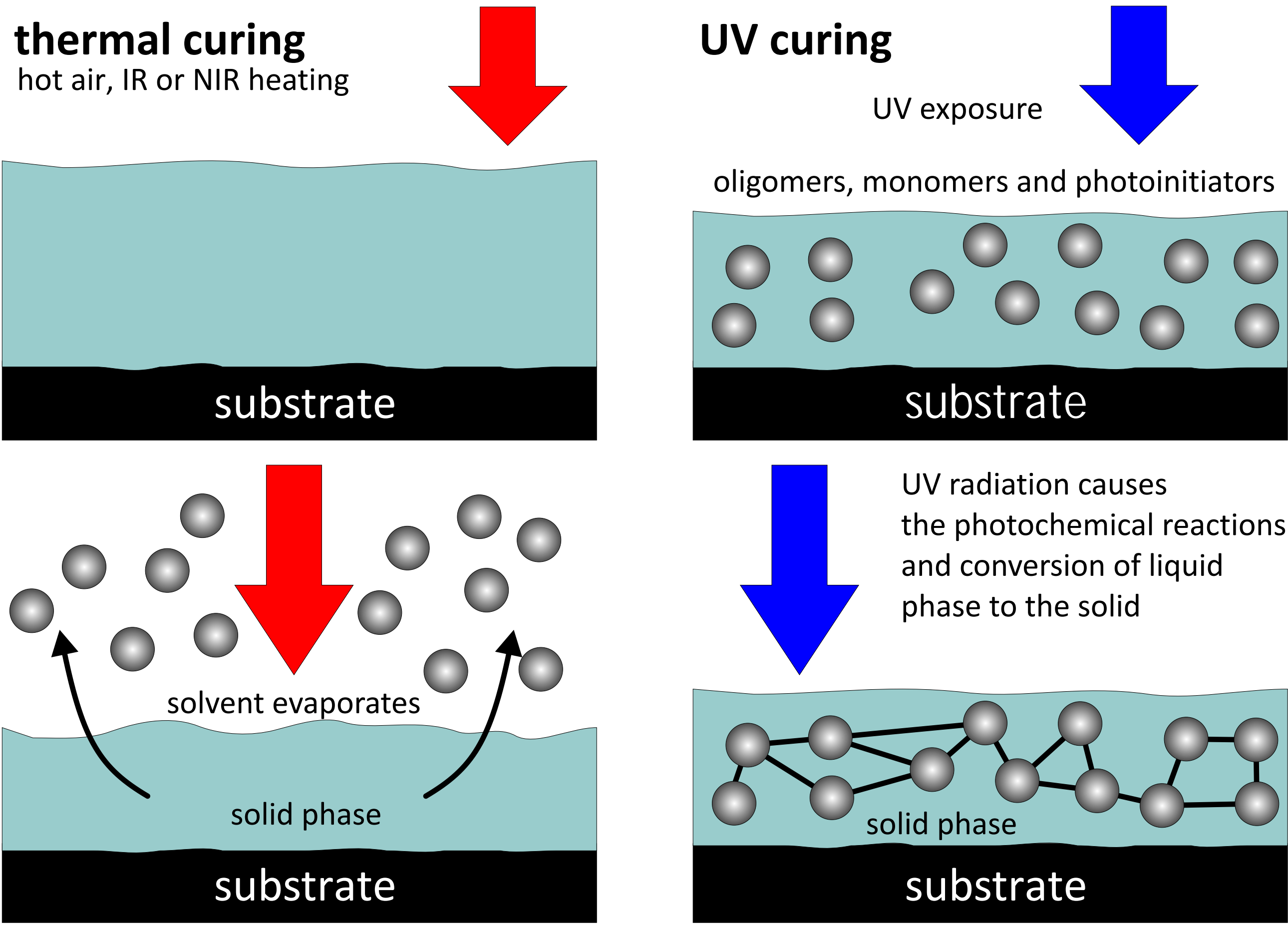


Involving UVA LED technology eliminates ineffective visible and near infrared radiation and thus reduces heating of the irradiated locations. CureStick is designed as low-cost spot cure UV light source without need for special controller. Optional controller is used to adjust exposition time, radiation power rating and other required parameters. Due to fast switching properties of CureStick, there are no needs for mechanical shutter, it is realized by electrical pulse switching. Irradiance, shutter time, triggering is given by external controller. CureStick with controller is safely placed in application box. This system can be used for various applications where point UVA source is required. We can offer extension of this system to high power UVA systems for printers, curing, sealing and other applications according to customer needs from several watts to several kWatts.

