

Constant Current Dimmable Driver

Model: SC42W300-1050CG-6X DALI



Model	Output Current	Input Current	Input Power	Output Power Range	PF	Efficiency	Output Voltage	No load Voltage
SC42W300-1050CG-6W DALI/ SC42W300-1050CG-6B DALI/ SC42W300-1050CG-6G DALI	300mA	0.07A	15.4W	3.00-12.60W	0.86	85%	10-42V	59V
	350mA	0.08A	17.9W	3.50-14.70W	0.87	86%	10-42V	59V
	400mA	0.09A	20.5W	4.00-16.80W	0.88	87%	10-42V	59V
	450mA	0.10A	22.8W	4.50-18.90W	0.89	87%	10-42V	59V
	500mA	0.11A	25.3W	5.00-21.00W	0.90	87%	10-42V	59V
	550mA	0.12A	27.8W	5.50-23.10W	0.91	87%	10-42V	59V
	600mA	0.14A	30.4W	6.00-25.20W	0.92	88%	10-42V	59V
	650mA	0.15A	32.5W	6.50-27.30W	0.93	88%	10-42V	59V
	700mA	0.16A	35W	7.00-29.40W	0.94	88%	10-42V	59V
	750mA	0.17A	37.5W	7.50-31.50W	0.94	88%	10-42V	59V
	800mA	0.18A	40W	8.00-33.60W	0.95	88%	10-42V	59V
	850mA	0.18A	40W	8.50-34.00W	0.95	88%	10-40V	59V
	900mA	0.2A	42.4W	9.00-36.00W	0.96	88%	10-40V	59V
	950mA	0.2A	44.7W	9.50-38.00W	0.96	88%	10-40V	59V
	1000mA	0.23A	46.5W	10.00-40.00W	0.97	88%	10-40V	59V
	1050mA	0.25A	48.8W	10.50-42.00W	0.97	88%	10-40V	59V

* Test result @230V, 50Hz, Full Load.

1. Parameters

Category	Item	Technical Norm
Features	Output Type	Constant Current
	Dimming Type	DALI 2
	Output Features	Isolation
	IP Grade	IP20
	Insulation Class	Class II
Input	Rated Input Voltage	220-240VAC
	Range of Input Voltage	198-264VAC or 180-280VDC
	Frequency	50/60Hz
	Input Current	≤0.25A (230VAC, full load)
	Input Power	≤48.8W (230VAC, full load)
	Power Factor	≥0.97 (230VAC, full load)

	THD	≤20% (230VAC, full load)
	Standby power(dim to off)	≤0.5W @230VAC
Output	Output Voltage Range	10-42VDC@300-800mA
		10-40VDC@850-1050mA
	No Load Voltage	59VDC Max.
	Output Current	300mA -1050mA (Max. output)
	Max. Output Power	42W
	Efficiency	≥88% (230VAC, full load)
	Current Ripple(< 120 Hz)	±5% (Imax-Imin)/(Imax+Imin)
	PstLM	≤1
	SVM	≤0.4
	Current Accuracy	±5%
	Started Delay Time	≤1S(230VAC, full load)
Control Method	Secondary PUSH dimming	Secondary PUSH dimming (Max. lead wire length : 20m,same port of DALI)
	PUSH-button	Max parallel connections qty for Push-dim 15
	DALI function	DALI dimming (Max. lead wire length: 300m)logarithm or linear dimming curve selectable251,252,253,CLO
	Dimming range	DALI dimming: 1%-100% , Dim to off .
Protection	Short Circuit Protection	Auto Recovery
	Overload Protection	Auto Recovery
	No-load Protection	Auto Recovery
	Insulation voltage	3000V 5mA 60S between P-S
	Insulation resistance	>100M ohm @ 500VDC
	Leakage current	< 250µA, I/P to O/P or I/P to PE @230V input
Environment	Ta/Operation Temperature	-25....+35°C
	Ts/Storage Temperature	-35....+85°C
	Tc/Enclosure Temperature	85°C
	Humidity	10%....90%RH
	Atmosphere	86-108KPa
Construction	Connection Method	Push-in Terminal
	Installation	Independent
	SEC Wire preparation	0.5-1.5 ^{mm}
	Dimension	238*31*45mm (L*W*H)
Standards	Certification	CE ENEC SAA UKCA CB
	Safety Standards	EN 61347-1:2015/A1:2021 EN 61347-2-13:2014/A1:2017 EN IEC 62384:2020 EN 62493:2015 AS61347.2.13:2018 AS/NZS61347.1:2016 Inc A1 BS EN 61347-1:2015/A1:2021 BS EN 61347-2-13:2014/A1:2017 BS EN 62493:2015 BS EN IEC 62384:2020
	EMC Standards	EN IEC 55015:2019

