

Tube T8 1500 – 22W(Glass Tube)

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1. Specification:

A. General Data

Model	Tube T8 1500 3000K	Tube T8 1500 4000K	Tube T8 1500 5000K	Tube T8 1500 6500K
P/N	DELS- T834022A5AE11	DELS- T844022A5AE11	DELS- T854022A5AE11	DELS- T8C4022A5AE11
Westnet Code	00172785	00172786	00172787	00172788
Rated Voltage	230 VAC	230 VAC	230 VAC	230 VAC
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Rated Wattage	22W	22W	22W	22W
Deviation Tolerance of Wattage	±10 %	±10 %	±10 %	±10 %
Rated Current	0.12A	0.12A	0.12A	0.12A
Maximum Input Current	0.138A	0.138A	0.138A	0.138A
Dimmable	NO	NO	NO	NO
Beam Angle	200°	200°	200°	200°
Stroboscopic effect metric (SVM)	0.4	0.4	0.4	0.4
Flicker metric (PstLM)	1	1	1	1
Energy Efficiency Class(EEC)	E	E	E	E
Peak luminous intensity (cd)	Non-directional			
R9 CRI	1	1	1	1
Survival factor	0.9	0.9	0.9	0.9
Safety requirements	CE	CE	CE	CE
Ingress protection rating	IP20	IP20	IP20	IP20
Impact resistance	N.A	N.A	N.A	N.A
Displacement Factor	0.7	0.7	0.7	0.7
Base	G13	G13	G13	G13

Photobiological Group	RG 0	RG 0	RG 0	RG 0
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* Displacement factor tolerance +/- 10%

B. Light Data

Color	Warm white	Neutral White	Daylight	Cool White
Color Temperature (CCT)	3000K	4000K	5000K	6500K
Rated Lumen Output(Total)*	2420lm			
Color Rendering Index	≥ 80			
Efficacy(Total)*	110 lm/W			
Color Consistency**	6 Step MacAdam Ellipse (6 SDCM)			

*tolerance +/- 10%

** 3000K center point (0.43387, 0.40319) ; 4000K center point (0.38177, 0.37959) ; 5000K center point (0.34464, 0.35506) ; 6500K center point (0.31230, 0.32825)

C. Lifetime

(Supplied Voltage:AC230V; Ambient Temperature: 25°C)

Lumen Maintenance Factor	70%of the rated lifetime
Rated Lifetime – L₇₀B₅₀	20,000 hrs
Lumen Maintenance factor	94.8%

D. Temperature Operation

Normal operation temperature	-20°C ~ 40°C
Relative Humidity	10%~ 90%

E. Geometric Data

Maximum overall length	1512± 1.5 mm
Glass cover diameter	25 ± 1 mm
End cap diameter	28 ± 1 mm
Mass	225 ± 10%

