

## Datasheet

LED engine specification

Product type:  
**LE-24-UVC-54X3535ILX60**

Description:  
**LuxaLight LED Engine 24V UVB/C 3535 (24 Volt, 54 LEDs, 3535, IP20)**



Date:  
03-01-2024

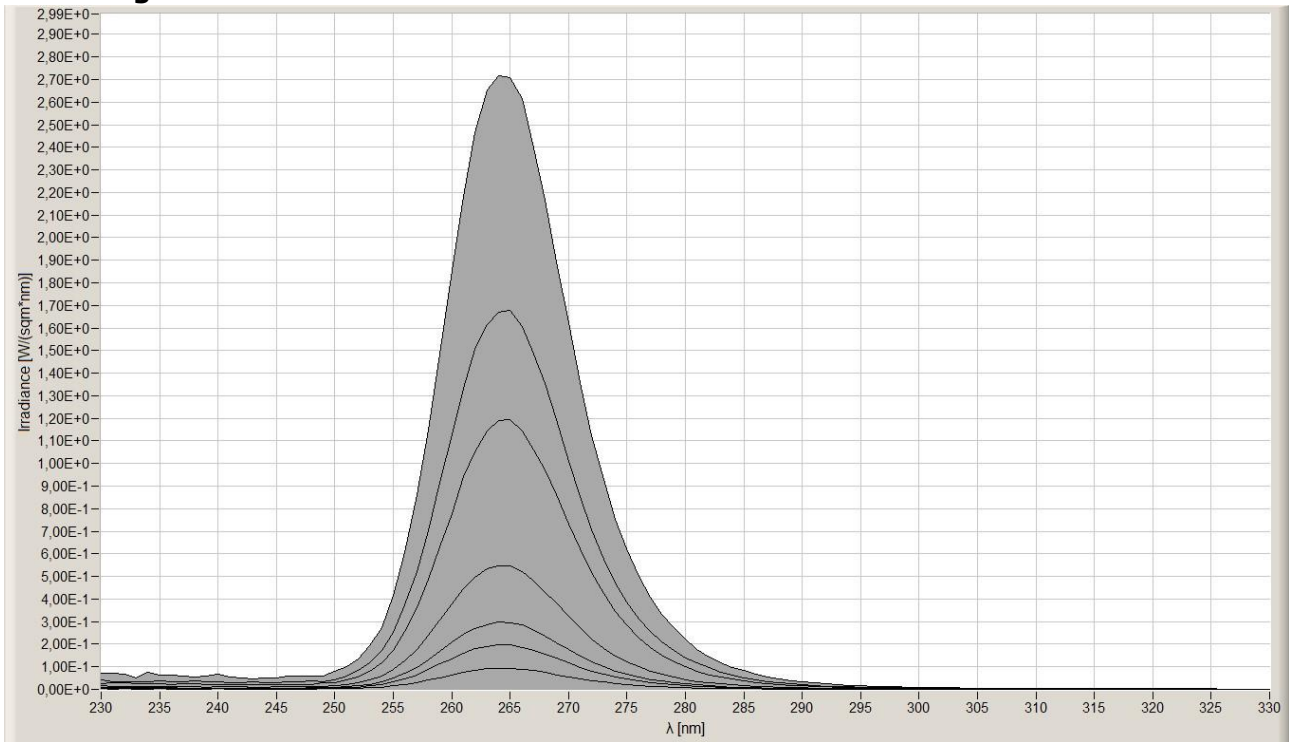
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Technical Specifications							
LE-24-UVC-54X2835ILX60							
<b>General</b>	LED Type		2835 SMD				
	LED Quantity		54 LEDs / Engine				
	Dimensions		200 * 20 * 2 ( L x B x H )				
	Weight		22g / Engine				
	Mounting		3M tape VHB4905				
<b>Environment</b>	Working Temperature		-20°C ~ +70°C				
	Storing Temperature		-20°C ~ +70°C				
	IP Grade		IP20				
	Mechanical Protection		N.A.				
<b>Electronic</b>	Working Voltage		DC24V				
	Working Current		1,55 A / Engine				
	Working Wattage		37,2 W / Engine				
	Driving Method		Constant Voltage				
	NTC Resistance		5Kohm				
	NTC Beta		3950				
<b>Lighting</b>	Engine Wavelength (nm)		265nm + 275nm + 300nm				
	Voltage at measurement		18.1V		24V		
	Current at measurement		0,47 A		1,55 A		
	Wattage at measurement		10,2 W		37,2 W		
	Total Radiance per distance 230nm - 1000nm (cm) (1 LED Engine)		5	504 mJ/cm <sup>2</sup>	50 W/m <sup>2</sup>	1360 mJ/cm <sup>2</sup>	136 W/m <sup>2</sup>
			7,5	319 mJ/cm <sup>2</sup>	32 W/m <sup>2</sup>	860 mJ/cm <sup>2</sup>	86 W/m <sup>2</sup>
			10	256 mJ/cm <sup>2</sup>	25,6 W/m <sup>2</sup>	690 mJ/cm <sup>2</sup>	69 W/m <sup>2</sup>
			20	115 mJ/cm <sup>2</sup>	11,5 W/m <sup>2</sup>	310 mJ/cm <sup>2</sup>	31 W/m <sup>2</sup>
			30	59 mJ/cm <sup>2</sup>	5,9 W/m <sup>2</sup>	160 mJ/cm <sup>2</sup>	16 W/m <sup>2</sup>
			40	35 mJ/cm <sup>2</sup>	3,5 W/m <sup>2</sup>	95 mJ/cm <sup>2</sup>	9.5 W/m <sup>2</sup>
60			16,6 mJ/cm <sup>2</sup>	1,7 W/m <sup>2</sup>	45 mJ/cm <sup>2</sup>	4,5 W/m <sup>2</sup>	