		EN IEC 55015:2019/A11:2020 EN IEC 61000-3-2:2019/A1:2021 EN 61000-3-3:2013/A2:2021 EN 61547:2009
	Performance	EN62384:2020
	Surge	L-N/2KV
Others	RoHS	complied to 2011/65/EU
	Life Time	50000h @Ta/ Tc
	Warranty	5years , F.R. < 10000ppm
	Noise	≤ 24dB @Background noise ≤18dB , Interval≥15cm

Remark:

- 1.All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature.
- 2.LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.
- 3.During the PUSH DIM test, the number of parallel connections must be less than 15PCS

2. Output Current Setting

Output Current	1	2	3	4
300mA	-	-	-	-
350mA	-	-	-	ON
400mA	-	-	ON	-
450mA	-	-	ON	ON
500mA	-	ON	-	-
550mA	-	ON	-	ON
600mA	-	ON	ON	-
650mA	-	ON	ON	ON
700mA	ON	-	-	-
750mA	ON	-	-	ON
800mA	ON	-	ON	-
850mA	ON	-	ON	ON
900mA	ON	ON	-	-
950mA	ON	ON	-	ON
1000mA	ON	ON	ON	-
1050mA	ON	ON	ON	ON

3. Connected quantities of different current Breaker

TYPE	Connected quantities of different current Breaker						Input Voltage	Inrush Current	Time
	current (A)	10	13	16	20	25			
	Installation wire diameter	1.5mm ²	2.5mm ²	2.5mm ²	4mm ²	4mm ²			
TYPE B	50	65	80	100	125	@230VAC	12	2.8	
TYPE C	80	104	128	160	200				
TYPE D	128	166	205	256	320				

4. Label

KGP
KGP Electronics GmbH
Hueckstraße 19
DE-58511 Lüdenscheid

LED Dimmable Driver
SC42W300-1050CG-6W DALI
Constant Current Lighting track adaptors

PRI:220-240VAC 50/60Hz Max.0.24A
SEC:300-800mA 10-42VDC
850-1050mA 10-40VDC

No Load:59VDC Max.42W Fmax.50N!
For LED modules only

0.5-1.5 A
6-8mm

1 2 3 4

Poutl [W]	Ioutl [mA]	Iin [A]	λ	1	2	3	4	Poutl [W]	Ioutl [mA]	Iin [A]	λ	1	2	3	4
12.6	300	0.09	0.86C	-	-	-	-	29.4	700	0.18	0.94C	ON	-	-	-
14.7	350	0.10	0.87C	-	-	-	ON	31.5	750	0.19	0.95	ON	-	ON	ON
16.8	400	0.12	0.88C	-	-	ON	ON	33.6	800	0.21	0.95	ON	-	ON	ON
18.9	450	0.13	0.89C	-	-	ON	ON	34	850	0.22	0.95	ON	-	ON	ON
21	500	0.14	0.90C	-	ON	-	-	36	900	0.23	0.96	ON	ON	-	-
23.1	550	0.15	0.91C	-	ON	ON	-	38	950	0.23	0.96	ON	ON	-	ON
25.2	600	0.16	0.92C	-	ON	ON	ON	40	1000	0.24	0.97	ON	ON	ON	-
27.3	650	0.17	0.93C	-	ON	ON	ON	42	1050	0.24	0.97	ON	ON	ON	ON

