



TS21 TS21A TS21B TS21H TS21K



APPLICATIONS

- Tunnel Lighting
(Tunnel, underpass, corridor....)

SPECIFICATION

Input Voltage:	100 ~ 277Vac
Input Frequency:	50 / 60Hz
Power Factor:	0.90
Surge Protection Level:	10kV line-earth
Working Environment:	-40°C~ +50°C, 10% ~90% RH
CCT:	3000K, 4000K, 5000K, 5700K
CRI:	≥70
Housing:	Die-cast Aluminium
IP Rating of LED Light Engine:	IP68
IP Rating of Luminaire:	IP67 *IP66 with tempered glass
Warranty:	5 Years Limited

FEATURES

Construction

- Die-cast aluminum housing.
- Unique patented IP68 LED light engines.
- Whole structure heating dissipation design with best thermal conduction and radiation.
- IP67 rated luminaire.
- Tempered glass cover available as optional choice
- Optional tempered glass cover.

Distribution

- Ergonomic and dedicated lighting distributions are available for various roadway applications.

Mounting






- L-shaped brackets adjustable in $\pm 60^\circ$ by step of 10° .
- L-shaped brackets adjustable in 360° , step-less.
- Optional U-shaped mounting bracket.

PHOTOS

TS21 TS21A TS21B TS21H TS21K



FINISHING COLORS

	Gray		Black	
	White		Dark Gray	

ORDERING INFORMATION

Luminaire Type		Module Qty.		System Power		LED Package		Cable Standard		LED Qty per Module	
TS	Tunnel light	N2	2 engines	80	80W	C	3030	A	CCC+VDE	45	45pcs
		N3	3 engines	100	100W			C	PSE	63	63pcs
21C	21C series	N4	4 engines	120	120W			H	UL		
21D	21D series							X	Others		
21E	21E series			240	240w						
Lens Code		CRI & CCT				Brand of LEDs		Driver Brand		Housing Color	
2340	Type I Short		7030	Ra≥70,	CCT 3000K	LU	LUMILEDS	SS	SOSEN	BK	Black
1392	Tunnel lighting		7040	Ra≥70,	CCT 4000K	XX	OTHER	IN	INVENTRONICS	WH	White
			7050	Ra≥70,	CCT 5000K			MO	MOSO	BU	Blue
			7057	Ra≥70,	CCT 5700K			XX	OTHER	GY	Gray

PERFORMANCE

Model	Power (W)	LED Qty (pcs)	3030 LEDs	
			Efficacy (lm/W)	Flux (lm)
TS21C-N2	80	45*2	127	10,160
	100	63*2	135	13,500
	120	63*2	127	15,240
TS21D-N3	120	63*3	140	16800
	150	63*3	135	20250
	180	63*3	127	22860
TS21E-N4	180	63*4	137	24660
	200	63*4	135	27000
	240	63*4	127	30480

Notes 1: Above values are calculated based on the product with CRI≥7 and CCT over 3000K, values of CCT 3000K are 5% lower than above values. Notes 2: Values shown are subject to ±5%~±8% tolerance.

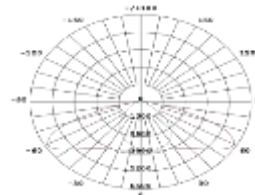
Notes 3: With optional tempered glass cover, efficacy drops by around 8%.

DIMENSIONS

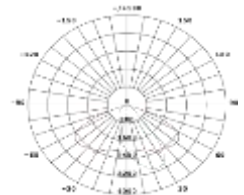
Model	L (mm)	W (mm)	H (mm)	N.W.* (kg)
TS21C	275	430	230	3.1
TS21D	375	430	230	5.3
TS21E	450	430	270	6.1

