| Material Properties | Zinc Blende Lattice Parameter $a_0$ at 300K | Zinc Blende Nearest-Neighbour Dist. at 300K | Zinc Blende Density at 300K | Wurzite Lattice Parameters at 300K | Wurzite Nearest-Neighbour Dist. at 300K | Wurzite Density at 300K | Phase Stable at 300K | Melting Point Handbook of C & P, 53rd Editn, 1972 |
|---|---|---|---|---|---|---|---|---|
| CdS | 0.582 nm | 0.252 nm | 4.87 $g.cm^{-3}$ | a0 = 0.4135 nm<br>c0 = 0.6749 nm | . . . nm | 4.82 $g.cm^{-3}$ | Wurzite | 1750 $^{o}$C<br>(wurzite, 100 atm.) |
| CdSe | 0.608 nm | 0.263 nm | 5.655 $g.cm^{-3}$ | a0 = 0.430 nm<br>c0 = 0.702 nm | . . . nm | 5.81 $g.cm^{-3}$ | Wurzite | >1350 $^{o}$C |
| CdTe | 0.648 nm | 0.281 nm | 5.86 $g.cm^{-3}$ | a0 =. . . nm<br>c0 =. . . nm | . . . nm | . . . $g.cm^{-3}$ | Zinc Blende | 1041 $^{o}$C<br>(Zinc Blende) |

| Material Properties | Thermal Conductivity at 20$^{o}$C | Specific Heat | Linear Expansion | Coefficient at 20$^{o}$C | Dielectric Const, low frequency<br>zinc-blende structure:<br>wurzite structure:<br><BRSingh 1993 | Refractive Index<br>zinc-blende structure:<br>wurzite structure: | Energy Gap<br>$E_g$ at 300 K<br>zinc blende structure: |
|---|---|---|---|---|---|---|---|
| CdS | ... | ... | ... | ... | ... | 2.506, 2.529<br>Handbook of C & P, 53rd Editn, 1972 | 2.50 eV, Direct<br>2.50 eV, Direct<br>Singh 1993 |
| CdSe | ... | ... | ... | ... | 10.2(pl),<br>9.3(pr) | 2.5<br>Singh 1993, p.840 | ,,<br>1.714 eV, Direct<br>Shan et al 2004 |
| CdTe | 0.062 $W.cm^{-1}.^{o}C^{-1}$ | 0.21 $J.g^{-1}.^{o}C^{-1}$ | 5.9x$10^{-6}$ $^{o}C^{-1}$ | ... | 10.2 | 2.72<br>Singh 1993, p.840 | 1.474 eV, Direct<br>Singh 1993 |

| Material Properties | Ionisation Energy of Aluminium Donor | Electron Hall Mobility at 300 K for n=lowish | Ionisation Energy of Phosphorus Acceptor | Hole Hall Mobility at 300 K for p=lowish |
|---|---|---|---|---|
| CdS | … | 340 $cm^2/V.s$ | . . . meV | 340 $cm^2/V.s$ |
| CdSe | … | … | 83±6 meV | . . . $cm^2/V.s$ |
| CdTe | 14.05 meV<br>Francou etc | 1050 $cm^2/V.s$ | 68.2 meV<br>50 meV | 100 $cm^2/V.s$ |