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SEC:300-800mA 10-42VDC
850-1050mA 10-40VDC

No Load:59VDC Max.42W Fmax.50N!
For LED modules only

0.5-1.5 A
6-8mm

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14.7	350	0.10	0.87C	-	-	-	ON	31.5	750	0.19	0.94C	ON	-	ON	ON
16.8	400	0.12	0.88C	-	-	ON	ON	33.6	800	0.21	0.95	ON	-	ON	ON
18.9	450	0.13	0.89C	-	-	ON	ON	34	850	0.22	0.95	ON	-	ON	ON
21	500	0.14	0.90C	-	ON	-	-	36	900	0.23	0.96	ON	ON	-	-
23.1	550	0.15	0.91C	-	ON	ON	-	38	950	0.23	0.96	ON	ON	-	ON
25.2	600	0.16	0.92C	-	ON	ON	ON	40	1000	0.24	0.97	ON	ON	ON	-
27.3	650	0.17	0.93C	-	ON	ON	ON	42	1050	0.24	0.97	ON	ON	ON	ON

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LED Dimmable Driver
SC42W300-1050CG-6G DALI
Constant Current Lighting track adaptors

PRI:220-240VAC 50/60Hz Max.0.24A
SEC:300-800mA 10-42VDC
850-1050mA 10-40VDC

No Load:59VDC Max.42W Fmax.50N!
For LED modules only

0.5-1.5 A
6-8mm

1 2 3 4

Poutl [W]	Ioutl [mA]	Iin [A]	λ	1	2	3	4	Poutl [W]	Ioutl [mA]	Iin [A]	λ	1	2	3	4
12.6	300	0.09	0.86C	-	-	-	-	29.4	700	0.18	0.94C	ON	-	-	-
14.7	350	0.10	0.87C	-	-	-	ON	31.5	750	0.19	0.94C	ON	-	ON	ON
16.8	400	0.12	0.88C	-	-	ON	ON	33.6	800	0.21	0.95	ON	-	ON	ON
18.9	450	0.13	0.89C	-	-	ON	ON	34	850	0.22	0.95	ON	-	ON	ON
21	500	0.14	0.90C	-	ON	-	-	36	900	0.23	0.96	ON	ON	-	-
23.1	550	0.15	0.91C	-	ON	ON	-	38	950	0.23	0.96	ON	ON	-	ON
25.2	600	0.16	0.92C	-	ON	ON	ON	40	1000	0.24	0.97	ON	ON	ON	-
27.3	650	0.17	0.93C	-	ON	ON	ON	42	1050	0.24	0.97	ON	ON	ON	ON

