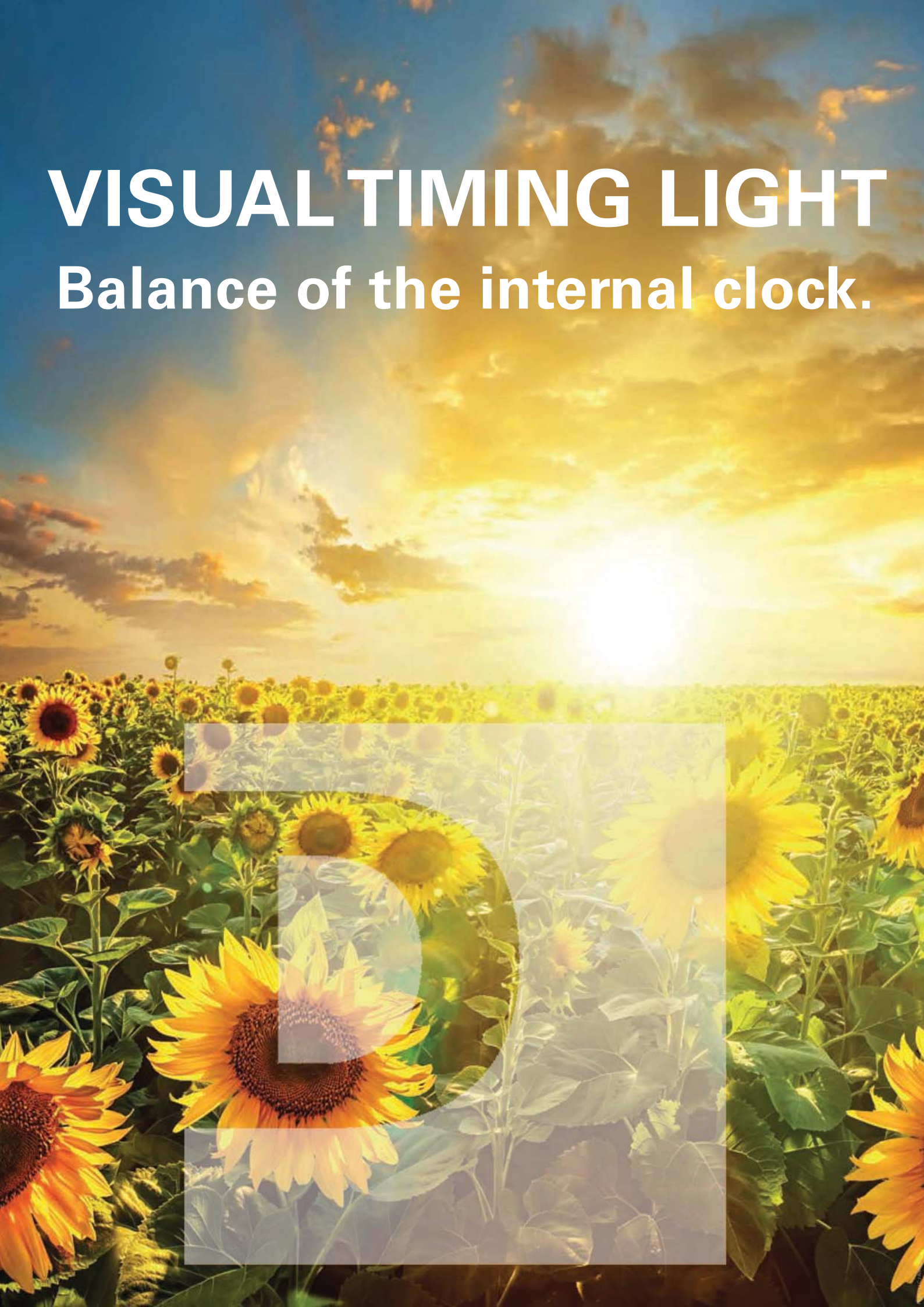


VISUAL TIMING LIGHT

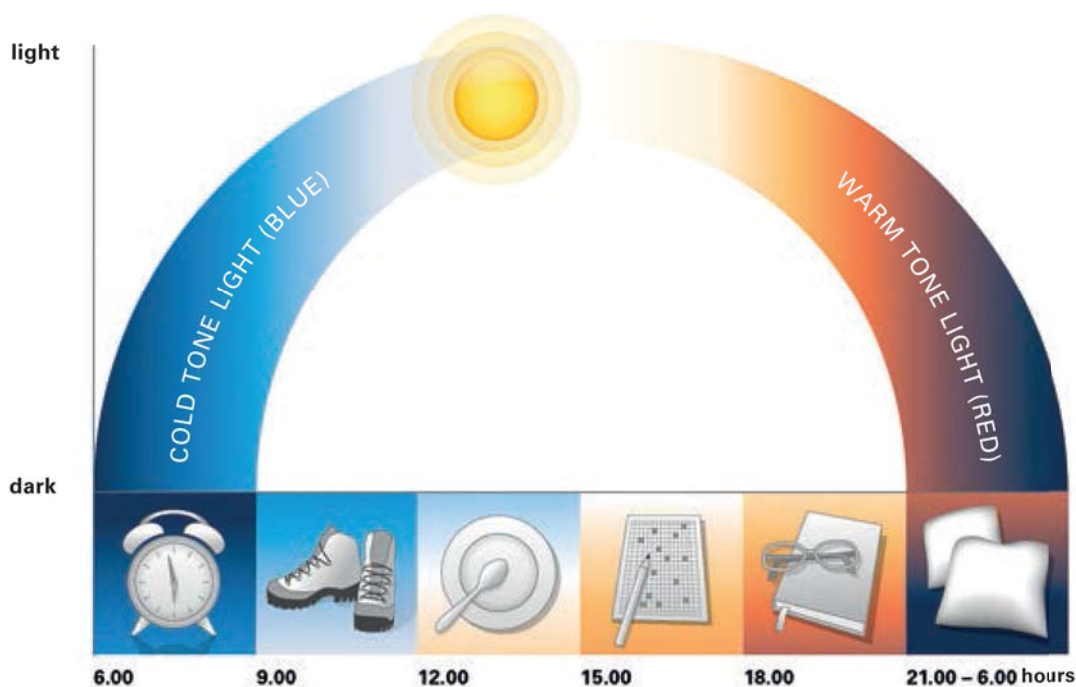
Balance of the internal clock.



VISUAL TIMING LIGHT. SEEING THE LIGHT OF DAY.

Digital Technology has changed our lives. By simulating the environment's 24-hour light cycle, the Visual Timing Lighting system by Derungs, replicates natural daylight and provides residents visual comfort by regulating their natural circadian rhythms. Various lighting scenarios can be defined via sophisticated, digital lighting controls. Each scenario can be customized by having a special adjustment of light color and intensity to provide the most pleasant lighting.

NON-TRANSITIONAL VISUAL TIMING LIGHT



The cold tone light activates and stimulates while the warm tone light relaxes and supports rest periods.

FASCINATION OF LIGHT AND PEOPLE.

THE INTERNAL CLOCK.

Light controls a variety of internal clocks that regulate our day/night cycle and influence critical neurological and metabolic processes. Although our biological clocks are genetically preset to compensate for the 24-hour cycle, it must be re-synchronized daily through exposure to daylight or artificial light designed to replicate daylight. Hormone levels of Melatonin, Cortisol and Serotonin, all crucial elements in keeping our systems in balance, are greatly impacted by this process. If exposure to daylight is missing, sleep disorders, chronic fatigue and/or depression may soon follow.

THE HORMONAL PULSE GENERATORS

The third photoreceptor in the retina sends signals to the brain and regulates hormone production. The three most important hormones that control the biological rhythm are:

- **Melatonin** makes you tired, slows the body functions and lowers activity in favor of earned rest.
- **Cortisol** on the other hand is a stress hormone that is produced from about 3 o'clock in the morning. It stimulates the metabolism and programs the body for day mode.
- **Serotonin** works as a stimulant and motivates. While the cortisol levels in the blood drop throughout the day and thereby act counter-cyclic to the melatonin level, serotonin helps elevate energy levels - a 24/7 cycle.

THE EFFECT OF DAYLIGHT ON HUMANS

