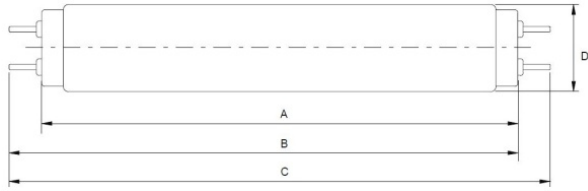




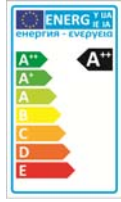
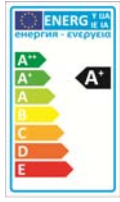






LED TUBES T8 RETROFIT

	   																										
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th>P_{nom}</th> <th>A_{max} (mm)</th> <th>B_{min} (mm)</th> <th>B_{max} (mm)</th> <th>C_{max} (mm)</th> <th>D (mm)</th> </tr> </thead> <tbody> <tr> <td>9W</td> <td>589.8</td> <td>594.5</td> <td>596.9</td> <td>604.0</td> <td>26 ÷ 28</td> </tr> <tr> <td>18W</td> <td>1199.0</td> <td>1204.1</td> <td>1206.5</td> <td>1213.6</td> <td>26 ÷ 28</td> </tr> <tr> <td>24W</td> <td>1500.0</td> <td>1504.7</td> <td>1507.1</td> <td>1514.2</td> <td>26 ÷ 28</td> </tr> </tbody> </table> <p style="font-size: small; text-align: center;"> <i>The 9W LED tube retrofits the 18W T8 fluorescent tube, single circuit</i> <i>The 18W LED tube retrofits the 36W T8 fluorescent tube</i> <i>The 24W LED tube retrofits the 58W T8 fluorescent tube</i> </p>	P _{nom}	A _{max} (mm)	B _{min} (mm)	B _{max} (mm)	C _{max} (mm)	D (mm)	9W	589.8	594.5	596.9	604.0	26 ÷ 28	18W	1199.0	1204.1	1206.5	1213.6	26 ÷ 28	24W	1500.0	1504.7	1507.1	1514.2	26 ÷ 28			
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FULL GLASS non-directional (light emission to the whole solid space), beam opening = 300° (C0/C180).	
Operating electric conditions	220 – 240V 50/60Hz
Lamp suitable for 50Hz/60Hz operation	
Not adjustable	
Lamp not suitable for emergency operation	
For indoor use only. Lamp to be used in dry conditions or in a luminaire that provides protection	
Rated ambient temperature range of the lamp	t _a = -20 ÷ 50°C
Average lifetime L70, F50	35.000 hours
Starting time	< 0.4s
Lamp Lumen Maintenance Factor @6000h	0.80
Lamp Lumen Maintenance Factor @35.000h	70% (L70)
Number of Switching cycles before failure	> 15.000
Warm-up time (to 95% of the steady-state lumen output)	< 2.0s
Failure rate @1000h	< 5.0%
Colour consistency	MacAdam ellipses step ≤ 6
Mercury and dangerous substances	Absent
UV and IR radiation	Absent
<i>LED lamps classified RISK GROUP 1 in application of the EN 62471: 2008 (CIE S009:2002) standards "Photobiological safety of lamps and lamp systems" and the European Directive 2006/25 on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation).</i>	

Item code	P _{nom} (W)	I (mA)	PF	Luminous Flux (lm)	lm/W	Energy Class	Ec (kWh/1000h)	Cap	T _c (K)	R _a	L _{nom} (mm) (**)
FLLT77XAP	9	49	>0.8 ⁽ⁱ⁾	900	100	A+	9	G13	3000	>80	590
FLLT77X2P	9	49	>0.8 ⁽ⁱ⁾	1000	111.1	A+	9	G13	4000	>80	590
FLLT77XEP	9	49	>0.8 ⁽ⁱ⁾	1100	122.2	A++	9	G13	6500	>80	590
FLLTJ7XAP	18	85	>0.8 ⁽ⁱ⁾	1600	88.9	A+	18	G13	3000	>80	1200
FLLTJ7X2P	18	85	>0.8 ⁽ⁱ⁾	1700	94.4	A+	18	G13	4000	>80	1200
FLLTJ7XEP	18	85	>0.8 ⁽ⁱ⁾	1800	100	A+	18	G13	6500	>80	1200
FLLTZ7XAP	24	113	> 0.9	2200	91.7	A+	24	G13	3000	>80	1500
FLLTZ7X2P	24	113	> 0.9	2300	95.8	A+	24	G13	4000	>80	1500
FLLTZ7XEP	24	113	> 0.9	2400	100	A+	24	G13	6500	>80	1500

(i) PF > 0.9 at 230V

(**) Total length of the tube, pin excluded

Item code	Description	Dimension	Pack
DMSTARTER	Dummy-starter for rated voltage AC 220...240V, single mode. Accessory for LED tube, retrofit on magnetic ballasts	Diameter 20mm Length 37mm	25pcs

One dummy starter is included in any single box of the tube, but it is available also in separate 25-pcs pack