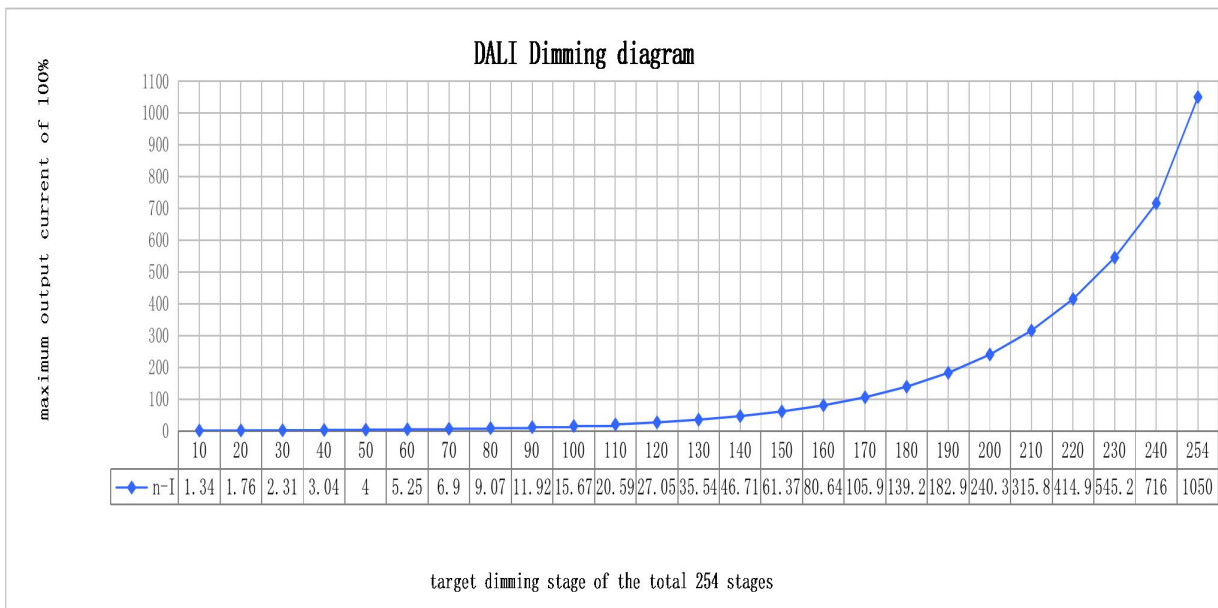
5. DALI dimming curve

formula for DALI dimming.

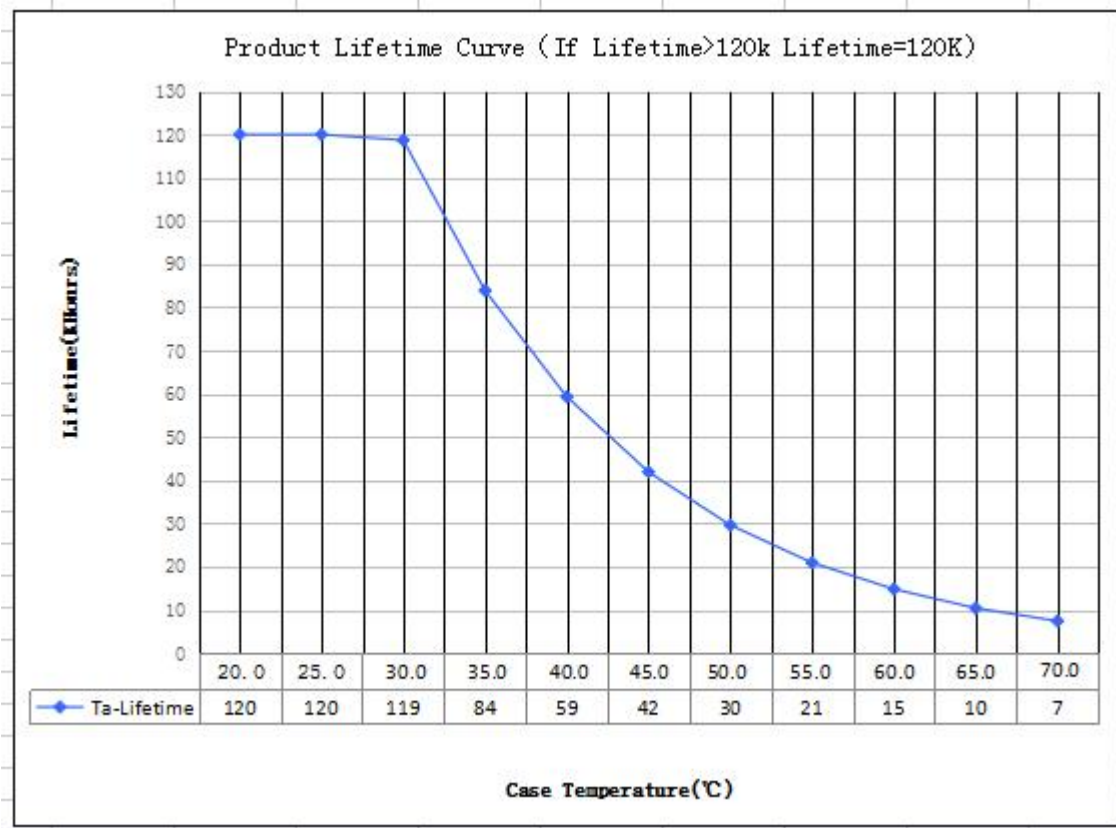
$$X(n) = 10^{\left\{ \left[\frac{(n-1)}{(253/3)} \right] - 1 \right\}}$$