Notes: Typical values above, tolerance: dimensions ±5mm; N.W. ±5%

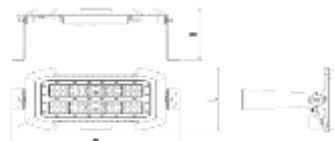
DISTRIBUTIONS



T1S2340



TL1392



ORDERING INFORMATION

Example: TS21A-N1-30-AA-12-1616-7040-LU-SS-BK

Luminary Type		Module Qty.	System Power		LED Package		Cable Standard	Qty of LEDs	
TS	Tunnel light	N1 1 module	20	20W	A	3535	A CCC+VDE	12	12pcs
21A	21A series		30	30W	C	3030	C PSE	20	20pcs
			40	40W			H UL	30	30pcs
							X Other	36*	36pcs
Lens Code		CRI & CCT			Brand of LEDs		Driver Brand	Housing Color	
1616	Tunnel lighting	7030	Ra≥70,	CCT 3000K	LU	LUMILEDS	SS SOSEN	BK	Black
1415	Type II Short	7040	Ra≥70,	CCT 4000K	SS	Samsung	XX OTHER	WH	White
5311	Lambertian Type	7050	Ra≥70,	CCT 5000K				BU	Blue
1617	Tunnel lighting	7057	Ra≥70,	CCT 5700K	XX	OTHER		GY	Gray

Notes: 36pcs-LEDs solution is only available for lens 1617.

PERFORMANCE

Model	Power (W)	LED Qty (pcs)	Module M6A-VA Efficacy (lm/W)	Flux (lm)	LED Qty (pcs)	Module M6A-VC Efficacy (lm/W)	Flux (lm)
TS21A	20	/	/	/	20	117	2340
	30	12	112	3360	30	117	3510
	40	12	107	4280	36	117	4680

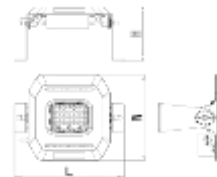
Notes 1: Above values are calculated based on the product with CRI≥7 and CCT over 3000K, values of CCT 3000K are 5% lower than above values.

Notes 2: Values shown are subject to ±5%~±8% tolerance.

Notes 3: With optional tempered glass cover, efficacy drops by around 8%.

DIMENSIONS

Model	L (mm)	W (mm)	H (mm)	N.W.* (kg)
TS21A	260	240	150	1.3

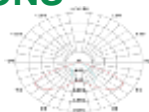


DISTRIBUTIONS

Module

M6A-

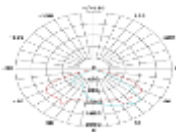
VA



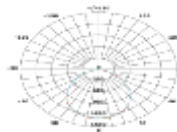
TL1616

Module

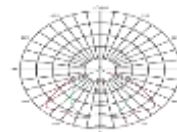
M6A-VC



T2S1415



LBN5311



TL1617

ORDERING INFORMATION

Example: TS21B-N1-30-1393-7040-LU-SS-BK

Luminary Type	Module Qty.	System Power	LED Package	Cable Standard	Qty of LEDs
TS Tunnel light	N1 1 module	30 30W 40 40W 50 50W 60 60W	C 3030	A CCC+VDE C PSE H UL X Other	30 30pcs 40 40pcs 50 50pcs 60 60pcs
21B 21B series					
Lens Code	CRI & CCT		Brand of LEDs	Driver Brand	Housing Color
1393 Tunnel lighting	7030	Ra≥70, CCT 3000K	LU LUMILEDS	SS SOSEN	BK Black
2213 Type I Short	7040	Ra≥70, CCT 4000K	XX OTHER	XX OTHER	WH White
2214 Lambertian Type	7050	Ra≥70, CCT 5000K			BU Blue
	7057	Ra≥70, CCT 5700K			GY Gray

PERFORMANCE

Model	Power (W)	LED Qty (pcs)	Efficacy (lm/W)	Flux (lm)	CRI	CCT (K)
TS21B	30	30	115	3450	≥70	3000, 4000, 5000, 5700
	40	40	115	4600		
	50	50	115	5750		
	60	64	115	6900		

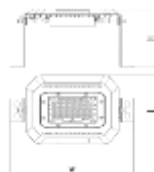
Notes 1: Above values are calculated based on the product with CRI≥7 and CCT over 3000K, values of CCT 3000K are 5% lower than above values.

Notes 2: Values shown are subject to ±5%~±8% tolerance.

Notes 3: With optional tempered glass cover, efficacy drops by around 8%.

