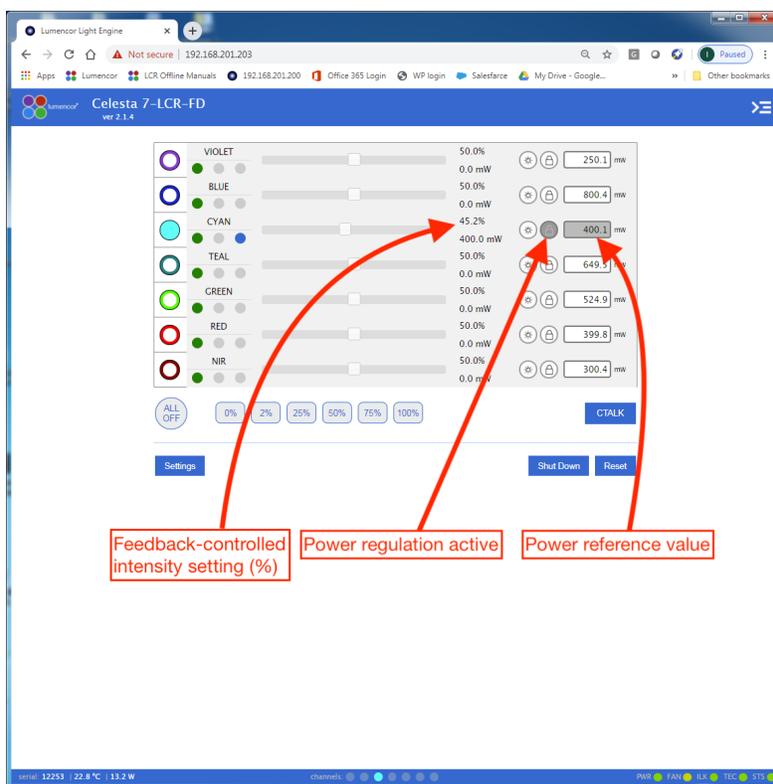


LIGHT **BYTES:** February 2020

## Precise power regulation on each of Lumencor's newest and brightest light engines: **AURA<sup>®</sup>, SPECTRA<sup>®</sup>, CELESTA<sup>®</sup>, and ZIVA<sup>®</sup>** light engines

In addition to high power and intense brightness, output power regulation is one of the many advanced control features incorporated in Lumencor's next generation products: **SPECTRA, AURA, CELESTA, and ZIVA light engines**. Output power regulation allows users to eliminate variations in light output due to temperature fluctuations and other environmental factors in photometric and quantitative imaging applications where reproducibility and accuracy are essential. To use power regulation, a desired power reference value in milliwatts is entered in the onboard control GUI, as shown in the attached link. To activate power regulation, simply click the padlock icon next to the reference power value. Gray shading of the padlock icon and the reference power value shows that power regulation is active for the selected output channel. When power regulation is active, the intensity setting for the channel is controlled by the onboard microprocessor, based on feedback from the light engine's reference photodiode array. The microprocessor continuously adjusts the intensity setting so that the output power matches the power reference value set by the user.



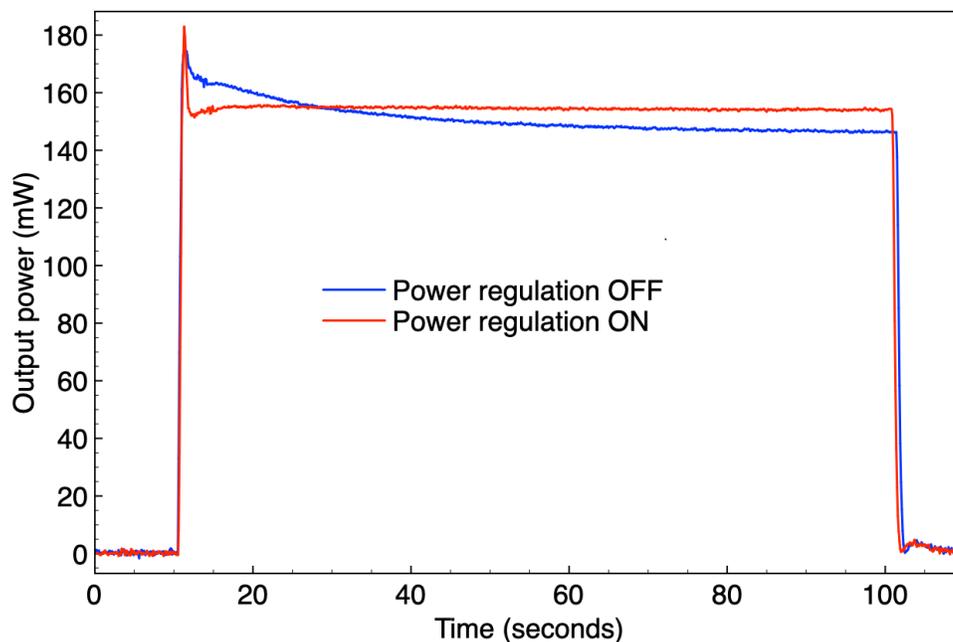
Output power regulation settings in the **CELESTA** light engine control GUI



light engines for a

**BRIGHTER.** GREENER. PLANET.

Performance of the output power regulation feedback system of a **SPECTRA light engine** is illustrated below. The response time of the feedback system is approximately one second. To find out more about any of our generation III light engines or about power regulation, please contact us.



Teal (510/25 nm) channel output from a **SPECTRA light engine** with and without power regulation. Power output from the light guide was monitored with a Coherent PowerMax II-TO power meter with model PM3 thermopile detector.

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