Comparison of thermal and UV curing



- Thermal curing disadvantages:**
- High power consumption generated by heating, cooling
 - Required powerful exhausting system
 - Secondary heating of cured material
 - Low productivity
 - Change in thickness of hardened layer

- UV curing:**
(standard UV sources, discharge lamps)
- Lower power consumption
 - Required exhausting system
 - Lower heating of cured material
 - High produktivity,
 - Low lifetime of UV sources

Technical data:
Wavelength: 365 ± 5 nm, 10 nm bandwidth
Spot diameter: > 10 mm
Maximum irradiance: 800 mW
LED Class: 3B
Dimensions: 10 x 105 mm
Power consumption DC: 2,8 W
Cooling: natural by air
Overheating protection: 75°C
Operation Temperature: 0-30°C



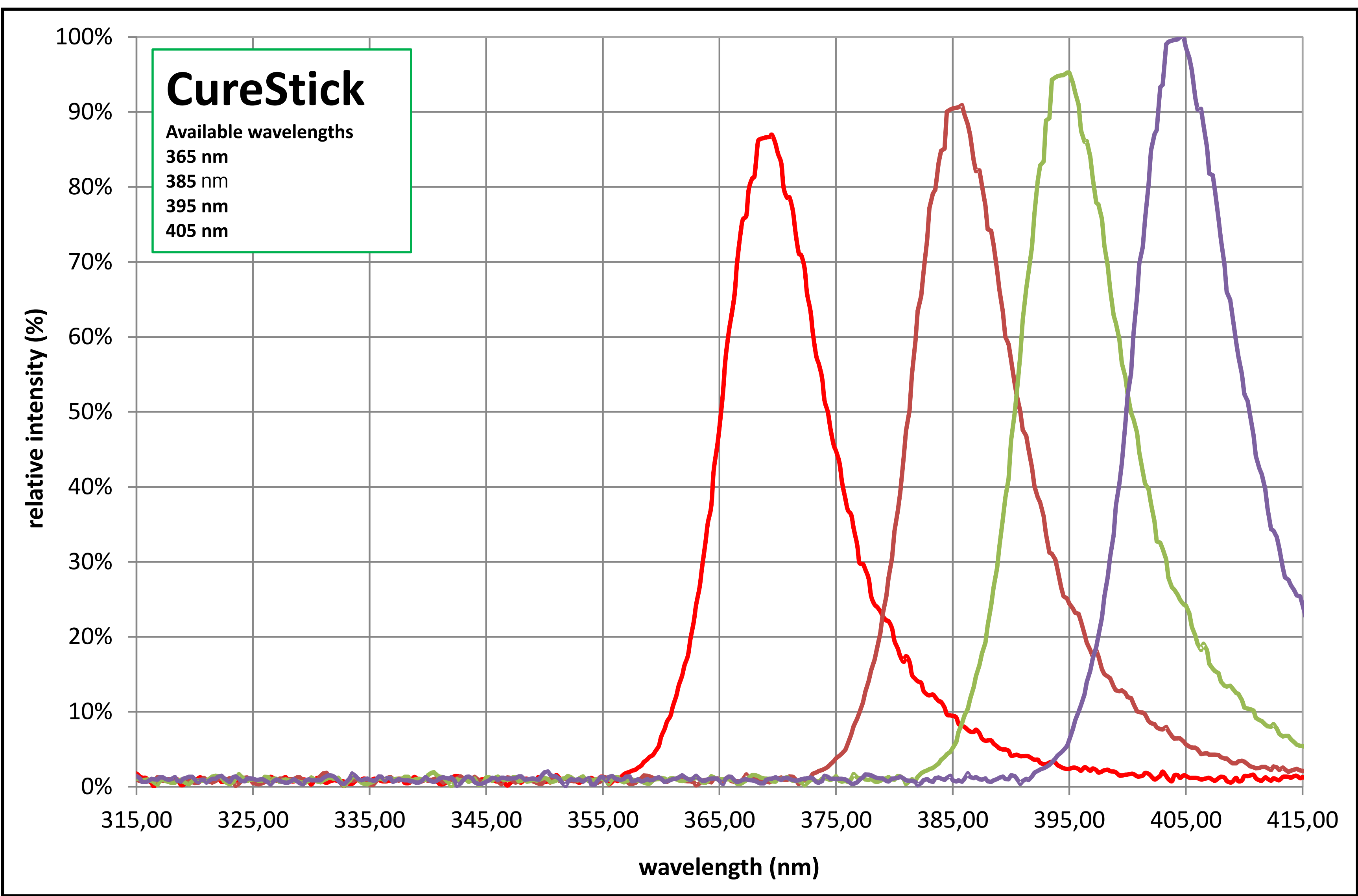
CureStick WEB



CureStick point source 700mW		
0 mm		
5 mm	16,5 mm	360 mW/cm2
10 mm	19,6 mm	196 mW/cm2
15 mm	30,0 mm	108 mW/cm2
20 mm	35,0 mm	70 mW/cm2
25 mm	42,5 mm	50 mW/cm2
30 mm	47,5 mm	35 mW/cm2
35 mm	55,0 mm	27 mW/cm2
40 mm	62,5 mm	21 mW/cm2
Distance	Diamater	Intensity



Measured: R&G Labs UV365 nm



- LED UV curing advantages:**
- Low power consumption
 - Exhausting system not needed
 - No heating of cured material almost no thermal radiation
 - High efficiency
 - High produktivity and repeatability
 - High lifetime of LED UV sources
 - UV LED customized source can have various shapes point, line, area
 - High process repeatability due to electrical shutter
 - Easy implementation to product lines

- UV LED applications:**
- UV curing, paints, UV inks, etc.
 - UV bonding
 - UV sealing, protection layers
 - Fluorescent excitation (Research and development),
 - Biological samples irradiation