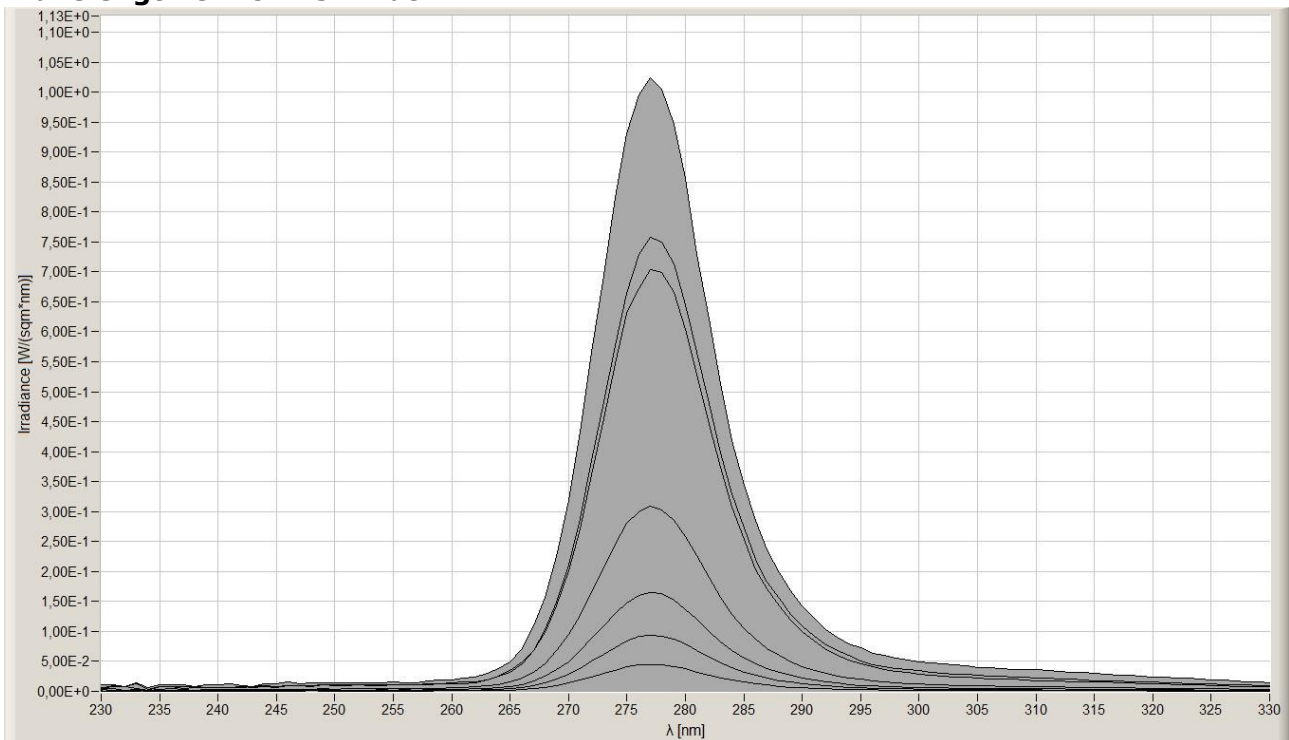
<b>Lighting</b>	<b>Engine Wavelength (nm)</b>		265nm UV-C				
	<b>Peak Measured Wavelength (5cm)</b>		264nm				
	<b>Voltage at measurement</b>		18.1V		24V		
	<b>Current at measurement</b>		0,13 A		0,6 A		
	<b>Wattage at measurement</b>		2,4 W		14,4 W		
	<b>Peak Measured Radiance per distance (cm) (1 LED Engine)</b>		<b>5</b>	8,6 mJ/cm <sup>2</sup>	0,86 W/m <sup>2</sup>	27 mJ/cm <sup>2</sup>	2,7 W/m <sup>2</sup>
			<b>7,5</b>	5,4 mJ/cm <sup>2</sup>	0,54 W/m <sup>2</sup>	17 mJ/cm <sup>2</sup>	1,7 W/m <sup>2</sup>
			<b>10</b>	3,8 mJ/cm <sup>2</sup>	0,38 W/m <sup>2</sup>	12 mJ/cm <sup>2</sup>	1,2 W/m <sup>2</sup>
			<b>20</b>	1,6 mJ/cm <sup>2</sup>	0,16 W/m <sup>2</sup>	5 mJ/cm <sup>2</sup>	0,5 W/m <sup>2</sup>
			<b>30</b>	1 mJ/cm <sup>2</sup>	0,1 W/m <sup>2</sup>	3 mJ/cm <sup>2</sup>	0,3 W/m <sup>2</sup>
			<b>40</b>	0,7 mJ/cm <sup>2</sup>	0,07 W/m <sup>2</sup>	2 mJ/cm <sup>2</sup>	0,2 W/m <sup>2</sup>
			<b>60</b>	0,4 mJ/cm <sup>2</sup>	0,04 W/m <sup>2</sup>	0,9 mJ/cm <sup>2</sup>	0,09 W/m <sup>2</sup>
	<b>Total Radiance per distance 230nm - 1000nm (cm) (1 LED Engine)</b>		<b>5</b>	145 mJ/cm <sup>2</sup>	14,5 W/m <sup>2</sup>	553 mJ/cm <sup>2</sup>	55,3 W/m <sup>2</sup>
			<b>7,5</b>	71 mJ/cm <sup>2</sup>	7,1 W/m <sup>2</sup>	270 mJ/cm <sup>2</sup>	27 W/m <sup>2</sup>
			<b>10</b>	45 mJ/cm <sup>2</sup>	4,5 W/m <sup>2</sup>	170 mJ/cm <sup>2</sup>	17 W/m <sup>2</sup>
			<b>20</b>	23 mJ/cm <sup>2</sup>	2,3 W/m <sup>2</sup>	80 mJ/cm <sup>2</sup>	8 W/m <sup>2</sup>
			<b>30</b>	12 mJ/cm <sup>2</sup>	1,2 W/m <sup>2</sup>	43 mJ/cm <sup>2</sup>	4,3 W/m <sup>2</sup>
			<b>40</b>	7 mJ/cm <sup>2</sup>	0,7 W/m <sup>2</sup>	26 mJ/cm <sup>2</sup>	2,6 W/m <sup>2</sup>
			<b>60</b>	3 mJ/cm <sup>2</sup>	0,3 W/m <sup>2</sup>	12 mJ/cm <sup>2</sup>	1,2 W/m <sup>2</sup>
