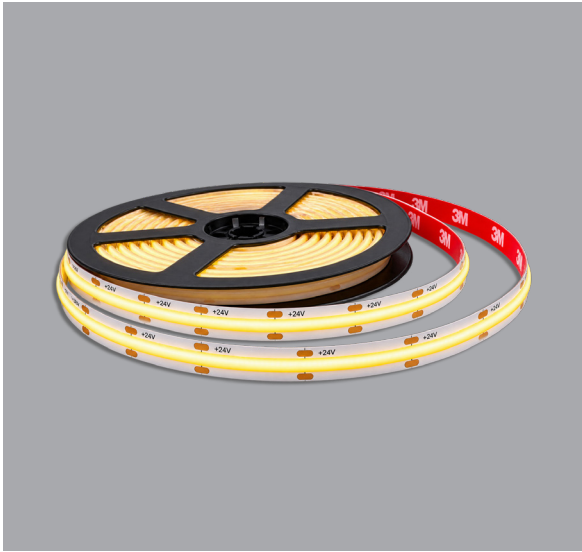


ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS



Job Information

Project Name	
Type	
Location	
Quantity	
Date	

DESCRIPTION

The ST02 Series is a versatile family of LED strip lights designed for seamless illumination across a wide range of lighting applications. The series includes ST02-COB for high density dot free lighting, ST02-DIM-TO-WARM for dynamic warm ambient lighting, and ST02-SAUNA engineered for high-temperature and high humidity environments.

Combining advanced LED technology, reliable performance, and application specific designs, the ST02 Series provides flexible solutions for architectural, decorative, and specialized lighting projects.

OVERVIEW

- Red M tape for better adhesion
- 528 LED/m for a denser, smoother, and virtually dot-free light output
- Having pigtail at both end of the roll
- Dynamic Dim to Warm performance
- High temperature sauna solution
- Architectural & decorative applications

PERFORMANCE

SERIES NAME	ST02		
MODEL NAME	COB	DIM TO WARM	SAUNA
POWER CONSUMPTION(±10%)	2.5W/ft (8W/m)	3.6W/ft (12W/m)	1.46W/ft (4.8W/m)
INPUT VOLTAGE	24VDC	24VDC	24VDC
EFFICACY @3000K	110Lm/W	85Lm/W	130Lm/W
LUMINOUS FLUX(±10%)	880Lm/m	1020Lm/m	624Lm/m
CCT	2700-6500K	1800-3000K	2700-6500K
CRI	>80	>90	>80
IP RATING	IP20/IP65 / IP68	IP54 / IP65 / IP67 / IP68	IP67
OPERATION TEMPERATURE	-4°F TO +104°F	-4°F TO +104°F	-4°F TO +194°F
STORAGE TEMPERATURE	-4°F TO +113°F	-4°F TO +140°F	-4°F TO +113°F
APPLICATIONS	Indoor/Outdoor		
CERTIFICATIONS	cULus Listed		
WARRANTY	5 Years		
LIFESPAN OF LED @TA=25°C	50000HRS		

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

PRODUCTS OVERVIEW

The ST02 Series offers versatile LED strip lights designed to deliver high performance, visual comfort, and reliable operation for a wide range of lighting applications.



ST02-COB

High density COB tape with 528 LEDs/m delivering seamless, dot free illumination.



528
LEDs/m



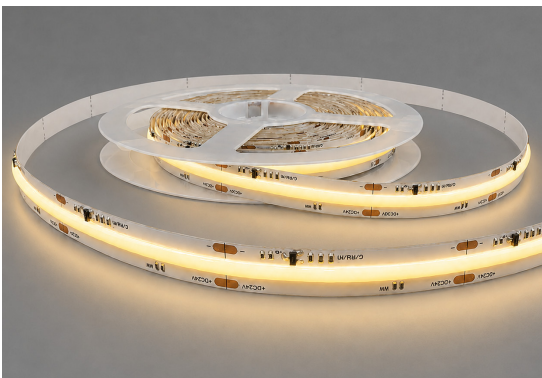
Up to
120Lm/W



+80



IP20 / IP65 /
IP68



ST02-DIM-TO-WARM

Dim-to-Warm COB tape that transitions from 3000K to 1800K as it dims.



