

# Product Information Sheet

COMMISSION DELEGATED REGULATION (EU) 2019/2015 with regard to energy labelling of light sources

**Supplier's name or trade mark:** ELMARK

**Supplier's address:** ELMARK INDUSTRIES SC, bul.Dobrudja 2, 9300 Dobrich Dobrich, BG

**Model identifier:** 99LED448M

**Type of light source:**

Lighting technology used:	LED	Non-directional or directional:	NDLS
Light source cap-type (or other electric interface)	G13		
Mains or non-mains:	MLS	Connected light source (CLS):	No
Colour-tuneable light source:	No	Envelope:	-
High luminance light source:	No		
Anti-glare shield:	No	Dimmable:	No

## Product parameters

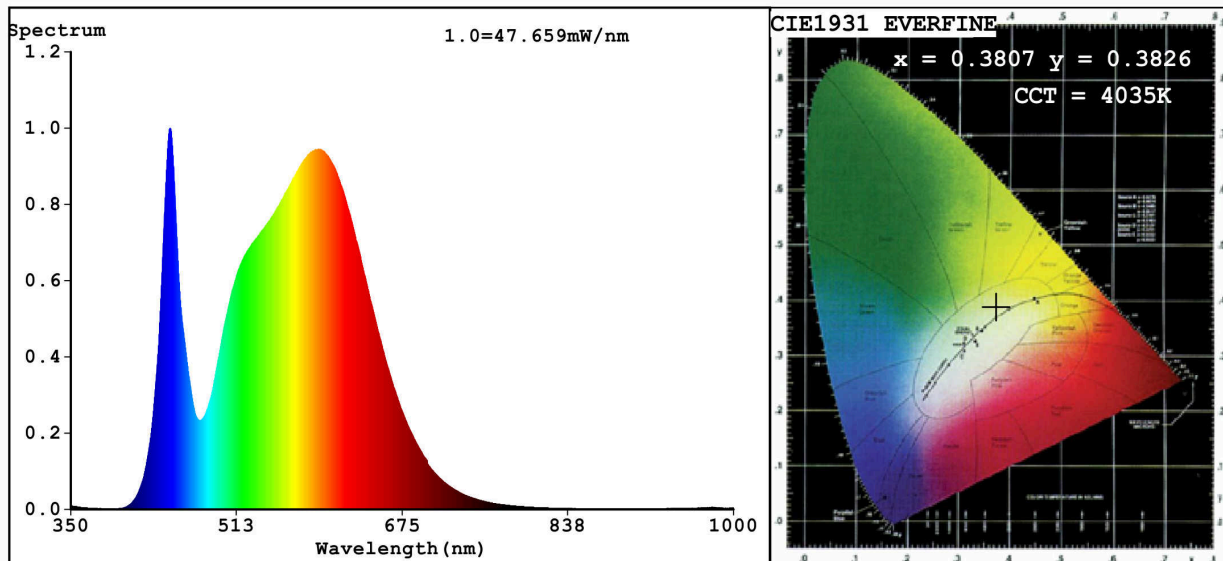
Parameter	Value	Parameter	Value
<b>General product parameters:</b>			
Energy consumption in on-mode (kWh/1000 h), rounded up to the nearest integer	24	Energy efficiency class	F
Useful luminous flux ( $\phi_{use}$ ), indicating if it refers to the flux in a sphere (360°), in a wide cone (120°) or in a narrow cone (90°)	2 300 in Sphere (360°)	Correlated colour temperature, rounded to the nearest 100 K, or the range of correlated colour temperatures, rounded to the nearest 100 K, that can be set	4 000
On-mode power ( $P_{on}$ ), expressed in W	24,0	Standby power ( $P_{sb}$ ), expressed in W and rounded to the second decimal	0,00
Networked standby power ( $P_{net}$ ) for CLS, expressed in W and rounded to the second decimal	-	Colour rendering index, rounded to the nearest integer, or the range of CRI-values that can be set	81
Outer dimensions without	Height	Spectral power distribution in the	See image in last page
	Width		
	Depth		

separate control gear, lighting control parts and non-lighting control parts, if any (millimetre)			range 250 nm to 800 nm, at full-load	
Claim of equivalent power <sup>(a)</sup>	Yes	If yes, equivalent power (W)	160	
		Chromaticity coordinates (x and y)	0,380 0,382	
<b>Parameters for LED and OLED light sources:</b>				
R9 colour rendering index value	5	Survival factor	0,90	
the lumen maintenance factor	0,93			
<b>Parameters for LED and OLED mains light sources:</b>				
displacement factor (cos $\phi_1$ )	0,50	Colour consistency in McAdam ellipses	5	
Claims that an LED light source replaces a fluorescent light source without integrated ballast of a particular wattage.	Yes <sup>(b)</sup>	If yes then replacement claim (W)	150	
Flicker metric (Pst LM)	0,0	Stroboscopic effect metric (SVM)	0,0	

(a) : not applicable;

(b) : not applicable;

## Spectrum Test Report



### Color Parameters:

Chromaticity Coordinate:  $x=0.3807$   $y=0.3826$   $u'=0.2230$   $v'=0.5042$   
CCT=4035K (Duv=0.0026) Dominant WL:  $\lambda_d = 577.6\text{nm}$  WL:  $\lambda_c = \text{--nm}$  Purity=29.1%  
Ratio: R=17.9% G=78.8% B=3.3% Peak WL:  $\lambda_p = 447.9\text{nm}$  FWHM=21.9nm  
Render Index:  $R_a = 81.9$

R1 =80	R2 =87	R3 =93	R4 =82	R5 =80	R6 =82	R7 =86
R8 =64	R9 =5	R10=69	R11=82	R12=63	R13=81	R14=96
						R15=73

### Photo Parameters:

Flux = 2643 lm Eff. : 97.81 lm/W  $\Phi_e = 7.998\text{ W}$

### Electrical parameters:

V = 219.87 V I = 0.2256 A P = 27.02 W PF = 0.5447

WHITE: ANSI\_4000K

Status: Integral T = 21 ms  $I_p = 46680$  (71%)

Model: LED TUBE  
Tester: Atanas DAKOV  
Temperature: 25.3Deg  
Manufacturer: ELMARK

Number: 99LED448M  
Date: 2021-03-30 11:08:42  
Humidity: 65.0%  
Remarks: 7377