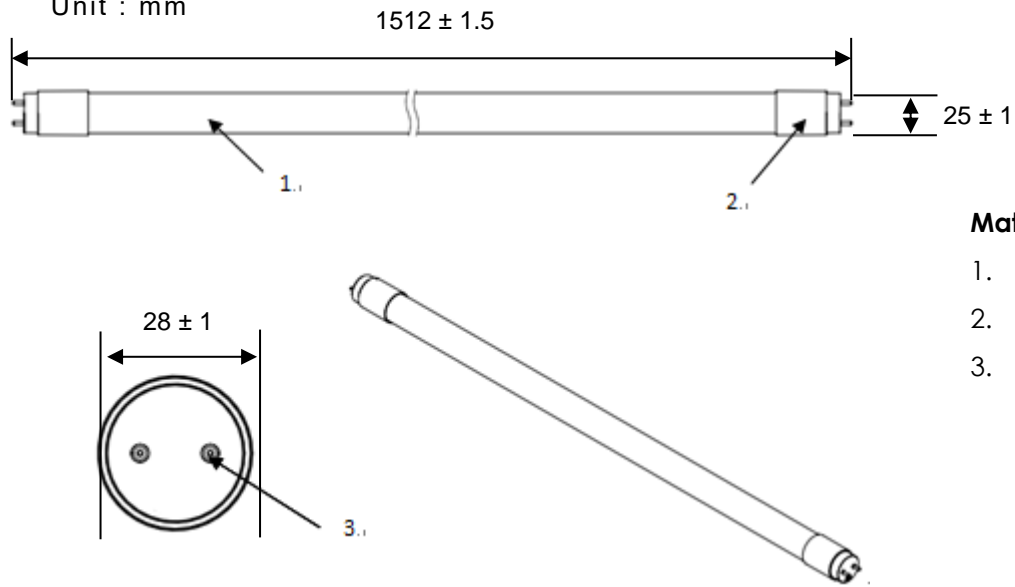
F. Environmental relevant materials

Mercury (Hg)	Comply with RoHS Directive 2011/65/EU
Lead (Pb)	
Cadmium(Cd)	
Hexavalent Chromium(Cr6+)	
Polybrominated Biphenyls(PBBs)	
Polybrominated Diphenyl Ethers(PBDEs)	
Bis (2-ethylhexyl) phthalate(DEHP)	
Butyl benzyl phthalate(BBP)	

Dibutyl phthalate(DBP)	
Diisobutylphthalate(DIBP)	