1800K-
3000K



85Lm/W



+90



IP54 / IP65 /
IP67 / IP68



ST02-SAUNA

Specialized tape light for sauna and steam room environments, up to 194°F (90°C)



UP TO
194°F



Up to
140Lm/W



+80



IP67

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

MODEL NAME: ST02-COB

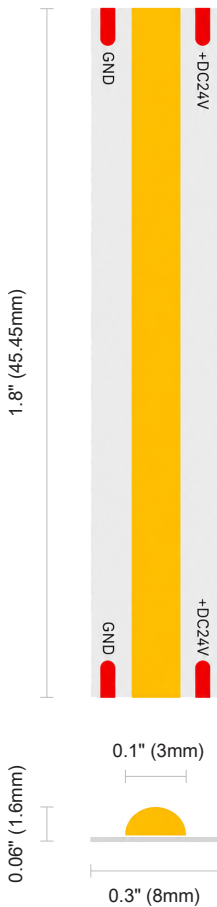
DESCRIPTION



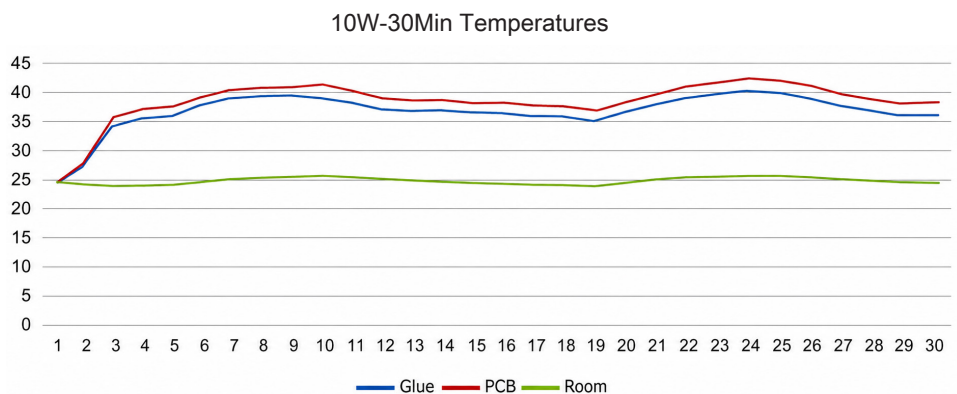
The ST02-COB Tape Light combines advanced COB technology with an ultra-high density of 528 LEDs per meter to deliver seamless, dot-free illumination on a slim 0.3" (8mm) PCB. Offering efficacy up to 120 Lm/W and cut points every 1.8" (45.45mm), it ensures both outstanding performance and installation flexibility. Available in IP20 and IP65 configurations, it is an ideal solution for architectural, decorative, and indirect lighting applications.

SPECIFICATIONS

TYPE	COB LED, 528 Chip/m			
INPUT VOLTAGE	24VDC			
POWER CONSUMPTION (±10%)	2.5W/ft (8W/m)			
CRI	>80			
CCT	2700K	3000K	3500K	4000-6500K
LUMINOUS FLUX (±10%)	840Lm/m	880Lm/m	920Lm/m	960Lm/m
EFFICIENCY	105Lm/W	110Lm/W	115Lm/W	120Lm/W
CUTTING LENGTH	1.8" (45.45mm)			
PRODUCT DIMENSION	0.3" x 0.06" x Total Length (8mm x 1.6mm x Total Length)			
TOTAL LENGTH	IP20: 16.4'/32.8'/65.6'(5/10/20m) IP65: 16.4'/32.8'(5/10m) IP68: 16.4'(5m)			
MAX. RUNNING LENGTH	16.4ft (5m). For Longer Application Please Contact In Parallel			
PCB	0.3" (8mm), White			
IP RATING	IP20 / IP65 / IP68			
OPERATION TEMPERATURE	-20°C TO +40°C (-4F TO +104F)			
STORAGE TEMPERATURE	-20°C TO +45°C (-4F TO +113F)			
APPLICATIONS	Residential Lighting / Decorative Lighting / Indirect Lighting			
CERTIFICATIONS	cULus Listed			
WARRANTY	5 Years			
LIFE TIME OF LED @TA=25°C	50000HRS			