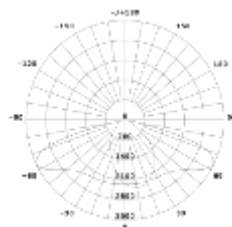
DIMENSIONS

Model	L (mm)	W (mm)	H (mm)	N.W.* (kg)
TS21B	265	260	220	2.5

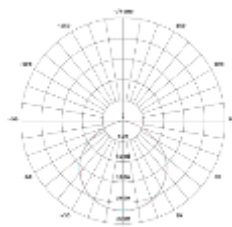


Notes: Typical values above. Tolerance of dimensions: ±5mm; of N.W.: ±5%.

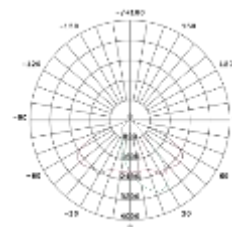
DISTRIBUTIONS



T1S2213



LBN2214



TL1393

ORDERING INFORMATION

Example: TS21K-N1-60-CA-63-1390-7040-LU-MO-GY

Luminary Type	Module Qty.	System Power	LED Package	Cable Standard	Qty of LEDs
Tunnel light	N1 1 module	20 20W	C 3030	A CCC+VDE	20 20pcs
TS		30 30W		C PSE	35 35pcs
21H 21H series		40 40W		H UL	45 45pcs
21K 21K series		50 50W		X Other	63 63pcs
		60 60W			
Lens Code	CRI & CCT		Brand of LEDs	Driver Brand	Housing Color
Type I Short	7030	Ra≥70, CCT 3000K	LU LUMILEDS	IN INVENTRONICS	BK Black
2519 Type II	7040	Ra≥70, CCT 4000K	S SANAN N XX OTHER	MO MOSO	WH White
2321 Short	7050	Ra≥70, CCT 5000K CCT		SS SOSEN	B Blu
5390 90	7057	Ra≥70, 5700K		XX OTHER	U e
1310 degree					G Gra
1390 Lambertian type Tunnel lighting					Y y

PERFORMANCE

Model	Power (W)	LED Qty (pcs)	Efficacy (lm/W)	Flux (lm)
TS21H	20	20	117	2340
	30	35	120	3600
	40	45	122	4880
TS21K	40	63	135	5400
	50	63	130	6500
	60	63	122	7320

Notes 1: Above values are calculated based on the product with CRI≥7 and CCT over 3000K, values of CCT 3000K are 5% lower than above values.

Notes 2: Values shown are subject to ±5%~±8% tolerance.

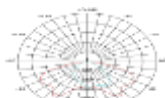
DIMENSIONS



Model	L (mm)	W (mm)	H (mm)	N.W.* (kg)
TS21H	320	55	135	1.4
TS21K	320	75	135	1.6

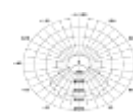
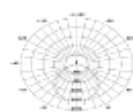
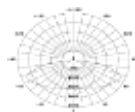
DISTRIBUTIONS

