

Ivent Solutions Market Trend Update

May 2020



Industry News and Leadtimes

The electronic component supply chain is currently experiencing considerable strain with some major disruption in certain areas. There are several reasons driving this situation: capacity constraints, mergers and acquisitions, obsolescence and higher-than-expected demand creating component shortages across the board. Added to the mix now is the impact of COVID-19 on global markets. Many manufacturers have announced extended lead times with some products possibly going onto allocation. Every manufacturer will however handle things differently, and it is early days in the response plan. If allocation occurs it can take time to resolve as lead-times for new manufacturing equipment and facility can be lengthy and recruiting and training of new staff can also be problematic, especially in the current restricted conditions around the world.

As a result, we are also seeing some prices increase across certain commodities and manufacturers. Global automotive OEMs and the leading consumer technology companies are hedging forward up to 3 years on raw materials and also booking fab capacity.

Key Lead Time and Capacity Issues

Fab constraints are being seen by a great number of manufacturers who are also experiencing a slip in lead-times, and in some instances the possibility of allocation. A global shortage of Tantalite Ore is resulting in shortages of Tantalum capacitors. Shortages are also being experienced in the following passive markets: TDK; general chip resistors; Vishay; MLCC's generally; Murata, Samsung; Epcos; Rohm, Kemet; Taiyo Yuden; Yageo and AVX. Some Flash devices are experiencing extended lead times of 20 weeks upwards with increasing prices, partly because of increasing demand and also increasing costs. Packaging houses are also busy, further compounding the production issue. Lead-times are increasing in part due to fall out from delivery issues of competitors. Again, it is early days but increases in leadtimes and pricing are expected.

Effect of COVID-19 on Our Industry

It's not the start to the year we had hoped for, as all of us in the electronics industry brace for the inevitable impacts from the COVID-19 virus. The coronavirus continues to spark anxieties among electronics manufacturers as the uncertainty of times ahead are still quite unclear. IPC, an electronics equipment trade organisation, has run a survey where 65% out of 150 participating electronics manufacturers and suppliers reported delays from suppliers due to the spread of coronavirus. The problem initially being the reliance of manufacturers supply chains on China, the original birthplace of COVID-19. 30 companies in the Fortune 500 have significant investments in the Wuhan area... The city is a hub for automobiles, optics, electronics, and more.

IPC chief economist Shawn DuBravac told Business Insider in a recent interview that, if the outbreak continues to drag the industry down into April and May, regular consumers will notice the effects first-hand.

Even if the suppliers themselves become fully operational once more, manufacturers still worry over the strain put on what the IPC report described as "limited" and "finite" transportation networks.

"Where some uncertainty still lies is, even after manufacturing is back online, to what extent is it back online?" DuBravac said.

There are concerns about the fragility of the supply chain when an issue like this arises, however another perspective could be how dynamic it is instead, given that currently industry experts aren't predicting significant consumer shortfalls. Only time will tell but one thing is for sure, this is a problem we will all face together as a global community.

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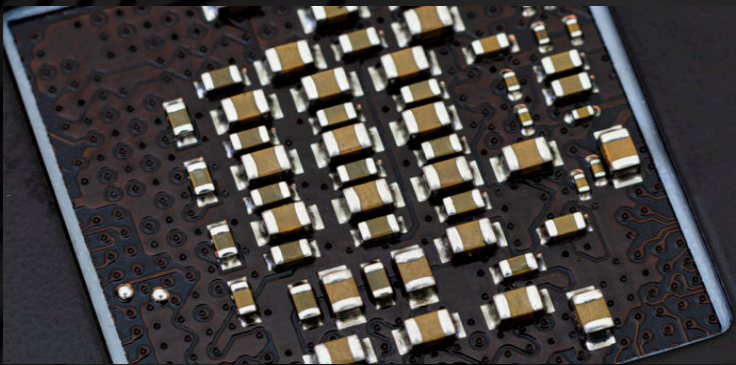
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How Are The Troublesome MLCC Leadtimes Faring?