Thermal fold-back
Thermal protection

Intensity:
10.0 - 100.0%

Timer:
0.1 sec - 99 min
(count-down)

Illuminated
Front panel
trigger

LCD display

child easy
adjustment

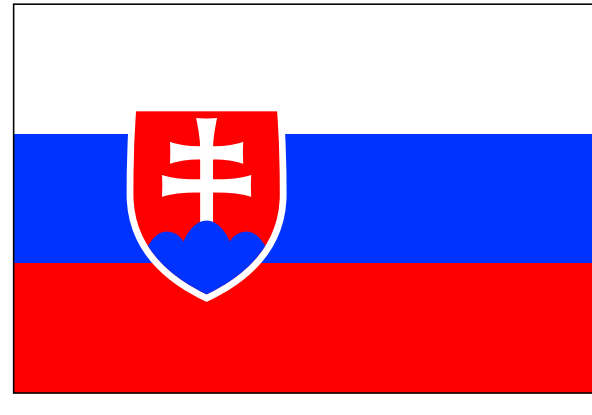
- Benefits:**
- Implemented thermal fold-back, giving constant radiation intensity,
 - Thermal protection at 75°C,
 - Intuitive parameter adjustment,
 - Precise intensity adjustment 10.0-100.0%,
 - Timer adjustable from 0.1 sec to 99 min,
 - Low power consumption below 5W,
 - Multichannel approach,
 - Trigger input, Ready out output for PLC,
 - Optional RS232 interface,
 - Compact size,
 - Practical design,
 - Made-in Slovakia, EU

Technical data:
Supply voltage: 5 VDC
Supply current: 0.9 A max
Dimensions: 155 x 120 x 40 mm
Cooling: natural by air
Operation Temperature: 0-30°C
Humidity: up to 85% non condensing
Storage temperature: -10 to 80°C

FuturoLighting, Ltd. is a young company based in Piestany. It is a certified partner of Osram in "LED Light for You" and focuses on LED lighting solutions with added value. In addition to its own products, such as Catherina, Catherina intended for the furniture industry, Catherina2 (square), Catherina2 LV, StreetStick, CureStick, HighStick, the company offers its design services to help our customers and partners with the development and production of new consumer LED modules and other solutions for a variety of applications.



Kontakt



slovenský produkt
vyvinuté a vyrobené
na Slovensku

Acknowledgment

At this point FuturoLighting team wants to thank the partners, Kamea, Hernon, LEDENGIN, Rutronik and others for their support and willingness to realizing this project.