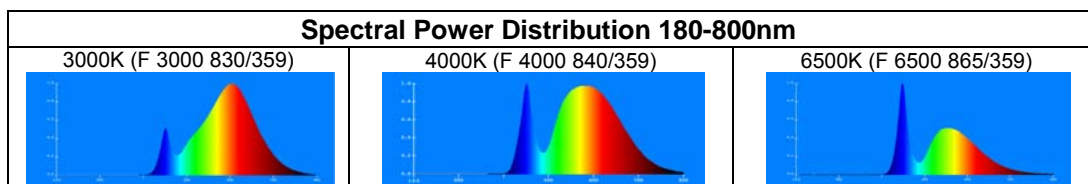
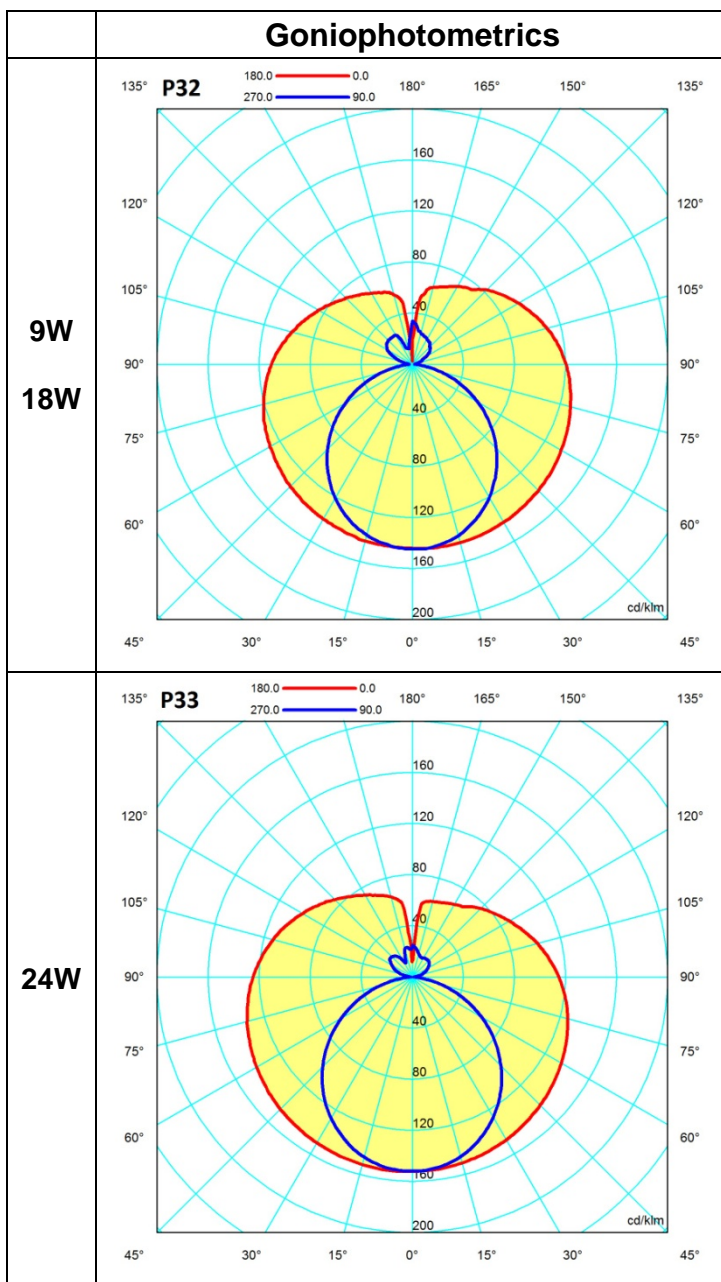
Possible uses of the LED tube:

<u>Installers</u>	<p>Retrofit in fixtures equipped by magnetic ballasts and glow-starters, <u>single circuit (***)</u>, by just the substitution of the glow-starters with dummy-starters. The protocol is showed at the right: unplug the mains; remove the existing fluorescent tube; remove the glow-starter; insert the dummy-starter; insert and rotate the LED tube</p>	
<u>OEMs</u>	<p>OEMs who want to make a fixture using the LED tube do not need any internal ballast, glow-starter or dummy-starter. It is sufficient to apply the European mains voltage at the end of the tube identified by the label (when the LED tube is inserted, its labeled end must be plugged into the G13 base where L, N have been applied). Another possible wiring is shown by the second picture hereby at the right.</p> <p>ADVICE AND DISCLAIMER in case of use inside already installed fixtures equipped by electronic ballasts: The possibility to install our LED tube into an already installed fixture equipped by an electronic ballast is forbidden by the European Directives, product standards and laws on safety of fixtures and installations. In facts the installer is not allowed to change the internal wiring of the fixture, infringing its CE marking. DLU hereby denies any responsibility in case of any similar use of their LED tubes.</p>	

➡ (***) The T8 LED tube 9W (600 mm) cannot retrofit fluorescent tubes in fixtures having two lamps in series (retrofit not possible in fixtures 2x18W, 4x18W, etc., with one magnetic ballast per pair of lamps in series). Notice: the retrofit is always possible in 2x36W and 2x58W magnetic fluorescent fixtures because they have two separated single circuits.

➡ The LED tubes cannot be used either in fixtures for emergency lighting either under dimmers.

➡ Remove any eventual phasing capacitor to take advantage of the high power factor proper of the LED tube.



Reference Standards: EN 62776; EN62493; EN62471; EN55015; EN61000-3-2; EN61000-3-3; EN61547
 European Directives: 2014/35; 2014/30; 92/31; 93/68; 2009/125 (Reg.no.1194/2012; no.1428/2015); 2012/27 (Reg.Del. no.874/2012; Reg. no.1369/2017); 2011/65; 2012/19

Correct disposal of this product (Waste Electrical & Electronic Equipment) Applicable in countries with separate collection systems

This graphic symbol placed on the product and on the package indicates that the product should not be disposed with other household waste. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and responsibly recycle them to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased the product, or their local government office, for details on where and how they can take these items for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract; this product should not be mixed with other commercial wastes for disposal.