Customers can expect supply of multilayer ceramic capacitors (MLCCs) to be ample in the first half of the year, but supply will likely tighten and lead times could stretch in the third and fourth quarters as demand builds through the year. The good news is that supply conditions will not worsen to 2018 levels when many multilayer ceramic capacitors went on allocation. Some industry analysts say supply could even tighten before the second half because higher-than-usual inventory levels are being worked off and demand from key market segments such as smart phones and automotive is expected to rise. Some distributors say there is a possibility of allocations for some parts later in the year, but the MLCC supply scenario won't devolve into 2018 levels when lead times time stretched to 30+ weeks and parts were on full allocation. Capacitor manufacturers have been adding capacity since 2017 and, while lead times for many parts could stretch, allocations for most parts, are not likely. However, it is unclear what the MLCC scenario will be and if buying conditions will turn from being a buyer's market to a seller's market. One thing is for sure. The MLCC market will be different in 2020 than it was in 2019.

When the shortage hit, manufacturers increased prices after years of falling returns. Capacitor manufacturers took some of their new-found profits and invested in new capacity to boost supply. For instance, AVX bought new equipment for its capacitor factories and built a new facility for MLCCs. However, as capacity began to come online, many companies had built up inventories and fewer orders were placed for MLCCs in 2019 with component manufacturers and distributors. A lot of the inventory in the supply chain has been worked off, but some buyers say inventory levels are still higher than normal for some components including MLCCs. Capacitor makers and distributors say inventory levels should be mostly depleted by the end of the first half and demand should pick up through the year. Some distributors say they are already seeing increased orders. The impact of COVID-19 is still to be seen and gauged on the market at this point in time. While lead times for most MLCCs have in general reduced across the board some have started to inch upward because of increased demand in the Asian communications sector.



MLCC manufacturers added capacity in 2018 and 2019, but some reduced their workforces due to lower market demand and lead times for some MLCCs in 0201 and 0402 cases sizes have seen increased lead times. While larger case size MLCC lead times are still extended, they have been stable over several quarters. Some capacitor manufacturers and distributors think strong demand for MLCCs could kick in later in the second half and continue through 2021 because OEMs and EMS providers cut back on purchases last year because of high inventories. In addition, MLCC demand is likely to increase from key large volume customer segments including smart phones and automotive systems. The return of robust demand for MLCCs could mean allocations in late 2020 once inventories are worked through and companies need to buy more parts including MLCCs in the second half.

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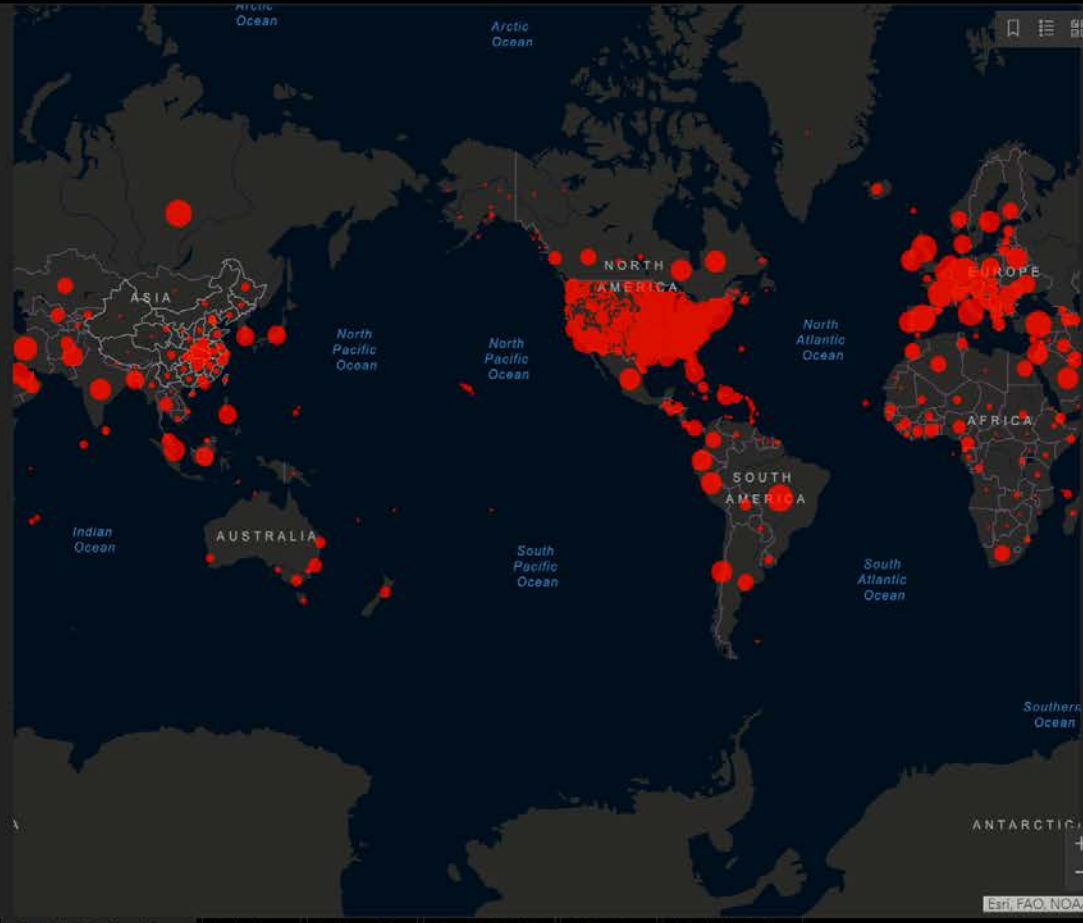
Total Confirmed
3,573,864

