

8-5-7. Normalize

Correct difference in amplitude of brightness value between each pixel and calculate so that brightness values of all pixels have the same amplitude (0 to 65,535).

Even with a uniform tissue sample such as an isolated heart, fluorescence intensity may vary depending on location due to factors such as uneven irradiation of excitation light, uneven staining, and tissue thickness. In such cases, using Normalize eliminates influence of external factors that cause differences in amplitude, and makes the signal intensities (waveforms) of all pixels the same as when recording with electrodes.

Correlation of signal intensity between pixels is lost, so it is not suitable for samples such as neuro samples where the signal intensity differs depending on the site.

Click [Filters (temporal)]-[Normalize] to execute.

The algorithm is as follows.

1. For each pixel, check all frames to find the maximum and minimum values.
2. Calculate gain and offset so that the minimum value is 0 and the maximum value is 65535.
3. Apply gain of 2 and offset to all frames