Here, n means the target dimming stage of the total 254 stages.

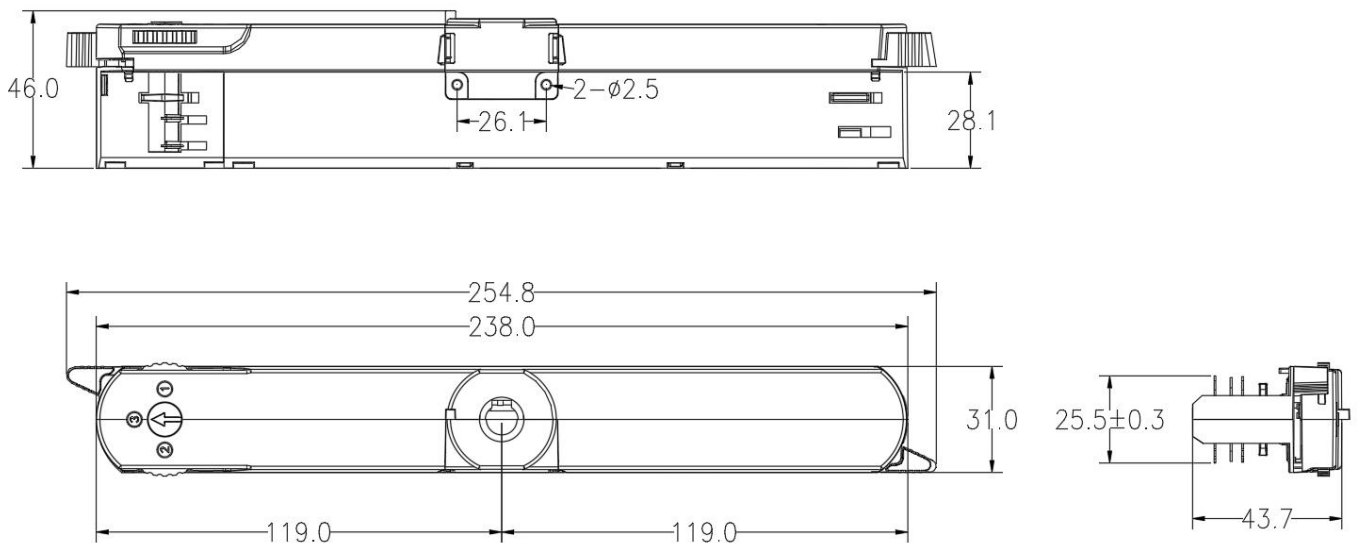
X(n) means the percent of the maximum output current



6. Lifetimecurve



7. Dimension



8. Packing information

Packing way	Model	Colour	Carton L*W*H(mm)	Pcs/ Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight/ Carton(kg)
industrial	SC42W300-1050CG-6W DALI	White	515*274*370	90	0.15	13.5	14.5
	SC42W300-1050CG-6B DALI	Black					
	SC42W300-1050CG-6G DALI	Grey					

