

● Current Dimming and PWM Dimming

PWM dimming has a wider adjustable range than current dimming. The adjustable range of current dimming is normally about 50%. Less than 50% dimming is available with PWM dimming. Current dimming and PWM dimming on a self-excited inverter are compared in term of effective current and power on the luminance change graph shown below for your reference.

In the case of PWM dimming, even when the drive current (effective value) is the same as in current dimming, lamp voltage

and power tend to decrease, if the dimmer is turned down too much. This will lead to an abnormally low lamp surface temperature, making discharge unstable. In PWM dimming, if you overuse soft starts even though they are of the same duty, the lamp surface temperature falls making discharge unstable. It is recommended to determine whether the discharge is unstable or not by observing optical waveforms for the system.

