

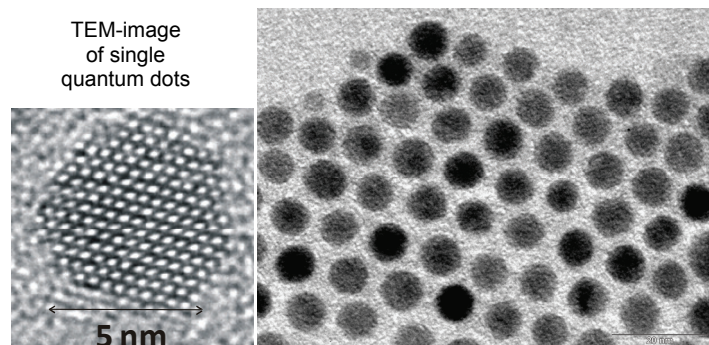
## CdSe/CdS/ZnS



Strem offers the following Quantum Dots

- Core: CdSe
- Core/Shell: CdSe/CdS
- Core/Shell/Shell: CdSe/CdS/ZnS

The CdSe core is highly uniform with a narrow particle size distribution ( $\pm 10\%$ ). The CdS shell is less than 1nm and stabilizes the core. The second shell of ZnS provides additional stability and is 1-2nm thick.



Product characteristics:

- High Quantum Yield
- Longer term stability
- Scalability (produced via continuous flow)
- High batch-to-batch reproducibility (TEM available for each lot)
- Emission range 500-650nm
- Homogeneous dispersions in different non-polar solvents possible
- Flexibility for ink or composite preparation

Structure	Ligand Capping Agent	Stability of Dispersions	Quantum Yield	Emission Range
CdSe core	Oleylamine	6 months	>10%	500-625nm
CdSe/CdS core/shell	Oleylamine	>6 months	>30%	550-625nm
CdSe/CdS/ZnS core/shell/shell	Hexadecylamine	>12 months	>30-40%	525-650nm



Quantum dots manufactured by and registered trademarks owned by Center for Applied Nanotechnology (CAN). Sold in collaboration with CAN for research purposes.

Visit [www.strem.com](http://www.strem.com) for new product information and searchable catalog.

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Peak Emission	Particle Size (diameter)	Strem Catalog No. (in hexane)†	Quantum Yield
<b>CdSe core</b>			
500nm	2.7nm	48-1005	>10%
525nm	2.8nm	48-1011	>10%
550nm	3.5nm	48-1017	>10%
575nm	3.9nm	48-1023	>10%
600nm	4.7nm	48-1030	>10%
625nm	5.3nm	48-1035	>10%
Kit: 500-625nm		96-0800	>10%

Kit contains 5ml of each of the above 6 products. Ligand capping agent oleylamine. Stable in dispersions 6 months.

Peak Emission	Particle Size (diameter)	Strem Catalog No. (in hexane)†	Quantum Yield
<b>CdSe/CdS core/shell</b>			
550nm	3.7nm	48-1040	>30%
575nm	4.1nm	48-1046	>30%
600nm	4.9nm	48-1052	>30%
625nm	5.6nm	48-1057	>30%
Kit: 550-625nm		96-0810	>30%

Kit contains 1ml of each of the above 4 products. Ligand capping agent oleylamine. Stable in dispersions >6 months.

Peak Emission	Particle Size (diameter)	Strem Catalog No. (in hexane)†	Quantum Yield
<b>CdSe/CdS/ZnS core/shell/shell</b>			
525nm	3.0nm	48-1061	>40%
550nm	4.6nm	48-1063	>40%
575nm	5.1nm	48-1070	>40%
600nm	6.0nm	48-1075	>40%
625nm	6.6nm	48-1080	>30%
650nm	8.5nm	48-1086	>30%
Kit: 525-650nm		96-0820	>30 - 40%

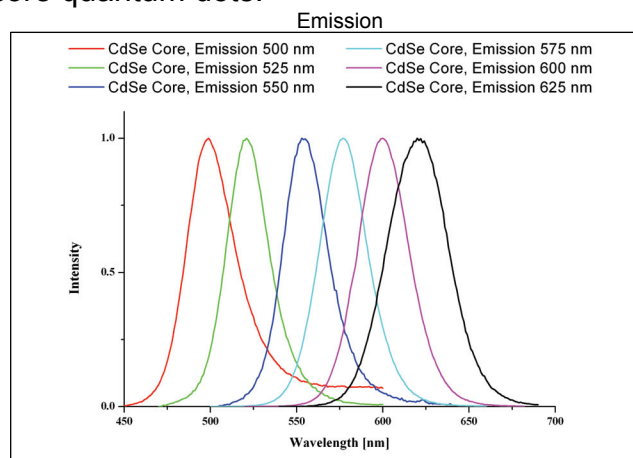
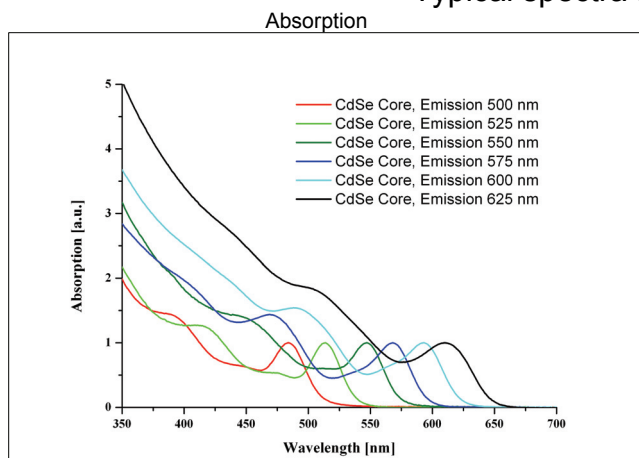
Kit contains 1ml of each of the above 6 products. Ligand capping agent hexadecylamine. Stable in dispersions >12 months.

\*Particle size reported excludes ligand capping agent.  
All sizes determined by TEM except for 650nm CdSe/CdS/ZnS which is calculated.

† Available at nanoparticle concentration of 50µmol per liter.

Store cold in dark under inert atmosphere. Do not freeze.

### Typical spectra for CdSe core quantum dots.



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