



Section Two:

Batten & Luminaire

- i. "TubeSaver" T5 Converter Series
- ii. "TubeSaver" T5 Batten Series
- 1. Integrated Batten
- 2. Industrial Batten
- (1) T5 Single Lamp Series
- (2) T5 Double Lamp Series

- 3. Water Proof Batten
- 4. Grille Lamp
- iii. T8 to T5 Converter Cap



i .“TubeSaver”T5 Converter Series



Features:

- **Impressive energy savings:**
High frequency operation combined with new generation T5 tubes give proven savings of between 50 and 60%.
- **Compatibility with magnetic and electronic ballast:**
The simply “plug&save” T5 converter can save 45-60% energy irrespective of whether the T8/T10 fluorescent tube is equipped with magnetic ballast or electronic ballast.



- **Rapid payback:**
Low initial cost, rapid pay back since converting existing luminaires is a fraction of light fitting replacement.
- **Reduces maintenance by over 50%:**
High frequency ballast's combined with the new generation T5 tube offers 20,000 hour mean average service life, twice that of standard luminaires fitted with conventional tubes.
- **Trouble free installation:**
simply plug in, no disruptive installation, hassle free, avoids down time and the need for highly
- **TubeSaver T5 Converter made with:**
 1. RoHS Compliant Aluminum Housing.
 2. Fuse, Preheat Start and End of Life Protection.
 3. THD \leq 20%; and 3rd Degree Harmonics \leq 10%. Current Crest Factor CCF: 1.4-1.7

E Series:



"TubeSaver" Converter Series	Product Code	Model Number	Product Description
	15101	TST5/14W/E	TubeSaver Energy Saving Series / T5 Converter / 14W
	15102	TST5/21W/E	TubeSaver Energy Saving Series / T5 Converter / 21W
	15103	TST5/28W/E	TubeSaver Energy Saving Series / T5 Converter / 28W
	15104	TST5/35W/E	TubeSaver Energy Saving Series / T5 Converter / 35W
	15113	TST5RF/14W/E	TubeSaver Energy Saving Reflector Series /T5 Converter / 14W
	15114	TST5RF/21W/E	TubeSaver Energy Saving Reflector Series /T5 Converter / 21W
	15115	TST5RF/28W/E	TubeSaver Energy Saving Reflector Series /T5 Converter / 28W
	15116	TST5RF/35W/E	TubeSaver Energy Saving Reflector Series /T5 Converter / 35W

Technical Parameters:

Model Number	Lamp Type	Voltage (V)	Operating Frequency (kHz)	Rated Frequency (kHz)	Power Factor	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficacy (lm/W)	Temperature Range	Length (mm)	Width (mm)	Height (h) (mm)	Average Life (h)
TS/T5/14W/E	1*2ft T5/14W	150-280	50	50	≥0.95	12	1215	101	-10°C~40°C	600	25	38	20000
TS/T5/21W/E	1*3ft T5/21W	150-280	50	50	≥0.95	17	1890	111	-10°C~40°C	900	25	38	20000
TS/T5/28W/E	1*4ft T5/28W	150-280	50	50	≥0.95	24	2610	109	-10°C~40°C	1200	25	38	20000
TS/T5/35W/E	1*5ft T5/35W	150-280	50	50	≥0.95	30	3285	110	-10°C~40°C	1500	25	38	20000
TS/T5/RF/14W/E	1*2ft T5/14W	150-280	50	50	≥0.95	12	1337	111	-10°C~40°C	600	45	38	20000
TS/T5/RF/21W/E	1*3ft T5/21W	150-280	50	50	≥0.95	17	2079	122	-10°C~40°C	900	45	38	20000
TS/T5/RF/28W/E	1*4ft T5/28W	150-280	50	50	≥0.95	24	2871	120	-10°C~40°C	1200	45	38	20000
TS/T5/RF/35W/E	1*5ft T5/35W	150-280	50	50	≥0.95	30	3614	120	-10°C~40°C	1500	45	38	20000