2. Outline Drawing

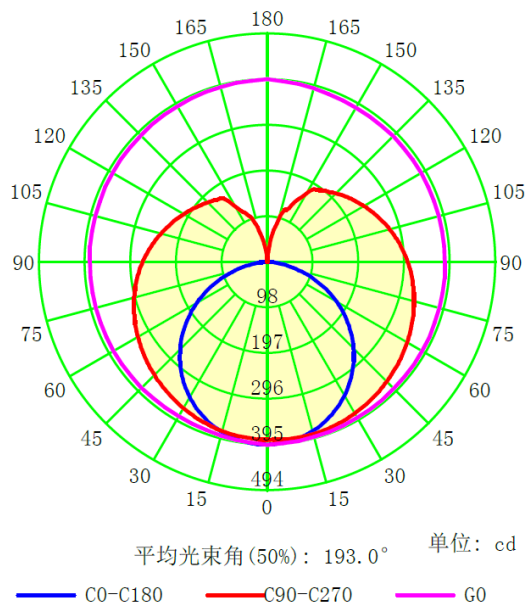
Unit : mm

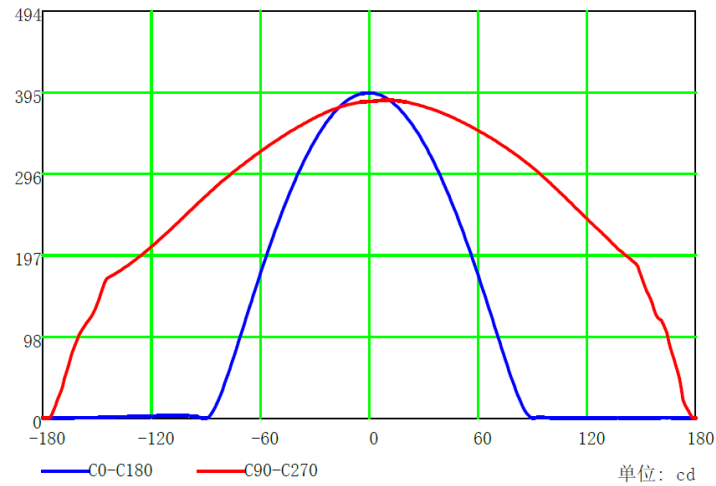


Material Information

1. Cover : Glass
2. End cap : Plastic
3. Pin : Metal

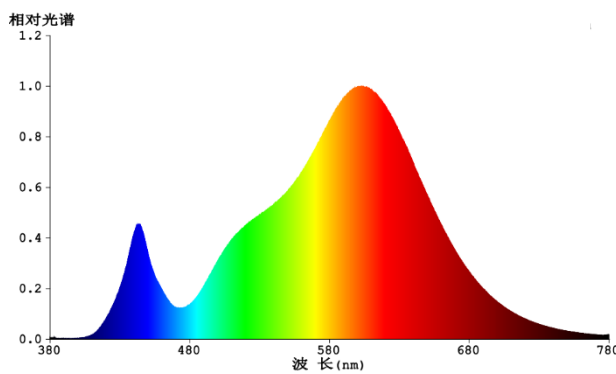
3. Light Distribution Curve



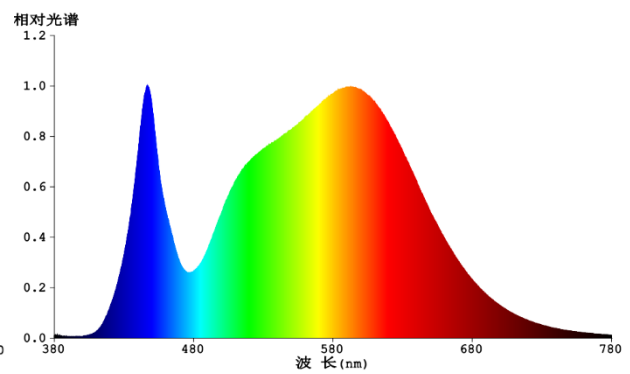


4. Spectrum Distribution

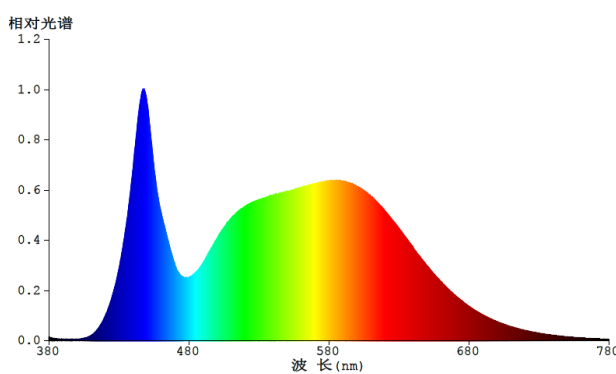
● 3000K Color Temperature



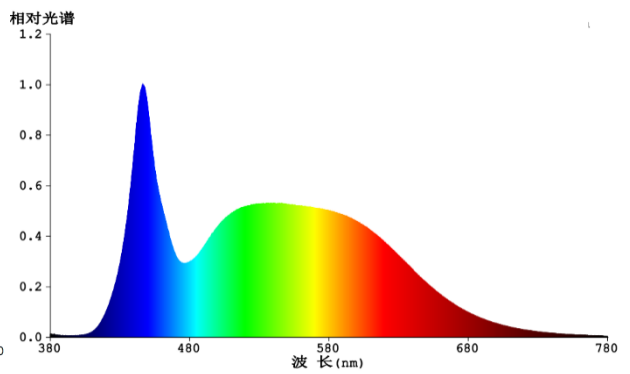
● 4000K Color Temperature



● 5000K Color Temperature



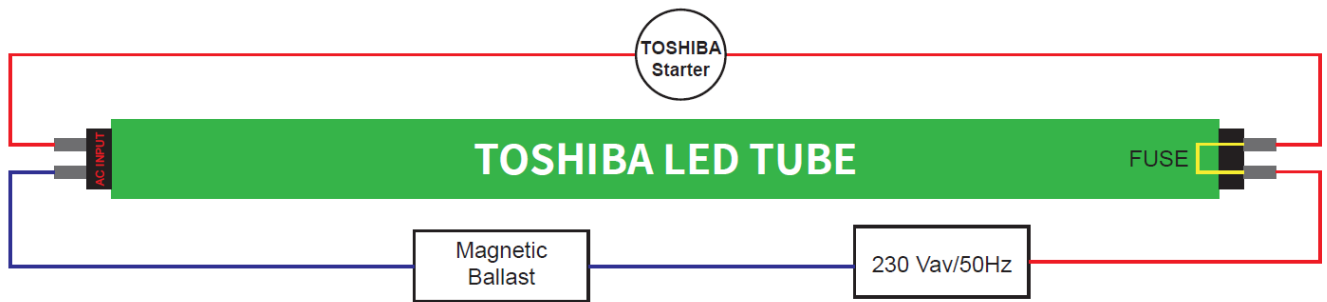
● 6500K Color Temperature



5. Installation Options

- Retrofitting in a CCG luminaire
 - (1) Make sure that the supply voltage is disconnected
 - (2) Remove the conventional lamp
 - (3) Remove the starter and power factor correction capacitor
 - (4) Install TOSHIBA own starter.
 - (5) Rewire the luminaire as shown in the circuit diagram below

(6) Insert LED tube into lamp holders and turn on the supply voltage to check the light distribution



NOTE :

- It can't be guaranteed LED tube can match up all kinds of electromagnetic ballasts.