Confirmed Cases by
Country/Region/Sovereignty

- 1,177,784 US
- 218,011 Spain
- 211,938 Italy
- 191,832 United Kingdom
- 169,583 France
- 165,914 Germany
- 145,268 Russia
- 127,659 Turkey
- 105,222 Brazil
- 98,647 Iran
- 83,965 China
- 61,814 Canada
- 50,267 Belgium
- 47,372 Peru
- 46,437 India
- 40,968 Netherlands
- 31,881 Ecuador
- 29,981 Switzerland
- 28,656 Saudi Arabia
- 25,524 Portugal
- 23,471 Mexico

Admin0 Admin1 Admin2

Last Updated at (M/D/YYYY)
5/5/2020, 9:32:32 AM



Cumulative Confirmed Cases Active Cases Incidence Rate Case-Fatality Ratio Testing Rate Hospitalization Rate

Lancet Inf Dis Article: [Here](#). Mobile Version: [Here](#).
Lead by JHU CSSE. Automation Support: [Esri Living Atlas team](#) and [JHU APL](#). Contact [US](#). [FAQ](#).

Data sources: [WHO](#), [CDC](#), [ECDC](#), [NHC](#), [DXY](#), [1point3acres](#), [Worldometers.info](#), [BNO](#), [the COVID Tracking Project](#) (testing and hospitalizations), state and national government health departments, and local media reports. Read more in this [blog](#).

Downloadable database: [GitHub](#): [Here](#). Feature layer: [Here](#).

187
countries/regions

Total Deaths
250,687

- 29,079 deaths Italy
- 28,734 deaths United Kingdom
- 25,428 deaths Spain
- 25,168 deaths France
- 19,057 deaths New York City **New York US**
- 7,924 deaths Belgium
- 7,288 deaths Brazil
- 6,935 deaths Germany
- 6,277 deaths Iran
- 5,082 deaths Most sub-states

Deaths Recovered

Total Test Results in US
7,285,178

- 1,007,310 tested New York US
- 747,874 tested California US
- 444,270 tested Florida US
- 407,398 tested Texas US
- 333,147 tested Illinois US
- 324,268 tested Massachusetts US
- 277,220 tested New Jersey US
- 245,590 tested Pennsylvania US
- 222,193 tested Michigan US
- 212,005 tested Washington US

US total tests Hospitalization



Confirmed Logarithmic Daily Cases

Interactive Dashboard For COVID-19 Infection

<https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>



ALL OF A SUDDEN



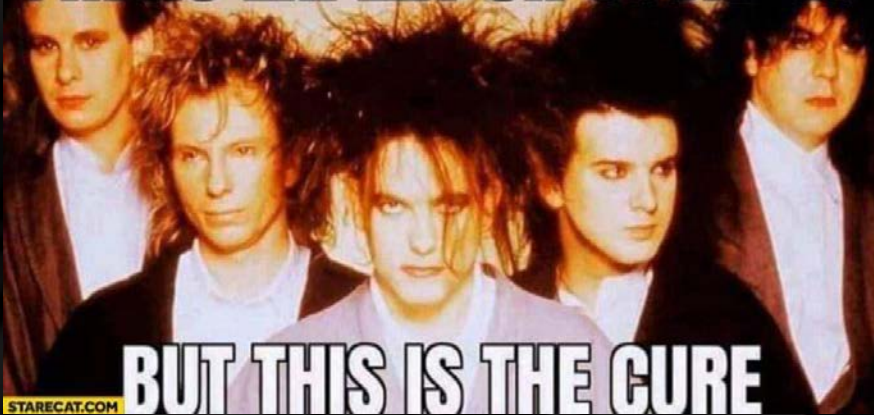
**EVERYBODY HAS
BECOME SHELDON**

**ME, TAKING MY WIFE TO GET PAMPERED THE FIRST DAY
AFTER QUARANTINE**



I got hand sanitizer down here...