EM Series:



"TubeSaver" Converter Series	Product Code	Model Number	Product Description
	15125	TST5/14W/EM	TubeSaver Battery Light Series /T5 Converter / 14W
	15126	TST5/21W/EM	TubeSaver Battery Light Series /T5 Converter / 21W
	15127	TST5/28W/EM	TubeSaver Battery Light Series /T5 Converter / 28W
	15128	TST5/35W/EM	TubeSaver Battery Light Series /T5 Converter / 35W
	15131	TST5RF/14W/EM	TubeSaver Battery Light Reflector Series /T5 Converter / 14W
	15132	TST5RF/21W/EM	TubeSaver Battery Light Reflector Series /T5 Converter / 21W
	15133	TST5RF/28W/EM	TubeSaver Battery Light Reflector Series /T5 Converter / 28W
	15134	TST5RF/35W/EM	TubeSaver Battery Light Reflector Series /T5 Converter / 35W

Technical Parameters:

Model Number	Lamp Type	Operating		Rated Frequency (kHz)	Power Factor	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficacy (lm/W)	Temperature Range	Length (mm)	Width (mm)	Height (mm)	Average Life (h)
		Voltage (V)	Frequency (kHz)										
TS/T5/14W/EM	1*2ft T5/14W	150-280	50	50	0.95	14	1350	96	-10°C~40°C	600	25	38	20000
TS/T5/21W/EM	1*3ft T5/21W	150-280	50	50	0.95	21	2100	100	-10°C~40°C	900	25	38	20000
TS/T5/28W/EM	1*4ft T5/28W	150-280	50	50	0.95	28	2900	104	-10°C~40°C	1200	25	38	20000
TS/T5/35W/EM	1*5ft T5/35W	150-280	50	50	0.95	35	3650	104	-10°C~40°C	1500	25	38	20000
TS/T5/RF/14W/EM	1*2ft T5/14W	150-280	50	50	0.95	14	1485	106	-10°C~40°C	600	45	38	20000
TS/T5/RF/21W/EM	1*3ft T5/21W	150-280	50	50	0.95	21	2310	110	-10°C~40°C	900	45	38	20000
TS/T5/RF/28W/EM	1*4ft T5/28W	150-280	50	50	0.95	28	3190	114	-10°C~40°C	1200	45	38	20000
TS/T5/RF/35W/EM	1*5ft T5/35W	150-280	50	50	0.95	35	4015	115	-10°C~40°C	1500	45	38	20000