	<b>Engine Wavelength (nm)</b>		275nm UV-C				
	<b>Peak Measured Wavelength (5cm)</b>		276nm				
	<b>Voltage at measurement</b>		18.1V		24V		
	<b>Current at measurement</b>		0,09 A		0,25 A		
	<b>Wattage at measurement</b>		1,6 W		6 W		
	<b>Peak Measured Radiance per distance (cm) (1 LED Engine)</b>		<b>5</b>	3,8 mJ/cm <sup>2</sup>	0,38 W/m <sup>2</sup>	10 mJ/cm <sup>2</sup>	1 W/m <sup>2</sup>
			<b>7,5</b>	3 mJ/cm <sup>2</sup>	0,3 W/m <sup>2</sup>	8 mJ/cm <sup>2</sup>	0,8 W/m <sup>2</sup>
<b>10</b>			2,6 mJ/cm <sup>2</sup>	0,26 W/m <sup>2</sup>	7 mJ/cm <sup>2</sup>	0,7 W/m <sup>2</sup>	
<b>20</b>			1,1 mJ/cm <sup>2</sup>	0,11 W/m <sup>2</sup>	3 mJ/cm <sup>2</sup>	0,3 W/m <sup>2</sup>	
<b>30</b>			0,7 mJ/cm <sup>2</sup>	0,07 W/m <sup>2</sup>	2 mJ/cm <sup>2</sup>	0,2 W/m <sup>2</sup>	
<b>40</b>			0,4 mJ/cm <sup>2</sup>	0,04 W/m <sup>2</sup>	1 mJ/cm <sup>2</sup>	0,1 W/m <sup>2</sup>	
<b>60</b>			0,2 mJ/cm <sup>2</sup>	0,02 W/m <sup>2</sup>	0,4 mJ/cm <sup>2</sup>	0,04 W/m <sup>2</sup>	
<b>Total Radiance per distance 230nm - 1000nm (cm) (1 LED Engine)</b>		<b>5</b>	80 mJ/cm <sup>2</sup>	8 W/m <sup>2</sup>	186 mJ/cm <sup>2</sup>	18,6 W/m <sup>2</sup>	
		<b>7,5</b>	39 mJ/cm <sup>2</sup>	3,9 W/m <sup>2</sup>	91 mJ/cm <sup>2</sup>	9,1 W/m <sup>2</sup>	
		<b>10</b>	29 mJ/cm <sup>2</sup>	2,9 W/m <sup>2</sup>	67 mJ/cm <sup>2</sup>	6,7 W/m <sup>2</sup>	
		<b>20</b>	17 mJ/cm <sup>2</sup>	1,7 W/m <sup>2</sup>	39 mJ/cm <sup>2</sup>	3,9 W/m <sup>2</sup>	
		<b>30</b>	10 mJ/cm <sup>2</sup>	1 W/m <sup>2</sup>	23 mJ/cm <sup>2</sup>	2,3 W/m <sup>2</sup>	
		<b>40</b>	5 mJ/cm <sup>2</sup>	0,5 W/m <sup>2</sup>	13 mJ/cm <sup>2</sup>	1,3 W/m <sup>2</sup>	
		<b>60</b>	2 mJ/cm <sup>2</sup>	0,2 W/m <sup>2</sup>	6 mJ/cm <sup>2</sup>	0,6 W/m <sup>2</sup>	

