

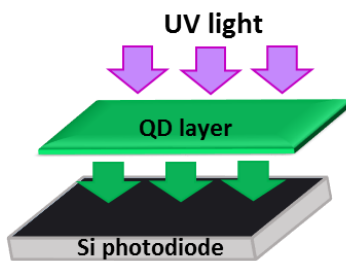


Perovskite Quantum Dots for UV Sensors

Silicon photodiode is the most widely used commercial device to capture light in a broad range of applications, from imaging to light sensors. Due to low penetration depth of high energy UV photons in the silicon-based layer, these sensors are not sensitive enough for UV light with wavelengths below 400 nm. Perovskite Quantum Dots can be utilized as the color-converting layer to enhance the UV light sensitivity of Si-based photodetectors.

BENEFITS:

- High photoconversion of UV light into visible light (PLQY up to 100%)
- Short decay time (\approx 5-20 ns) allowing high-speed UV light detection
- High absorption coefficient of UV light
- Tunable emission 450-685 nm

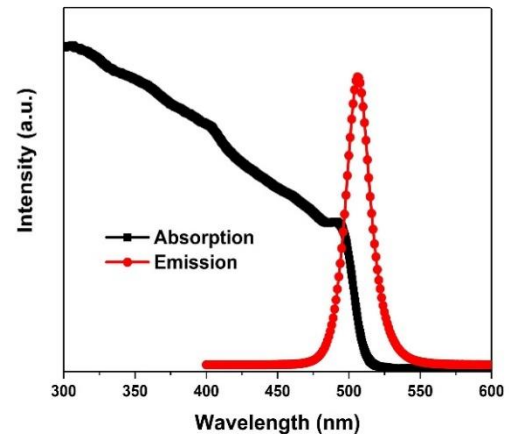


PERFORMANCE:

	QD-P-510
Emission	510 nm
PLQY at UV light excitation	Up to 100%
FHWM	< 20-25 nm
Decay time at UV light	\approx 5-20 ns
UV light absorption range	100-400 nm

EXPERIMENTAL DATA for QD-P-510 (Perovskite CsPbBr₃ QDs):

Perovskite Quantum Dots CsPbBr₃ with the catalog number QD-P-510 has a broad absorption profile and can capture UV light and re-emit at 510 nm.



High PLQY of QD-P-510 allows to convert UV light into lower energy green light where Si-based photodetectors have a high sensitivity. QD-P-510 can be used in the form of QDs in a polymer film or a spin coated layer on top of the Si-sensor.

Products portfolio:

- [Perovskite Quantum Dots \(QD-P\)](#)
Perovskite QDs CsPbX₃, oleic acid and oleylamine capped, 450-685 nm emission peaks
- [LUMAR™ CsPbBr₃ Quantum Dots](#)
Perovskite QDs CsPbBr₃, 510-530 nm emission peaks, high thermal and photo stability for LCD

