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THORLABS

CS2010 - November 13, 2020

Item # CS2010 was discontinued on November 13, 2020. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

HIGH POWER UV CURING LED SYSTEM

- **Customizable Exposure Times and Intensities**
- **User Calibration for Reproducible Exposure**
- **10 Customizable Profiles**
- **5 Operation Modes**

Source Stand Included

CS2010
with Driver Unit and Handheld Light Source

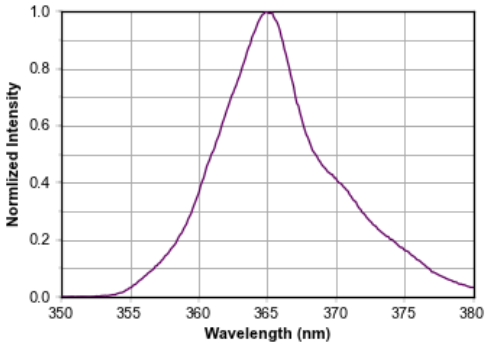
The Swiveling Mounted Handheld LED Source Includes a Removeable

OVERVIEW

Features

- 27 W/cm² LED Power Density at 365 nm*
- Adjustable Beam Spot Size and Shape
  - 30 mm Beam at 20 mm Distance Without Optics
  - 12 mm Collimated Beam Using Included CS20A2 Collimation Adapter
- User Calibration with Included Power Density Detector
- Timer and Continuous Mode Plus 3 Additional Modes
- 10 Configurable Profiles
- USB Port for PC Control
- Acoustic Time Signal
- Trigger Operation via Controller, Foot Switch, or Hand Trigger

Typical Emission Spectrum of the CS2010 LED



The CS2010 is an advanced UV Curing LED System designed to cure adhesives that need to be exposed to reproducible high-intensity (27 W/cm²) light at 365 nm. Five operation modes allow fine control of the duration and intensity of emission. Up to 10 different settings can be stored in configuration profiles. The integrated power density detector enables calibration of the emission time based on the current power density of the LED.

Five Operation Modes

- **Continuous Mode:** The intensity of the emitted light can be continuously adjusted and dispensed in mA, % of max 700 mA, or mW/cm².
- **Timer Mode:** This mode allows the user to limit the exposure time for a selected intensity.
- **Slope Mode:** This mode allows the user to gradually increase or decrease the intensity over a chosen time interval. Simply choose the initial and final intensities and the intensity will vary in a linear fashion during the chosen time period.
- **Configuration Mode:** 10 different user-defined configurations can be stored.
- **Irradiance Mode:** Use this mode to recalibrate all settings or to measure the irradiance of the LED source.

The integrated power density detector enables calibration of the emission time based on the current power density of the LED source. An acoustic signal can also be activated to generate beeps at determined time intervals. The output of the curing system is SM05-threaded; optics can be easily interchanged to produce different beam spot sizes and shapes.

Compared to conventional arc-lamp UV systems, the CS2010 offers many advantages, like an intense, uniform UV radiation profile and a long lifetime of 10,000+ hours. It requires much less energy, needs no warm-up time, and exhibits low IR heat emission. The system has no moving parts (passive, fan-less cooling) and is maintenance free. Additionally, the source contains no mercury and generates no ozone during the curing process.

Optional Accessories
See below for some optional accessories for the UV Curing LED System. The CS20A1 Foot Switch is designed as an alternative means for controlling the system. The beam diameter can be changed to 12 mm or 1 mm with the CS20A2 Collimation and CS20A3 Focus Adapter, respectively. One CS20A2 Collimation Adapter is included with the CS2010 UV curing system. While the CS2010 can be used with no optic, please note that without an optic, the outputted light will be divergent with a 30 mm diameter when measured 20 mm from the output.

Safety glasses are recommended when using our UV Curing LED System. Thorlabs offers several pairs of glasses that are appropriate for use with this system (LG1, LG2, LG3, LG4, LG5, LG6, LG7, LG9, LG10, LG12, LG13, and LG14). Please visit our Laser Safety Glasses page for detailed information about each of these items. Since the correct choice of laser safety eyewear depends upon many local factors that cannot be evaluated remotely, including the beam path, laser parameters, and lab environment, we would recommend that you discuss your needs with your organization's laser safety officer to determine the best option.

*Calculated power density directly at the LED emitter. The calculation is done using the minimum LED power of 270 mW and a chip surface measuring 1 mm x 1 mm.

SPECS

Item #	CS2010
Operation Properties	
Continuous Mode	Power: 0 - 100%
Timer Mode	Power: 0 - 100% Time: 1s - 2 h 46 min 39 s
Config Mode	10 Configurations in Timer Mode
Slope Mode	Time: 1 s - 2 h 46 min 39 s Start Power: 0 - 100% Stop Power: 0 - 100%
Optical Properties	
Wavelength	365 nm
UV LED Power	270 mW (Min) 360 mW (Typical)
Irradiance	
LED Chip	27 W/cm² (Min)
Focused using CS20A3	10 W/cm² (Min)
Collimated using CS20A2[a]	150 mW/cm² (Min)
Divergent without Optics (Distance 20 mm)	25 mW/cm² (Min)
Beam Diameter	
LED Chip	1 x 1 mm²

Focused using CS20A3	1 mm
Collimated using CS20A2[a]	12 mm
Divergent without Optics (Distance 20 mm)	30 mm
General	
Operating Temperature Range[b]	0 - 40 °C
Storage Temperature Range	-40 to 70 °C
Dimensions (W x H x D) Main Unit	157 mm x 80 mm x 158 mm (6.2" x 3.2" x 6.2")
Dimensions (W x H x D) Hand Held Unit	95 mm x 180 mm x 32 mm (3.6" x 7.1" x 1.3")
Warm Up Time for Rated Accuracy	<10 min
Weight	<1 kg

- One CS20A2 Collimation Adapter Included with CS2010 UV Curing System
- Non-condensing

SOFTWARE

Software for the High-Power UV Curing LED System

Software

Version 1.0

Standard full software application packages and graphical user interfaces.

Software

UV Curing System

Part Number	Description	Price	Availability
CS2010	UV Curing LED System, 365 nm	$2,235.66	Lead Time

Optional Accessories for Curing LED System

Item #	CS20A1	CS20A2[a]	CS20A3
Click on the Image to Enlarge			
Description	**Foot Switch**	**Collimation Adapter**	**Focus Adapter**

- One CS20A2 Collimation Adapter Included with CS2010 UV Curing System

Part Number	Description	Price	Availability
CS20A1	Foot Switch for CS2010 UV Curing LED System	$100.37	Today
CS20A2	Collimation Adapter for CS2010 UV Curing LED System	$110.37	Today
CS20A3	Focus Adapter for CS2010 UV Curing LED System	$196.95	Today