TEMPERATURE CURVE



- The x-axis indicates the minutes from 1 minutes to 30 minutes.
- The y-axis indicates the changes of temperatures in glue, PCB, and room.

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

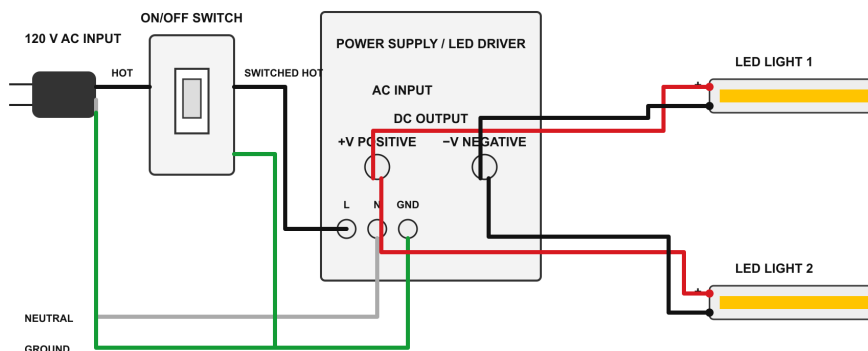


BRIGHTNESS CONSISTENCY (Based on 16.4' (5m) Running)

LENGTH	3.28' (1m)	6.56' (2m)	9.84' (3m)	13.12' (4m)	16.4' (5m)
VOLTAGE (VDC)	23.48	23.1	22.83	22.67	22.66
LUMEN (Lm/m)	840.33	723.06	639.74	590.36	587.28
LUMEN REDUCTION	0.00%	-13.96%	-23.87%	-29.75%	-30.11%

Above table shows the voltage, lumen and lumen reduction on each meter.
For better brightness consistency, the recommend length is 16.4' (5m) for powering on one side.

INSTALLATION



- The maximum running length is 16.4' (5 meters), for over 16.4' (5 meters) please connect in parallel.
- Make sure the power supply is operating at maximum 80% of its capacity.
- Match the polarities according to the mark ('+' and '-') in the PCB while connecting.

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

MODEL NAME: ST02-DIM-TO-WARM

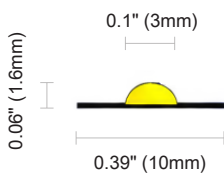
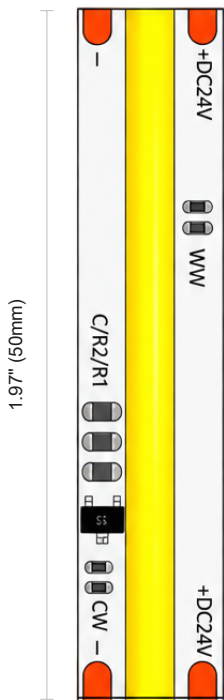
DESCRIPTION