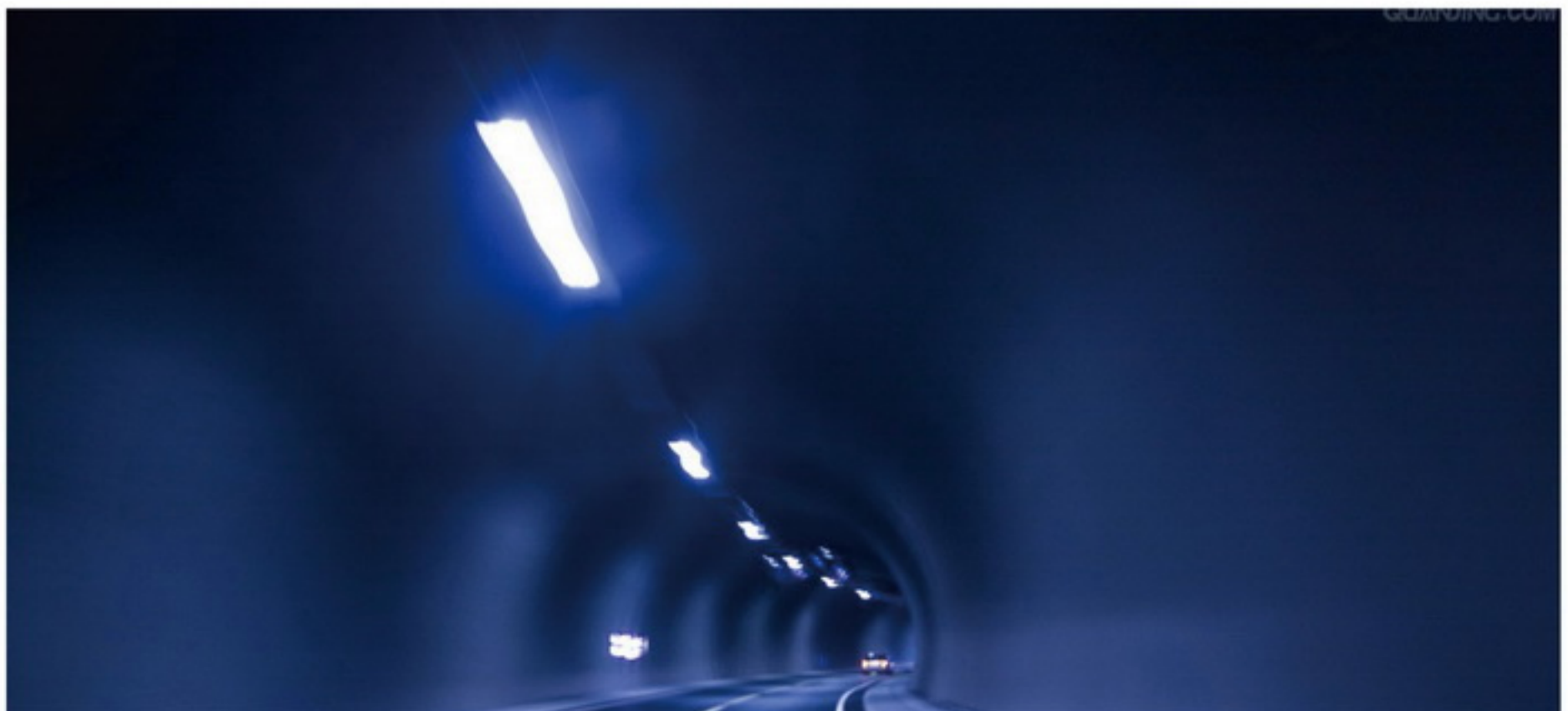


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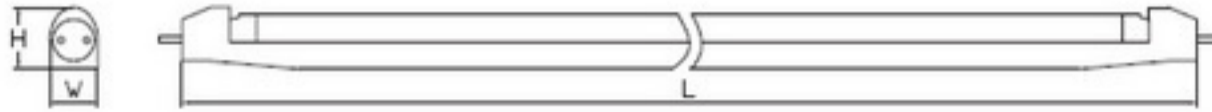
"TubeSaver" Converter Series	Product Code	Model Number	Product Description
	15107	TST5/14W/S	TubeSaver Standard Series / T5 Converter / 14W
	15108	TST5/21W/S	TubeSaver Standard Series / T5 Converter / 21W
	15109	TST5/28W/S	TubeSaver Standard Series / T5 Converter / 28W
	15110	TST5/35W/S	TubeSaver Standard Series / T5 Converter / 35W
	15119	TST5RF/14W/S	TubeSaver Standard Reflector Series / T5 Converter / 14W
	15120	TST5RF/21W/S	TubeSaver Standard Reflector Series / T5 Converter / 21W
	15121	TST5RF/28W/S	TubeSaver Standard Reflector Series / T5 Converter / 28W
	15122	TST5RF/35W/S	TubeSaver Standard Reflector Series / T5 Converter / 35W

Technical Parameters:

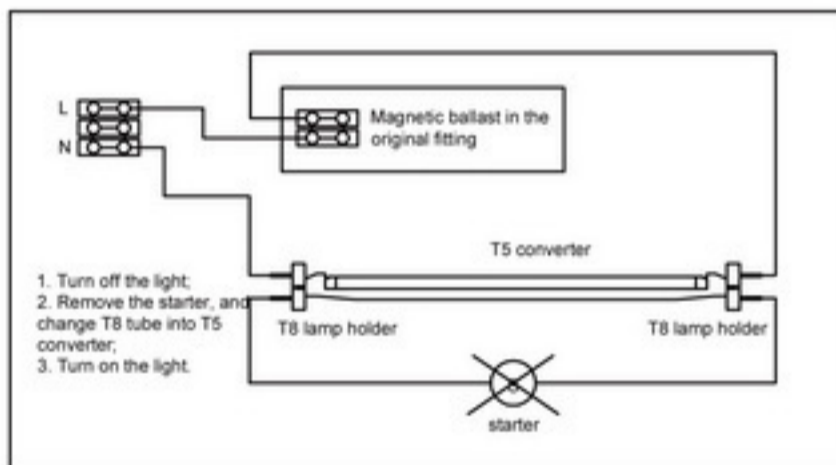
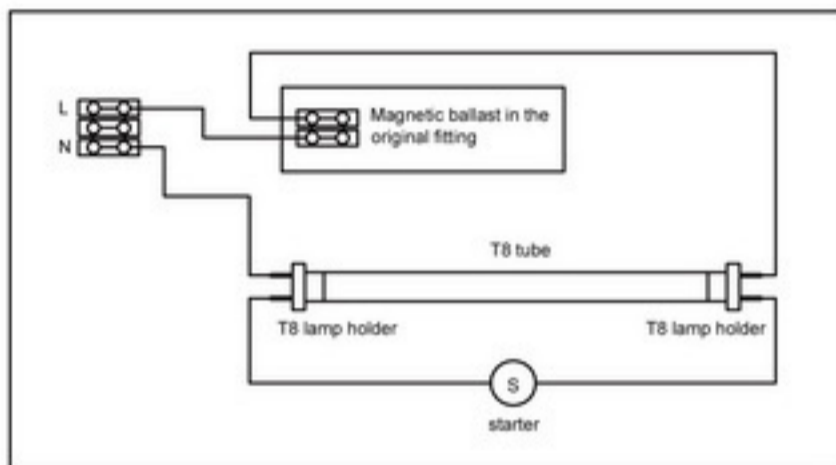
Model Number	Lamp Type	Voltage (V)	Operating	Rated	Power Factor	Power Consumption (W)	Luminous Flux (lm)	Luminous Efficacy (lm/W)	Luminous Temperature Range	Length (mm)	Width (mm)	Height (mm)	Average Life (h)
			Frequency (kHz)	Frequency (kHz)									
TS/T5/14W/S	1*2ft T5/14W	150-280	50	50	≥0.95	14	1350	96	-10°C~40°C	600	25	38	20000
TS/T5/21W/S	1*3ft T5/21W	150-280	50	50	≥0.95	21	2100	100	-10°C~40°C	900	25	38	20000
TS/T5/28W/S	1*4ft T5/28W	150-280	50	50	≥0.95	28	2900	104	-10°C~40°C	1200	25	38	20000
TS/T5/35W/S	1*5ft T5/35W	150-280	50	50	≥0.95	35	3650	104	-10°C~40°C	1500	25	38	20000
TS/T5/RF/14W/S	1*2ft T5/14W	150-280	50	50	≥0.95	14	1485	106	-10°C~40°C	600	45	38	20000
TS/T5/RF/21W/S	1*3ft T5/21W	150-280	50	50	≥0.95	21	2310	110	-10°C~40°C	900	45	38	20000
TS/T5/RF/28W/S	1*4ft T5/28W	150-280	50	50	≥0.95	28	3190	114	-10°C~40°C	1200	45	38	20000
TS/T5/RF/35W/S	1*5ft T5/35W	150-280	50	50	≥0.95	35	4015	115	-10°C~40°C	1500	45	38	20000



Dimension Diagram:



Connection Diagram:



standard: EN 61347-2-3
EN 61347-1
EN 61195
EN 55015
EN 61547
EN 61000-3-2
EN 61000-3-3

ii .“TubeSaver”T5 Batten Series

Features:

Attractive appearance, innovative design.