9. Wiring Diagram

Fig. A: Push Dimming

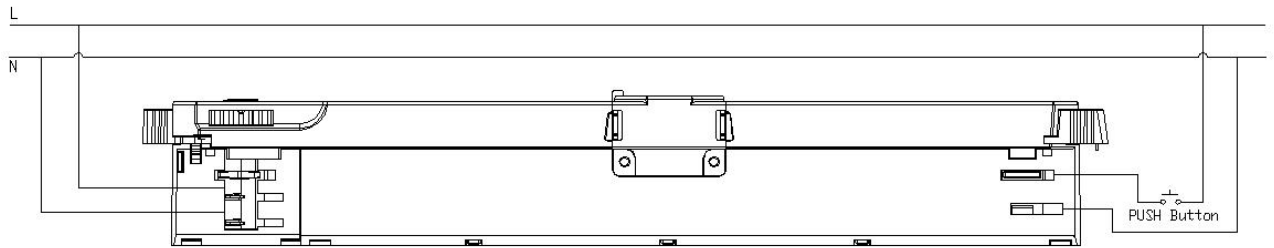
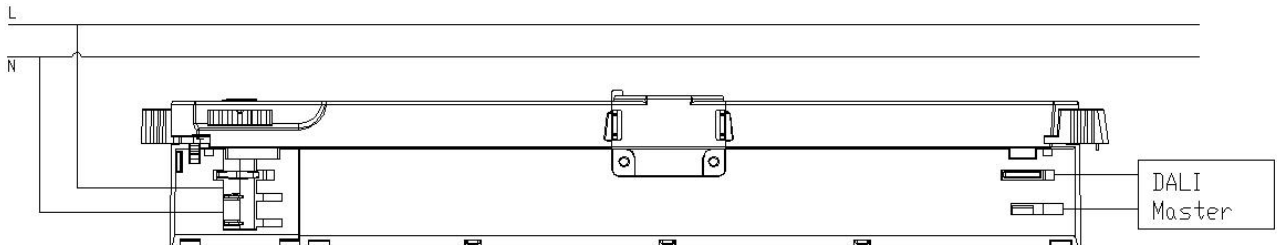


Fig. B: DALI Dimming



10. Suitable for following tracks

Serial number	Brand	Track model	System
1	Global	XTSC611	3P
2	A.A.G STUCCHI	9000-1-ST	3P
3	Unipro	T32B	3P
4	PowerGEAR	Pro-D631R	3P

Remark:

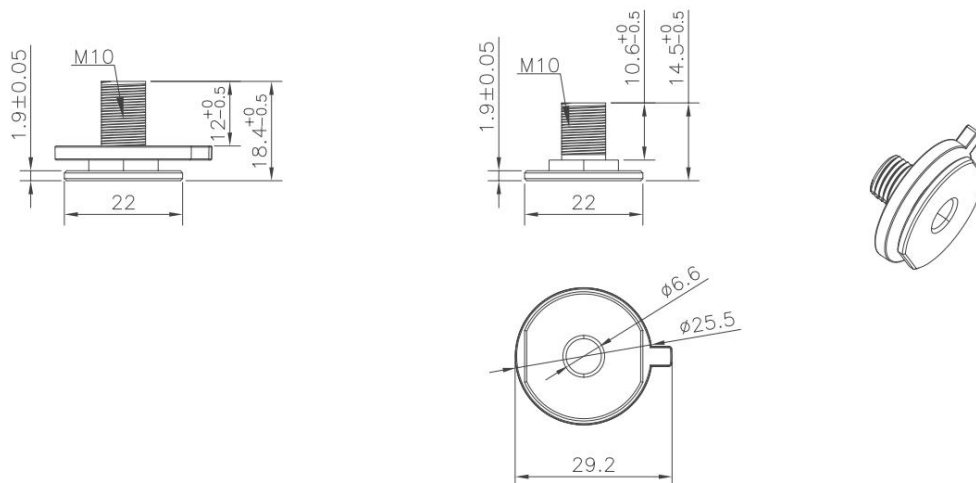
1. The model name is XTSC611 tracks, and its brand is Global.
2. The model name used is the 9000-1-ST track, and its brand is A.A.G STUCCHI.
3. The model name is T32B tracks, and its brand is Unipro.
4. The model name is Pro-D631R tracks, and its brand is PowerGEAR.

