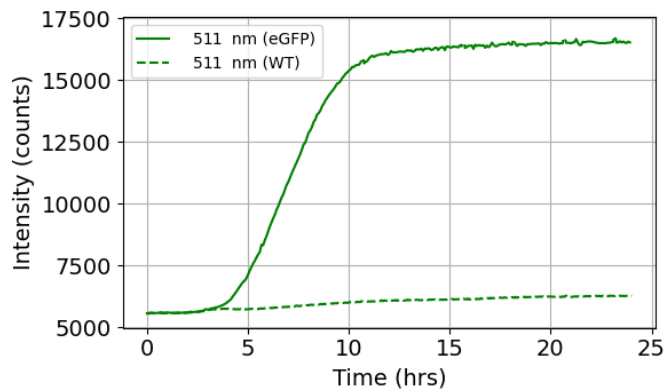
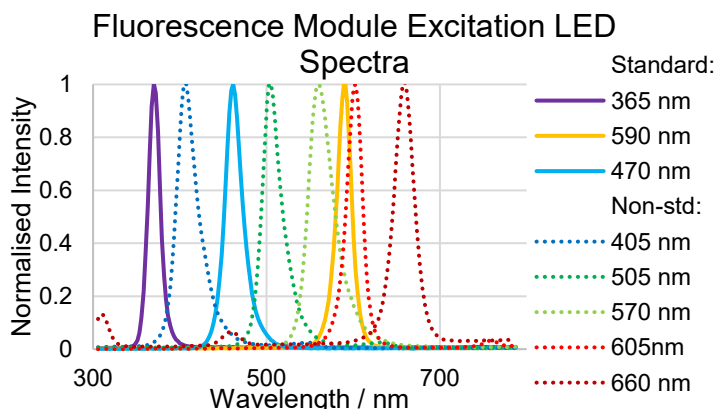


Specifications:

- Spectral response range: 340 to 780 nm over a 256 pixel CMOS linear image sensor,
- Spectral resolution (FWHM): 12 nm typical, 15 nm max (sampling resolution \sim 2 nm),
- 3 variable intensity excitation LEDs (365 nm, 470 nm, and 590 nm as default. 405 nm, 505 nm, 570 nm, 605nm, 660 nm options available),
- Real-time full spectrum scan,
- 8 bit adjustable intensity excitation LEDs (including zero intensity and an always on function for optogenetics),
- User defined gain and integration time for fluorophore detection optimisation,
- 15 bit intensity resolution,
- Filterless, pre-set and customisable fluorophore band selection,
- Automatic linear dark correction.



Time-resolved raw spectrum of E.coli YD133 with eGFP grown in LB at 37°C and excited with a 470 nm LED.



Time-resolved single emission of E.coli YD133 with eGFP and without (wild type) grown in LB at 37°C and excited with a 470 nm LED.