0.5mm white aluminum housing, high rigidity, invulnerable to bending deformation.

Anti-combustion PBT plastic cap, invulnerable to high temperature, aging & deformation.

Integrated with T5 fluorescent lamp, which is of high luminous efficacy, efficacy up to 80 lm/W, and color rendering index over 80.

High performance electronic ballast installed. Efficiency up to 98% or above; saving rate: 20%-30%.



Low self-power consumption. The ideal solution for energy saving in fluorescent lamp.



Application:

factory, school, restaurant, hospital, warehouse, parking lot, supermarket, etc.

1. "TubeSaver" Integrated Batten

"TubeSaver" Integrated Batten	Product Code	Model Number	Product Description
	7101	TST5B/14W	TubeSaver T5 Integrated Batten / 14W
	7102	TST5B/21W	TubeSaver T5 Integrated Batten / 21W
	7103	TST5B/28W	TubeSaver T5 Integrated Batten / 28W
	7104	TST5B/35W	TubeSaver T5 Integrated Batten / 35W
	7105	TST5BPC/14W	TubeSaver T5 Integrated Batten with PC protection cover / 14W
	7106	TST5BPC/21W	TubeSaver T5 Integrated Batten with PC protection cover / 21W
	7107	TST5BPC/28W	TubeSaver T5 Integrated Batten with PC protection cover / 28W
	7108	TST5BPC/35W	TubeSaver T5 Integrated Batten with PC protection cover / 35W

Technical Parameters:

Model Number	Lamp Type	Temperature Range	Length (mm)	Width (mm)	Height (mm)	Average Life (h)
TST5B/14W	1*2ft T5(14W)	5°C~50°C	610	25	40	20000
TST5B/21W	1*3ft T5(21W)	5°C~50°C	910	25	40	20000
TST5B/28W	1*4ft T5(28W)	5°C~50°C	1220	25	40	20000
TST5B/35W	1*5ft T5(35W)	5°C~50°C	1520	25	40	20000
TST5BPC/14W	1*2ft T5(14W)	5°C~50°C	610	38	50	20000
TST5BPC/21W	1*3ft T5(21W)	5°C~50°C	910	38	50	20000
TST5BPC/28W	1*4ft T5(28W)	5°C~50°C	1220	38	50	20000
TST5BPC/35W	1*5ft T5(35W)	5°C~50°C	1520	38	50	20000

Dimension Diagram:




Standard: IEC 60598-2-1:1979+A1:1987
CISPR15:2005+A1:2006

IEC 60598-1:2003
IEC 61000-3-2:2001

2. Industrial Batten


(1) T5 Single Lamp Series

Single Lamp Series	Product Code	Model Number	Product Description
	7109	TST5SL/14W	TubeSaver T5 Single Lamp Series / 14W
	7110	TST5SL/21W	TubeSaver T5 Single Lamp Series / 21W
	7111	TST5SL/28W	TubeSaver T5 Single Lamp Series / 28W
	7133	TST5SL/35W	TubeSaver T5 Single Lamp Series / 35W

Technical Parameters:

Model Number	Lamp Type	Temperature Range	Length (mm)	Width (mm)	Height (mm)	Average Life (h)
TST5SL/14W	1*2ft T5(14W)	-10°C~ 40°C	600	25	38	20000
TST5SL/21W	1*3ft T5(21W)	-10°C~ 40°C	900	25	38	20000
TST5SL/28W	1*4ft T5(28W)	-10°C~ 40°C	1200	25	38	20000
TST5SL/35W	1*5ft T5(35W)	-10°C~ 40°C	1500	25	38	20000