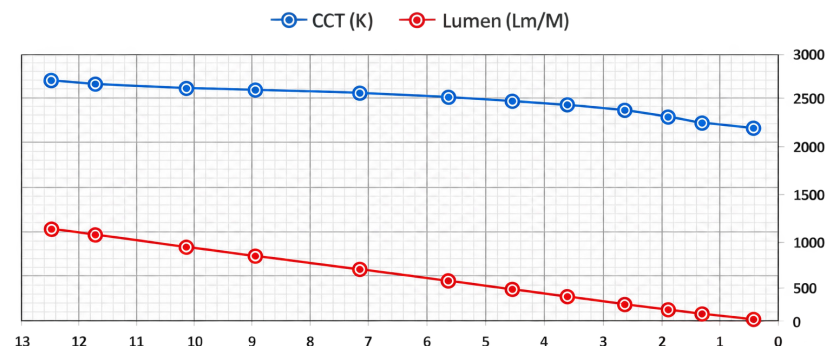
The ST02-DIM-TO-WARM COB Tape Light combines advanced COB technology with dynamic dim-to-warm performance, smoothly shifting the color temperature from 3000K to an intimate 1800K as the light is dimmed. Its continuous COB light-emitting surface delivers seamless, dot-free illumination on a slim 0.4" (10mm) PCB. Offering up to 1,020 lm/m at 3000K, CRI 90+, and cut points every 2" (50mm), it provides excellent light quality and installation flexibility, making it an ideal solution for residential, hospitality, and architectural applications where warm, ambient dimming is desired.

SPECIFICATIONS

TYPE	COB LED - DIM TO WARM
INPUT VOLTAGE	24VDC
POWER CONSUMPTION (±10%)	3.6W/ft (12W/m) @3000K
CRI	>90
CCT	1800-3000K
LUMINOUS FLUX (±10%)	1020Lm/m @3000K
EFFICIENCY	85Lm/W @3000K
CUTTING LENGTH	1.97" (50mm)
PRODUCT DIMENSION	0.39" x 0.06" x Total Length (10mm x 1.6mm x Total Length)
TOTAL LENGTH	IP54: 16.4'/32.8'/65.6'(5/10/20m) IP65/IP67: 16.4'/32.8'(5/10m) IP68: 16.4'(5m)
MAX. RUNNING LENGTH	22.96ft (7m). For Longer Application Please Contact In Parallel
PCB	0.39" (10mm), White
IP RATING	IP54 / IP65 / IP67 / IP68
OPERATION TEMPERATURE	-20°C TO +40°C (-4F TO +104F)
STORAGE TEMPERATURE	-20°C TO +60°C (-4F TO +140F)
APPLICATIONS	Residential Lighting / Decorative Lighting / Indirect Lighting
CERTIFICATIONS	cULus Listed
WARRANTY	5 Years
LIFE TIME OF LED @TA=25°C	50000HRS



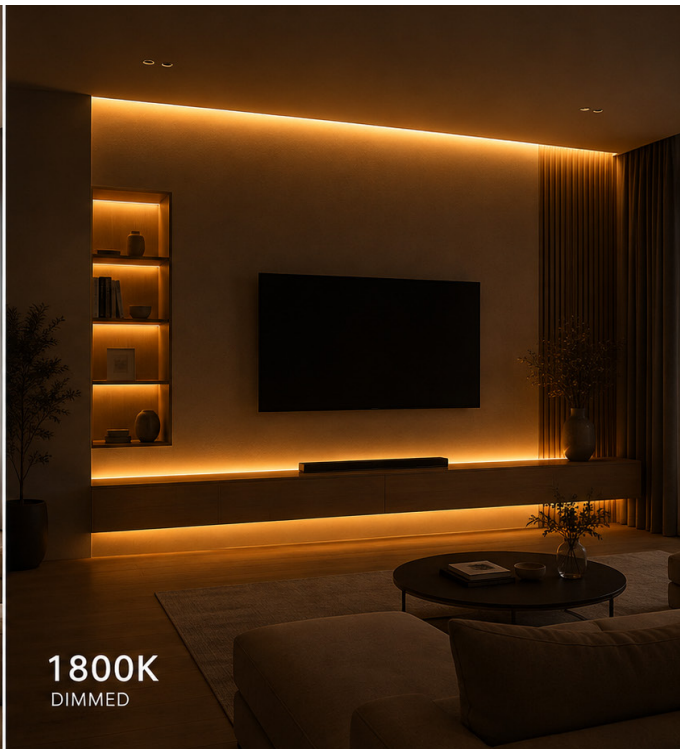
DIM TO WARM CURVE



- The above curves indicate the CCT and flux changing when the LED strip is dimming down. As the flux decreases, the color temperature decrease synchronously.