6. Warnings

- Before replacing, turn off power and let lamp cool to avoid electrical shock or burn.
- The LED tube must not be damaged or operated in a damaged condition.
- If having flickering issue on LED tube when installing with the electromagnetic ballast, please change suitable electromagnetic ballasts.




7. Cautions

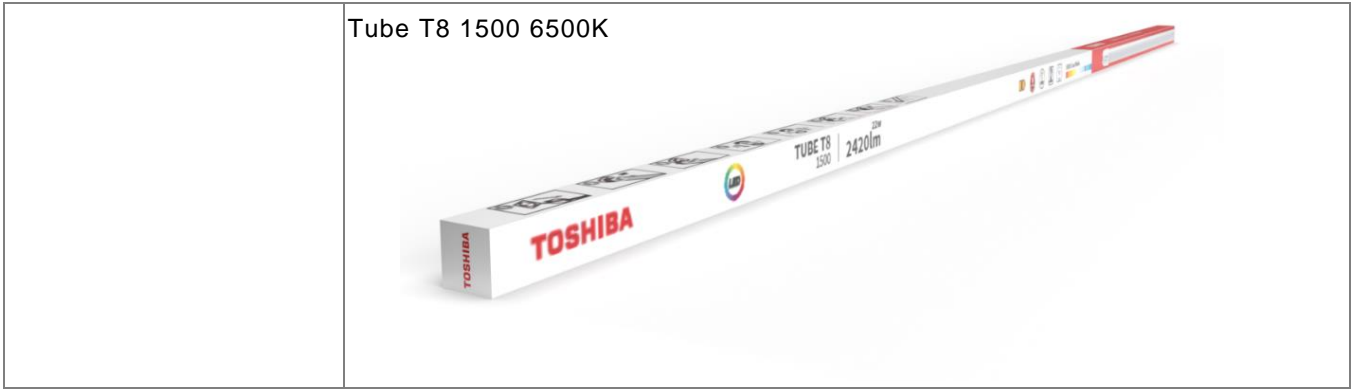
- Not intended for use with emergency light fixtures or exit lights.
- When operating with CCG (Electromagnetic Ballast), if the conventional starter is not removed, the LED tube will start blinking. Switch off immediately, the LED tube can be damaged.

8. Notes

- All characteristics are estimated at room temperature (25°C), free air burning, base up burning position and at rated voltage. In view of the complex manufacturing process for light above for the technical LED parameters are merely statistical values that do not necessarily correspond to the actual technic individual products may vary from the typical values.
- The LED tube emits light only with a limited angle, not like a fluorescent tube with 360 degree output.
- Due to the characteristic light distribution of the LED tube, the current luminaire light characteristic will likely change.

9. Logistic information

Model	Tube T8 1500 3000K	Tube T8 1500 4000K	Tube T8 1500 5000K	Tube T8 1500 6500K
Pieces per pack	1	1	1	1
EAN code on pack	4711112387984	4711112387991	4711112388004	4711112388011
Size of pack	1555x30x30 mm			
Weight per pack (G.W)	0.275 kg ± 10%			
Packs per inner box	N/A	N/A	N/A	N/A
EAN code on inner box	N/A	N/A	N/A	N/A
ITF code on inner box	N/A	N/A	N/A	N/A
Size of inner box	N/A	N/A	N/A	N/A
Weight per inner box(G.W)	N/A	N/A	N/A	N/A
Packs per outer box	25			
EAN code on outer box	N/A	N/A	N/A	N/A
ITF code on outer box	14711112387981	14711112387998	14711112388001	14711112388018
Size of outer box	1540*170*170 mm			
Weight per outer box(G.W)	8.5 kg ± 10%			
Packing Photograph	Tube T8 1500 3000K 			
	Tube T8 1500 4000K 			
	Tube T8 1500 5000K 			