(2) T5 Double Lamp Series

Double Lamp Series	Product Code	Model Number	Product Description
	7115	TST5DL/14W	TubeSaver T5 Double Lamp Series / 14W
	7116	TST5DL/21W	TubeSaver T5 Double Lamp Series / 21W
	7117	TST5DL/28W	TubeSaver T5 Double Lamp Series / 28W
	7134	TST5DL/35W	TubeSaver T5 Double Lamp Series / 35W

Technical Parameters:

Model Number	Lamp Type	Temperature Range	Length (mm)	Width (mm)	Height (mm)	Average Life (h)
TST5DL/14W	2*2ft T5(14W)	-10°C~ 40°C	570	70	57	20000
TST5DL/21W	2*3ft T5(21W)	-10°C~ 40°C	870	70	57	20000
TST5DL/28W	2*4ft T5(28W)	-10°C~ 40°C	1170	70	57	20000
TST5DL/35W	2*5ft T5(35W)	-10°C~ 40°C	1470	70	57	20000

Dimension Diagram:

T5 Single Lamp Series



T5 Double Lamp Series





2

Standard: IEC 60598-2-1:1979+A1:1987
CISPR15:2005+A1:2006

IEC 60598-1:2003
IEC 61000-3-2:2001



3. Water Proof Batten

T5 Water Proof Batten	Product Code	Model Number	Product Description
	22117	IP / T5 / 14W / SL	1X14W T5 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22125	IP / T5 / 14W /SL / EM	1X18W T8 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22119	IP / T5 / 28W / SL	1X28W T5 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22129	IP / T5 / 28W /SL / EM	1X36W T8 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22120	IP / T5 / 35W / SL	1X35W T5 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22131	IP / T5 / 35W / SL / EM	1X58W T8 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22121	IP / T5 / 14W / DL	2X14W T5 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22126	IP / T5 / 14W / DL / EM	2X18W T8 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22123	IP / T5 / 28W / DL	2X28W T5 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22130	IP / T5 / 28W / DL / EM	2X36W T8 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22124	IP / T5 / 35W / DL	2X35W T5 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)
	22132	IP / T5 / 35W / DL / EM	2X58W T8 Dust-proof and Water-proof Batten (ballast excluded) (ABS+PC)

Specifications:

Model Number	Lamp Type	Length (mm)	Width (mm)	Height (mm)	IP Class
IP / T5 / 14W / SL	1*2ft T5/14W	615	58	80	IP65
IP / T5 / 14W /SL / EM	1*2ft T5/14W	615	58	80	IP65
IP / T5 / 28W / SL	1*4ft T5/28W	1215	58	80	IP65
IP / T5 / 28W /SL / EM	1*4ft T5/28W	1215	58	80	IP65
IP / T5 / 35W / SL	1*5ft T5/35W	1515	58	80	IP65
IP / T5 / 35W / SL / EM	1*5ft T5/35W	1515	58	80	IP65
IP / T5 / 14W / DL	2*2ft T5/14W	615	100	85	IP65
IP / T5 / 14W / DL / EM	2*2ft T5/14W	615	100	85	IP65
IP / T5 / 28W / DL	2*4ft T5/28W	1215	100	85	IP65
IP / T5 / 28W / DL / EM	2*4ft T5/28W	1215	100	85	IP65
IP / T5 / 35W / DL	2*5ft T5/35W	1515	100	85	IP65
IP / T5 / 35W / DL / EM	2*5ft T5/35W	1515	100	85	IP65

Dimension Diagram:




Standard: IEC 60598-2-1:1979+A1:1987
CISPR15:2005+A1:2006

IEC 60598-1:2003
IEC 61000-3-2:2001

2



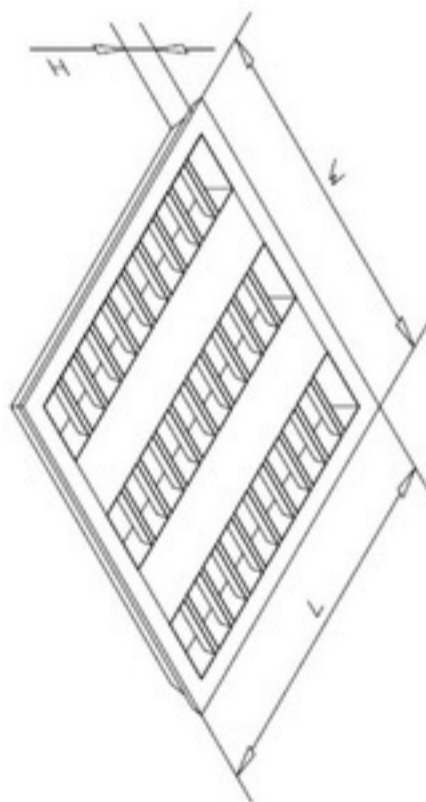
4. Grille Lamp

T5 Grille Lamp	Product Code	Model Number	Product Description
	24110	GL / T5 / 2 / 14W / UK	T5 2X14W Grille Lamp
	24114	GL / T5 / 3 / 14W / UK	T5 3X14W Grille Lamp
	24112	GL / T5 / 2 / 28W / UK	T5 2X28W Grille Lamp
	24116	GL / T5 / 3 / 28W / UK	T5 3X28W Grille Lamp

Technical Parameters:

Model Number	Lamp Type	Temperature Range	Length (mm)	Width (mm)	Height (mm)	Average Life (h)
GL / T5 / 2 / 14W / UK	2*2ft T5(14W)	5°C~50°C	598	298	50	20000
GL / T5 / 3 / 14W / UK	3*2ft T5(14W)	5°C~50°C	598	598	50	20000
GL / T5 / 2 / 28W / UK	2*4ft T5(28W)	5°C~50°C	1198	298	50	20000
GL / T5 / 3 / 28W / UK	3*4ft T5(28W)	5°C~50°C	1198	598	50	20000

Dimension Diagram:



Standard: IEC 60598-2-1:1979+A1:1987
 IEC 60598-1:2003
 CISPR15:2005+A1:2006
 IEC 61000-3-2:2001

iii. T8 to T5 Converter Cap

T8 to T5 Converter Cap	Product Code	Model Number	Product Description
	28101	TST5/14W/C	T8 to T5 Converter Cap 14W
	28102	TST5/21W/C	T8 to T5 Converter Cap 21W
	28103	TST5/28W/C	T8 to T5 Converter Cap 28W
	28104	TST5/35W/C	T8 to T5 Converter Cap 35W

Features:

- * TubeSaver T5 Converter Cap is very flexible and convenient, not subject to height restrictions – suitable for lighting fixture in varying degrees or height, without worrying about space limitations.
- * High energy efficiency, meet the needs of the public – assorting advanced high-frequency T5 ballasts, fluorescent tubes is instant lit up, energy efficiency up to 60%.
- * Longer lifespan – T5 tube's lifespan is 20,000 hours, twice that of T8 tube.
- * Low cost, no need to replace the original fixture, and rapid payback.
- * Reduced maintenance cost, and easy to maintain.

Technical Parameters:

Model Number	Lamp Type	Diameter (mm)	Length (mm)	Weight (g)
TST5/14W/C	1*2ft T5 (14w)	26	2*36	23
TST5/21W/C	1*3ft T5 (21w)	26	1*36 + 1*41	24.5
TST5/28W/C	1*4ft T5 (28w)	26	2*41	26
TST5/35W/C	1*5ft T5 (35w)	26	2*41	26

Standard: IEC 60400