<b>Lighting</b>	<b>Engine Wavelength (nm)</b>		300nm UV-B				
	<b>Peak Measured Wavelength (5cm)</b>		301nm				
	<b>Voltage at measurement</b>		18.1V		24V		
	<b>Current at measurement</b>		0,25 A		0,7 A		
	<b>Wattage at measurement</b>		4,5 W		16,8 W		
	<b>Peak Measured Radiance per distance (cm) (1 LED Engine)</b>		<b>5</b>	25,5 mJ/cm <sup>2</sup>	2,55 W/m <sup>2</sup>	52 mJ/cm <sup>2</sup>	5,2 W/m <sup>2</sup>
			<b>7,5</b>	14 mJ/cm <sup>2</sup>	1,42 W/m <sup>2</sup>	29 mJ/cm <sup>2</sup>	2,9 W/m <sup>2</sup>
			<b>10</b>	11 mJ/cm <sup>2</sup>	1,08 W/m <sup>2</sup>	22 mJ/cm <sup>2</sup>	2,2 W/m <sup>2</sup>
			<b>20</b>	4,4 mJ/cm <sup>2</sup>	0,44 W/m <sup>2</sup>	9 mJ/cm <sup>2</sup>	0,9 W/m <sup>2</sup>
			<b>30</b>	2,4 mJ/cm <sup>2</sup>	0,24 W/m <sup>2</sup>	5 mJ/cm <sup>2</sup>	0,5 W/m <sup>2</sup>
			<b>40</b>	1,4 mJ/cm <sup>2</sup>	0,14 W/m <sup>2</sup>	3 mJ/cm <sup>2</sup>	0,3 W/m <sup>2</sup>
			<b>60</b>	0,5 mJ/cm <sup>2</sup>	0,05 W/m <sup>2</sup>	1 mJ/cm <sup>2</sup>	0,1 W/m <sup>2</sup>
	<b>Total Radiance per distance 230nm - 1000nm (cm) (1 LED Engine)</b>		<b>5</b>	519 mJ/cm <sup>2</sup>	51,9 W/m <sup>2</sup>	1180 mJ/cm <sup>2</sup>	118 W/m <sup>2</sup>
			<b>7,5</b>	234 mJ/cm <sup>2</sup>	23,4 W/m <sup>2</sup>	532 mJ/cm <sup>2</sup>	53,2 W/m <sup>2</sup>
			<b>10</b>	174 mJ/cm <sup>2</sup>	17,4 W/m <sup>2</sup>	395 mJ/cm <sup>2</sup>	39,5 W/m <sup>2</sup>
<b>20</b>			75 mJ/cm <sup>2</sup>	7,5 W/m <sup>2</sup>	170 mJ/cm <sup>2</sup>	17 W/m <sup>2</sup>	
<b>30</b>			40 mJ/cm <sup>2</sup>	4 W/m <sup>2</sup>	91 mJ/cm <sup>2</sup>	9,1 W/m <sup>2</sup>	
<b>40</b>			22 mJ/cm <sup>2</sup>	2,2 W/m <sup>2</sup>	51 mJ/cm <sup>2</sup>	5,1 W/m <sup>2</sup>	
<b>60</b>			10 mJ/cm <sup>2</sup>	1 W/m <sup>2</sup>	24 mJ/cm <sup>2</sup>	2,4 W/m <sup>2</sup>	
<b>Viewing Angle (θ)</b>		60 ±5°					
<i>Keep the LED Fixture within operating temperatures, for more information about heat management, read the 'Luxalight modular LED Fixtures infosheet'.</i>							

