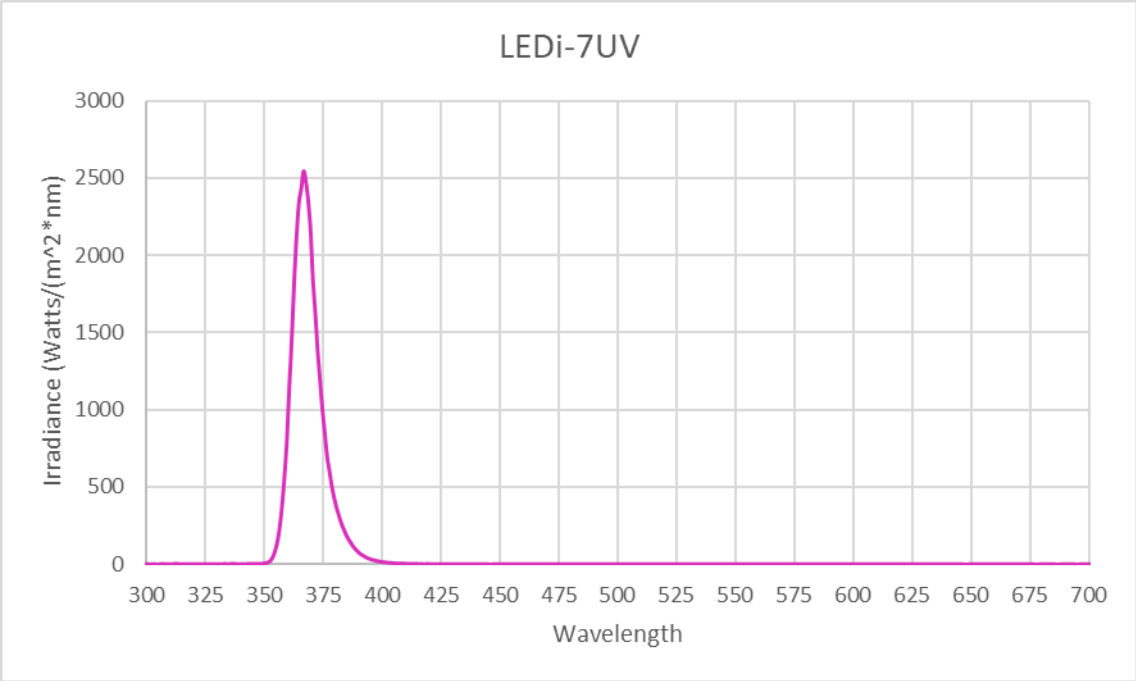
December 2020

TECHNICAL RELEASE
LUZCHEM EXPOSURE STANDARD: LEDi-7UV

General information: Luzchem Research, Inc. produces and freely distributes exposure standards as a service to scientists involved in research in photochemistry, photobiology and photostability. These standards are available in Luzchem's website for reference. They can be used to characterize conditions of exposure and should allow other scientists to readily replicate irradiation conditions. Measurements were made using a calibrated Ocean Optics USB4000 spectrometer (calibration valid until December 2021). To the best of our knowledge spectral information is accurate within the experimental resolution of ±2 nm. For more information concerning the procedure used to obtain this data, please consult tech@luzchem.com

Lamp Part Number	LEDi-HUV	Measurement Temperature	25 ˚C
Description	7 UVA LED	Measurement date	December 11, 2020
Measurement distance	~ 3.8 cm lamp face to target plane	Monitored range	300nm - 700nm
FWHM (nm)	13	FWHM peak range[1]	362-374 nm[2]

[1] As output current is adjusted the peak wavelength can vary within the resolved peak range specified above with an additional ±5 nm margin of error (information provided by LED manufacturer).
[2] FWHM based on power at 50% of value at maximum.



Irradiance and Power[3][4]

Total Irradiance in UVA Region (320-400 nm)	35,800	W/m^2
Total Irradiance under main peak (356-389 nm) [5]	35,000	W/m^2
Estimated dose for a cuvette with 2 cm^2 exposure area	7.2	Watt

[3] Irradiance measured at maximum output available for LEDi-7UV. Power output of individual units may vary ±10%;
[4] Conversion factor for W/m^2 to W/cm^2: divide by 10,000.
[5] Based on power exceeding 5% of peak spectral irradiance.

Luzchem Research, Inc.

Toll free 1-800-397-0977
Phone: (613) 749-2442
Fax: (613) 749-2393
E-mail: sales@luzchem.com

5509 Canotek Road, Unit 12
Ottawa, Ontario
Canada K1J 9J9
www.luzchem.com