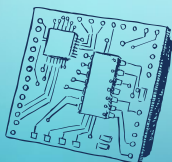


# ULTRAPURE WATER = ULTRASMART ELECTRONICS

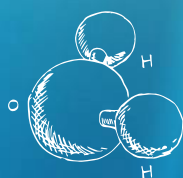
## ULTRAPURE WATER & THE MICROCHIP



Water is an integral part of making your electronic smart. Microchips and their pathways are built up in layers, and between layers need to be washed with water that is free of even the smallest amount of impurities (ultrapure water). The smallest contaminant can prevent a circuit from functioning correctly, which can result in a faulty device.



## HOW ULTRAPURE WATER (UPW) IS USED



### PURE H<sub>2</sub>O

UPW is the purest form of liquid that can be created on the planet. Stripped of all impurities, UPW is H<sub>2</sub>O in its most basic form, with no dirt, salts or minerals.<sup>2</sup>



### UNIVERSAL SOLVENT

To a certain degree, UPW will dissolve virtually everything to which it is exposed.<sup>3</sup>

## HOW ULTRAPURE WATER IS MADE



### TREATMENT STEPS

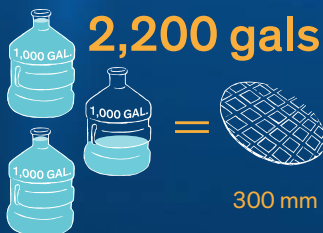
To become ultrapure, water must go through filtration, reverse osmosis, oxidation, UV, degasification, electrodeionization, ion exchange and ultrafiltration.



### NOT SAFE

Ultrapure water is not safe to drink because it pulls minerals from the body.<sup>4</sup>

## WHERE ULTRAPURE WATER IS USED



2,200 gals of water used to clean integrated circuit on a 300 mm wafer.<sup>5</sup>



A semiconductor's manufacturing plant's water use is equal to that of a city of **40-50K people.**<sup>6</sup>



**2,000 gals/minute**

Microelectronics facilities require up to 2,000 gals of water per minute to manufacture a product.

For more information visit [www.dowwaterandprocess.com](http://www.dowwaterandprocess.com)

1. <http://www.cnet.com/how-to/how-to-dry-out-wet-phone-tablet/>

2. [http://qct-inc-usa.com/ULTRA\\_PURE\\_WATER.html](http://qct-inc-usa.com/ULTRA_PURE_WATER.html)

3. [http://qct-inc-usa.com/ULTRA\\_PURE\\_WATER.html](http://qct-inc-usa.com/ULTRA_PURE_WATER.html)

4. [http://qct-inc-usa.com/ULTRA\\_PURE\\_WATER.html](http://qct-inc-usa.com/ULTRA_PURE_WATER.html)

5. <http://engineeredenvironment.tumblr.com/post/30464844411/water-use-in-the-semiconductor-manufacturing-industry>

6. <http://engineeredenvironment.tumblr.com/post/30464844411/water-use-in-the-semiconductor-manufacturing-industry>

7. <http://engineeredenvironment.tumblr.com/post/30464844411/water-use-in-the-semiconductor-manufacturing-industry>