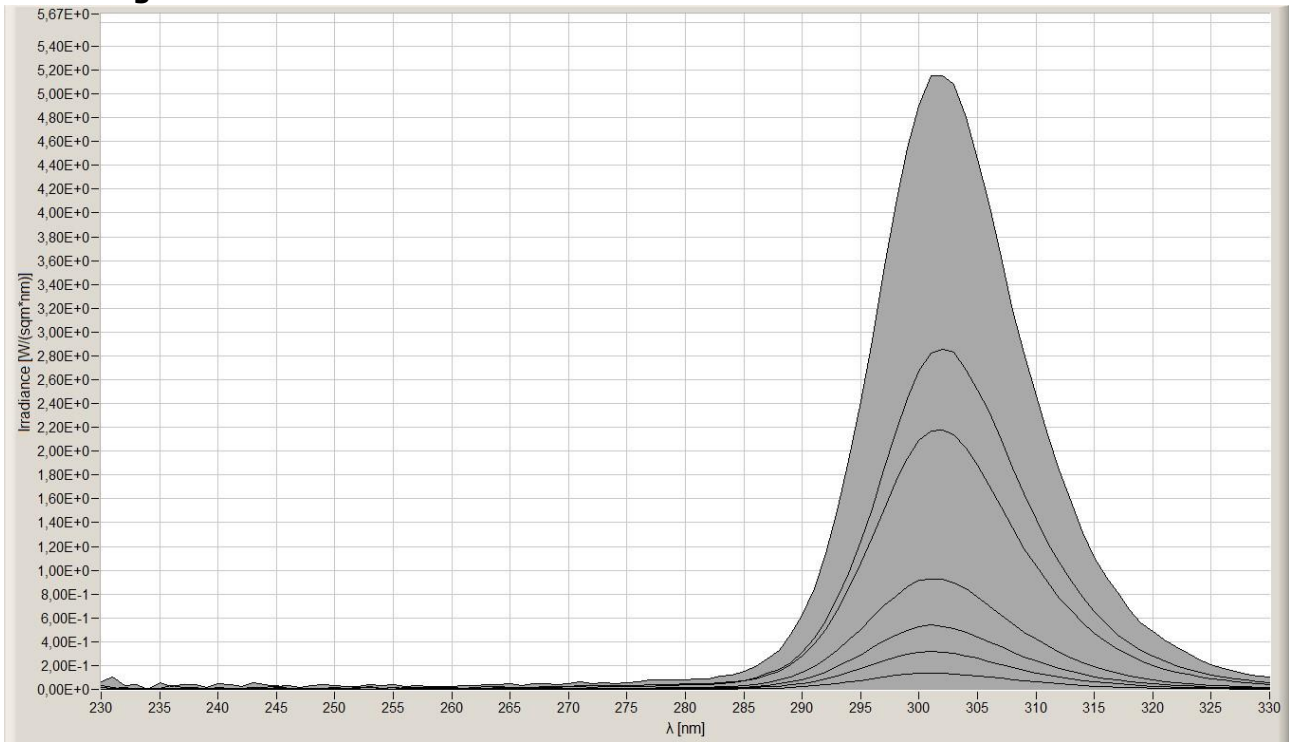
## Wavelength UV-C 265nm at 24V:



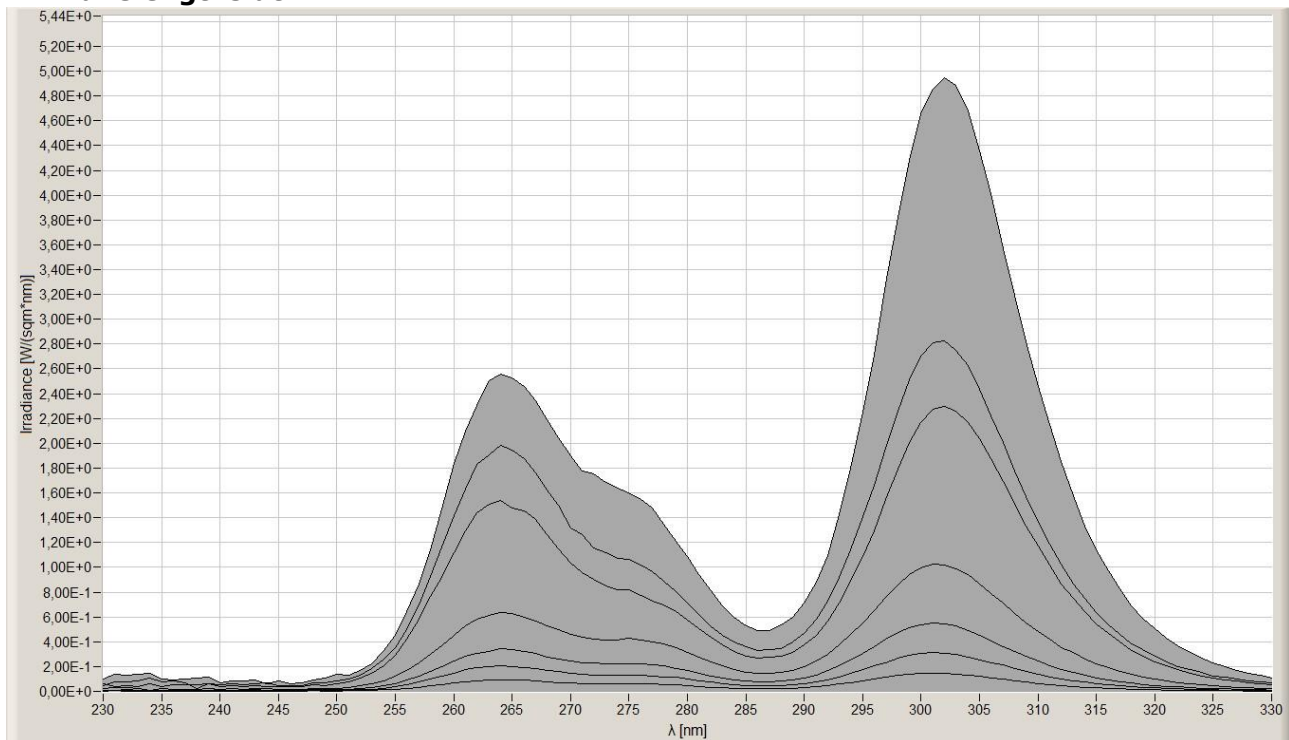
## Wavelength UV-C 275nm at 24V:



## Wavelength UV-B 300nm at 24V:



## All wavelengths at 24V:



**The Materials of PCB:**

2mm Thick Aluminium.

**Solderings:**

Solder Alloy: 99.3 Sn, 0.7 Cu,

Melting Temperature: 227°C

No SVHC (Jan 2021)

**Certificate of Conformity:**

EC Council Directive 2004/108/EC

Electromagnetic Compatibility

**Complies to the standards:**

- NEN-EN-IEC 61000-3-2:2019/A1:2021
- NEN-EN-IEC 61000-3-3:2013+A1:2017+A2:2021
- NEN-EN-IEC 61547:2009

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