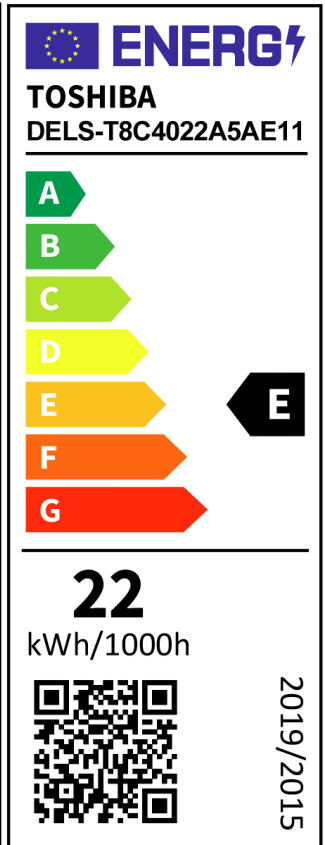
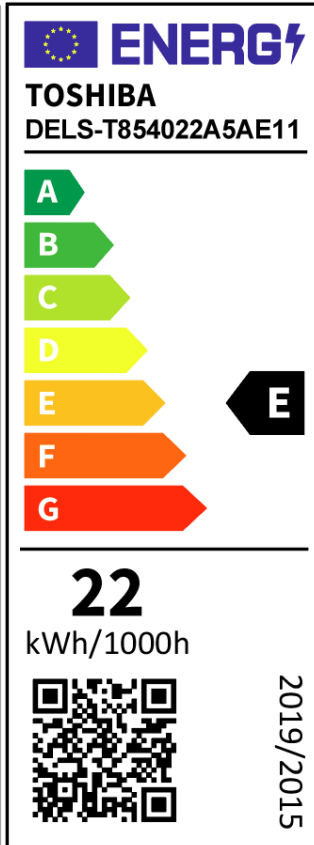
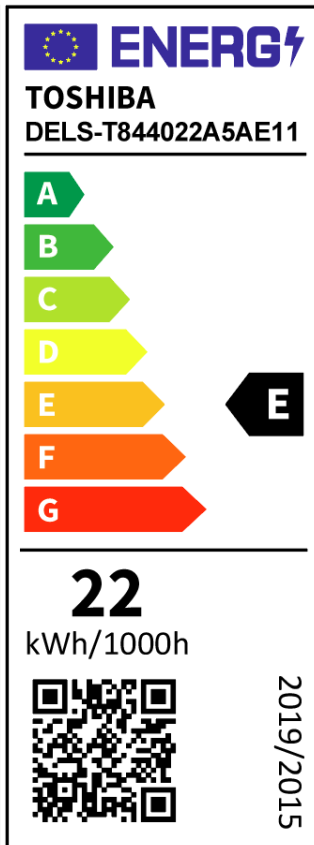
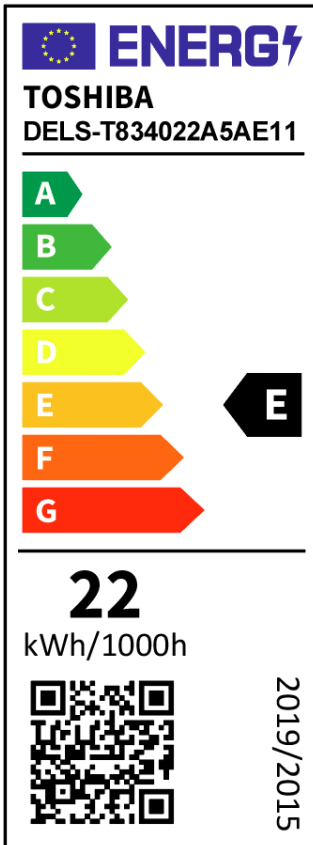
10. ERP Label

3000K

4000K

5000K

6500K



11. Conformity

2014/35/EU; Low Voltage Directive	EN 62776 : 2015 、 EN 62471 : 2008 、 EN62493 : 2015
2014/30/EU; EMC Directive	EN 55015: 2019+A11 、 EN 61000-3-2:2019 、 EN 61000-3-3: 2013+A1 EN 61547:2009
2009/125/EC; ErP Directive	(EU) 2019/2015 、 (EU) 2019/2020 、 (EU) 2021/340 、 (EU) 2021/341
2011/65/EU+(EU)2015/863; RoHS Directive	EN 50581: 2012