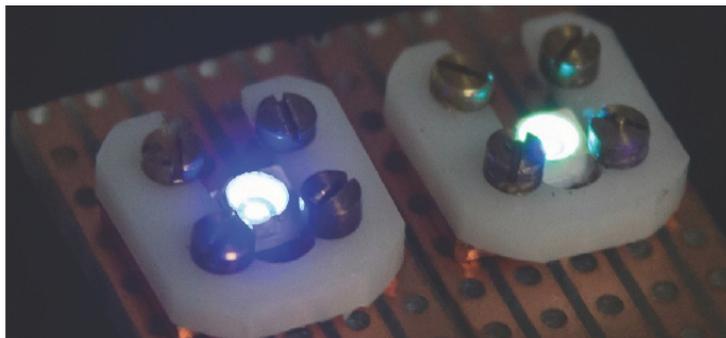


STREM StremDots™ in Solid State Lighting (LED)

METALS • INORGANICS • ORGANOMETALLICS • CATALYSTS • LIGANDS • NANOMATERIALS • CUSTOM SYNTHESIS • cGMP FACILITIES

Strem Chemicals, Inc. offers a variety of fluorescent nanoparticle systems for the use as phosphors in LEDs – **StremDots™ Series A and C**. They feature small particle diameters, narrow size distributions and long term stability. In addition, they exhibit exceptional fluorescence properties like high quantum yields, tunable emission wavelength and thermal stability which makes them suitable for applications where fluorophores are needed.



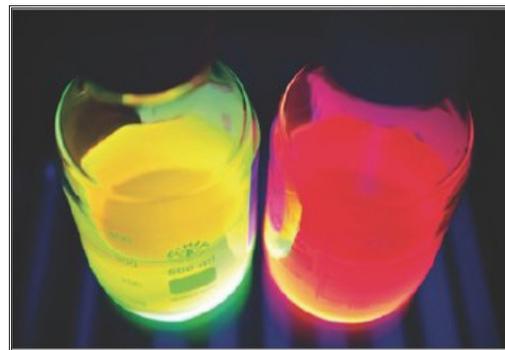
A patent pending continuous flow process allows production of even larger amounts of these nanoparticles at a much lower cost than ever before. In addition, this procedure ensures high reproducibility of all particle properties at every production volume.

Due to the high thermal and long term stability of our particles they are particularly suitable as fluorophores in LEDs where these properties are at a premium.

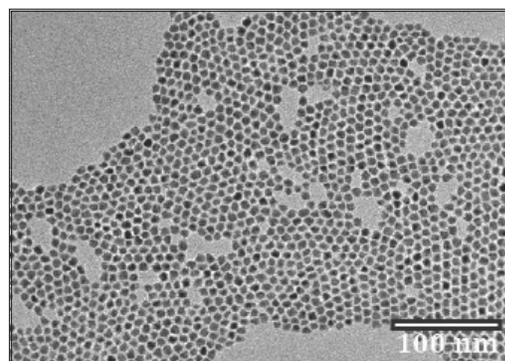
Strem offers **StremDots™ Series A** with emission wavelengths spanning the VIS range and **StremDots™ Series C** spanning the IR range. **StremDots™ Series X** features very narrow emission at distinct wavelengths from the VIS to IR (please inquire).

To facilitate easy application, Strem offers customizable dispersibility of **StremDots™ Series A, C and X** for different solvents, inks and paints or solid matrices via chemical engineering.

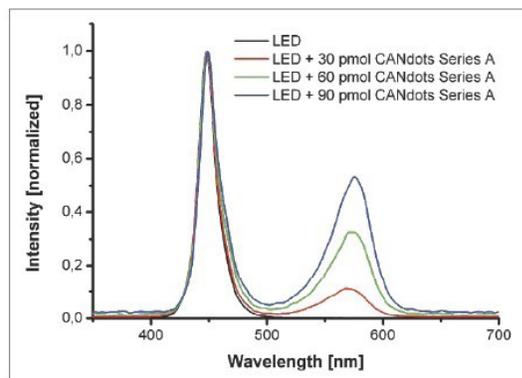
	StremDots™ Series A and C	StremDots™ Series X
Material	Semiconductor (Cd- or Pb-based)	Rare-earth doped vanadates/phosphates
Dispersibility	Nonpolar organic solvents	Polar solvents, like water and alcohols
Emission	Narrow emission peaks	Distinct emission peaks
Emission Wavelength	Series A: 550-625 nm Series C: 1- 1.6 um	Emission depending upon dopant



StremDots™ Series A under UV excitation



TEM image of **StremDots™ Series A** particles



StremDots™ Series A particles modifying a LED spectra

For Series A Plus- See 96-0813 • For Series A- See Strem 96-0800 • For Series X- Please Inquire

Visit www.strem.com for new product information and a searchable catalog.

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