I'M NO EXPERT ON COVID-19



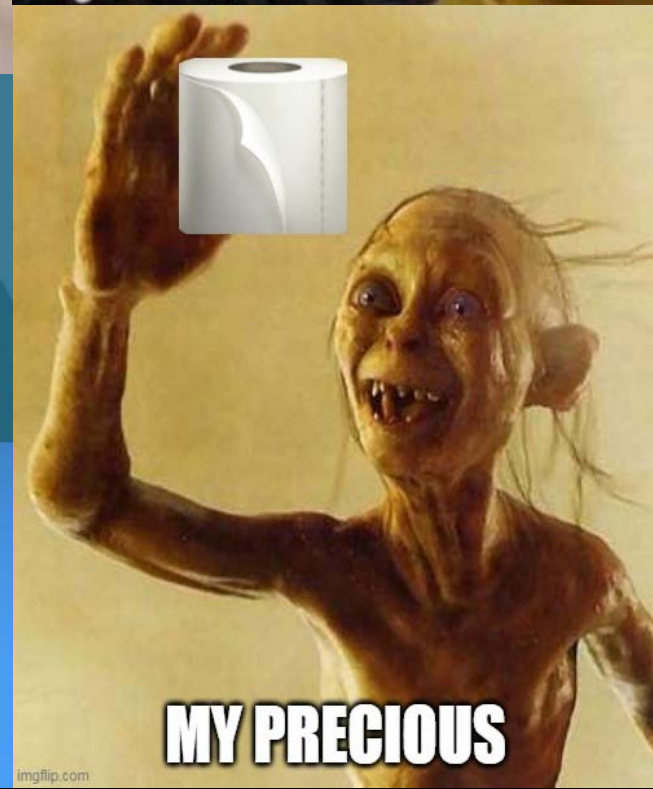
BUT THIS IS THE CURE



STAY HOME !



WOOHOO !!!



MY PRECIOUS

THE LIGHTER SIDE OF COVID-19...



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NZD versus AUD - AU\$0.940 vs NZ\$1.00 ↓



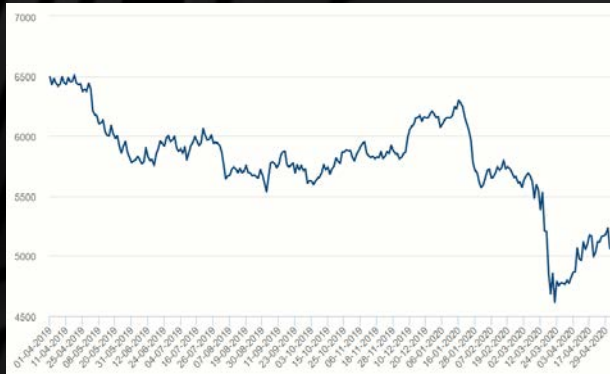
NZD versus USD - US\$0.600 vs NZ\$1.00 ↑



NZD versus EUR - EU\$0.555 vs. NZ\$1.00 ↑



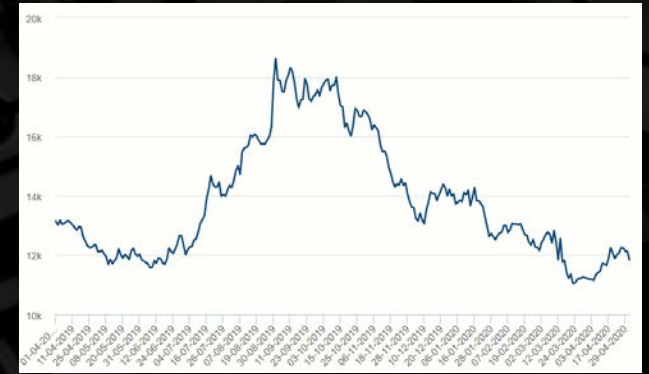
Copper - USD5100 / tonne ↑



Lead - USD1600 / tonne ↓



Nickel - USD11800 / tonne ↑



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