TS21H



T1S2519

TS21K



T2S2321

90D5390

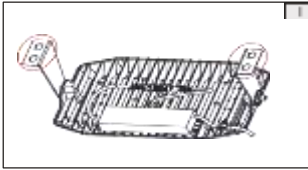
LBN1310

TL1390

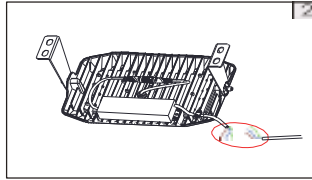
INSTALLATION AND MAINTENANCE

INSTALLATION

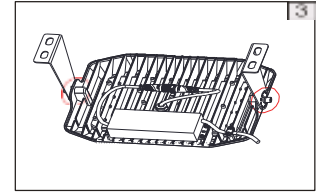
TS21&TS21B



1. Fixate the luminaire onto the mounting surface with screws.
(recommend M10 screws)

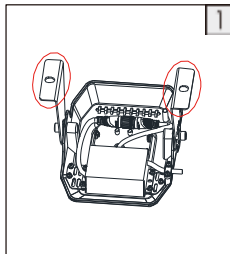


2. Connect the wires to AC input. Make sure it grounded sufficiently.

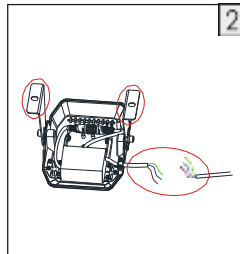


3. Loosen the M10 screws on brackets to adjust to a proper angle.

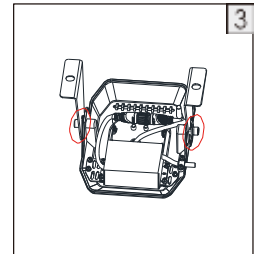
TS21A



1. Mount the fixture with screws at the bracket.
(Mounting screws are not provided in package.
Screw hole diameter: Ø11mm.)

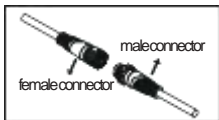


2. Connect the wires to AC input. Make sure it grounded sufficiently.



3. Loosen the screws on brackets to adjust to a proper angle.

CABLE CONNECTORS

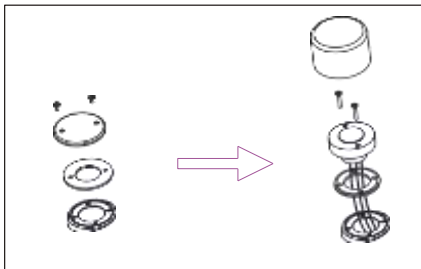


1. Connect the male and female connectors by aligning the indicative arrow on them.



2. Hold the nut on one terminal still, meanwhile, rotating clockwise till the one on the other terminals is tightened up. Otherwise the waterproof performance might be affected.

INSTALLATION OF NEMA RECEPTACLE AND PHOTOCELL



1. Undo the two screws to remove the round cover and its white sealing washer.
2. Thread the wires of the receptacle through the black sealing washer into the electrical compartment of luminaire. Keep the screw holes in alignment among the receptacle, sealing ring and luminaire, and fixate the receptacle with two M4x25 cross recessed countersunk head screws.
3. Plug in and fasten the photocell. Connect the wires in the electrical compartment.

WIRING

Power Supply End	Earth wire	Neutral wire	Live wire
Fixture End	Yellow-green lead	Blue lead	Brown lead
	Green lead	White lead	Black lead

CAUTION

- a** Disconnect or turn off power before installation, maintenance and wiring.
- b** Cable connection must be insulated and waterproof.
- c** For luminaires with glass cover: the cover is made of tempered glass which shatters into small pieces without sharp edges when it breaks. Application condition: - 30°C~100°C; maximum temperature rise $\Delta t 60^{\circ}\text{C}$.
- d** The light source of this luminaire is not replaceable. When the light source's lifetime comes to an end, it is the whole luminaire that should be replaced.

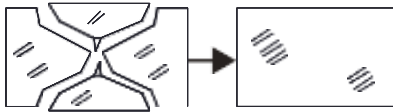
Warning: Danger! Electric shock risk!

(via IEC 60417-6042 (2011-11))

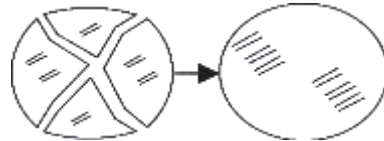


For luminaires with glass cover: The broken cover should be replaced.

Rectangle



Round



The luminaire shall be installed by a qualified electrician and wired in accordance with the latest IEE electrical regulations or the national requirements.



This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling

REMARKS

- 1.This luminaire uses permanent connection on power supply with flexible cable and wires (60245 IEC57). Sufficient length of cable is reserved for connection to AC power. Protection over the connection joint and elimination of tensile force there should be ensured.
- 2.This luminaire uses type Y attachment: method of attachment of the cable or cord such that any replacement can only be made by the manufacturer, his service agent or similarly qualified person.
- 3.Wiring: the connection to AC power should be operated on terminal blocks in a wiring box with a degree of protection at least equivalent to the luminaire, and there should be devices to fixate wires.
- 4.The luminaire can be mounted onto ordinary combustible surfaces.