11. Lamp Screw Type

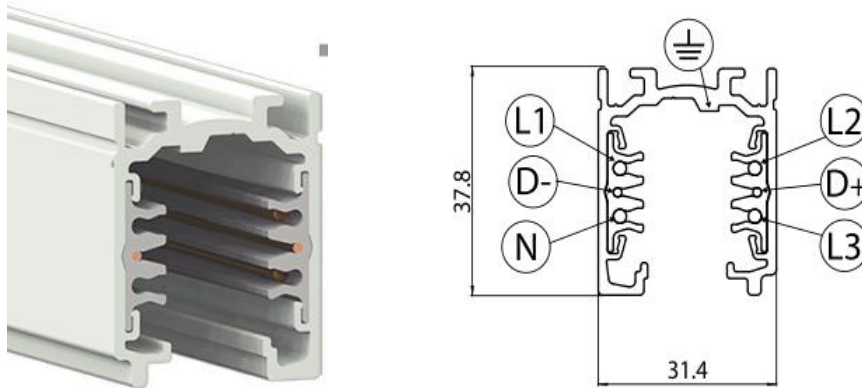
- Optional threaded sleeve for luminaire mounting
- Suitable for M10x1x8 threaded nut
- Additional mounting equipment, e.g. M10x1x12
- aluminium, black, white
- further on request

Ordering data

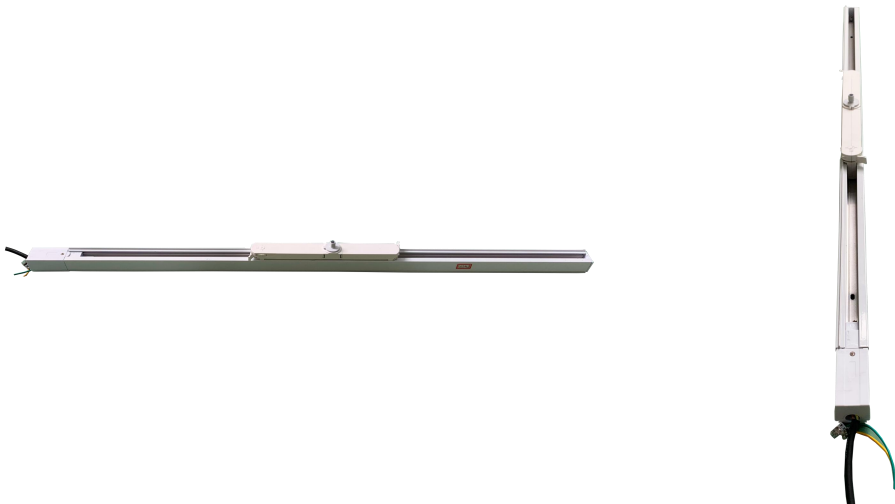
Type	Colour	Material 1	Material 2	Weight(g)/pcs
M10x8	White	AL	PC	9.04
	Black	AL	PC	9.04
	Gray	AL	PC	9.04
M10x12	White	AL	PC	9.72
	Black	AL	PC	9.72
	Gray	AL	PC	9.72



12. Phase track light rail specification:



13. Lighting track adapter and rail system installation diagram:



The adaptor shall be given that the use is limited to the track system specified.

14. Wiring instructions

- All connections must be kept as short as possible to ensure good EMI behaviour
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Advice the maximum length of output wires is 3 m
- Secondary switching is not permitted (Except for constant voltage)
- Incorrect wiring can damage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metals parts, metal cable clips, louver, etc.)

15. Packing information

DATE	VER	REMARK
2023-06-20	V1.0	Initial release.
2023-06-21	V1.1	No load power change to Standby power(dim to off)