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

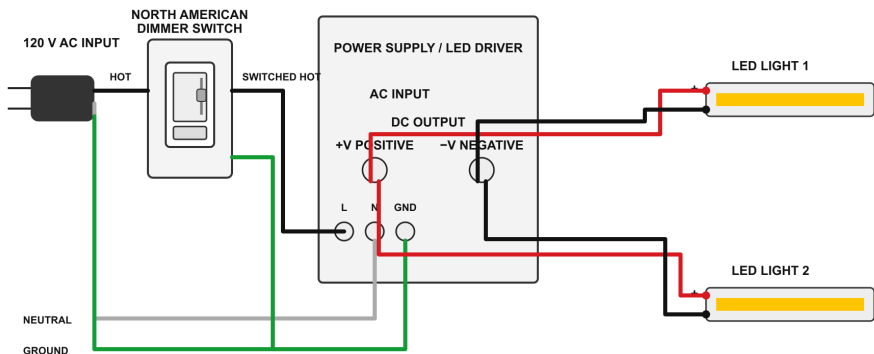


BRIGHTNESS CONSISTENCY (Based on 22.96' (7m) Running)

LENGTH	3.28' (1m)	6.56' (2m)	9.84' (3m)	13.12' (4m)	16.4' (5m)	19.68' (6m)	22.96' (7m)
LUMEN (Lm/m)	991	924	867	829	785	757	729

Above table shows the electrical parameters of the sampling point in 22.96' (7m).
For better brightness consistency, the recommend length is 22.96' (7m) for powering on one side

INSTALLATION



- The maximum running length is 22.96' (7 meters), for over 22.96' (7 meters) please connect in parallel.
- Make sure the power supply is operating at maximum 80% of its capacity.
- Match the polarities according to the mark ('+' and '-') in the PCB while connecting.

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

MODEL NAME: ST02-SAUNA

DESCRIPTION

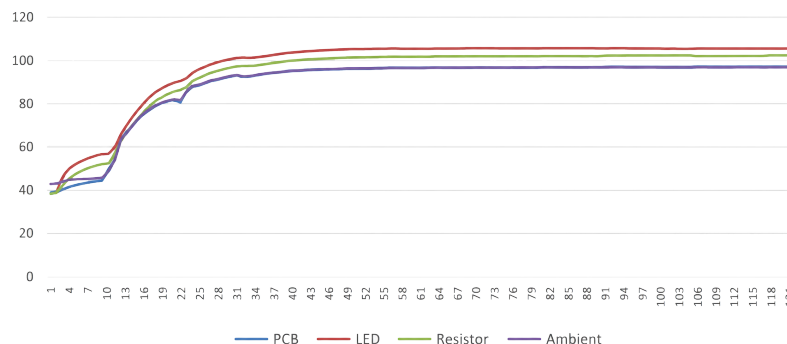
The ST02-SAUNA Tape Light features SMD 2835 LEDs at a density of 80 LEDs/m, engineered for reliable performance in high temperature and high humidity environments. With IP67 protection, it withstands temperatures up to 194°F (90°C) and humidity up to 85%. Operating at 24VDC with efficacy up to 140 lm/W, ST02-SAUNA is an ideal solution for sauna, steam room, and specialized wellness applications.

SPECIFICATIONS

TYPE	SMD 2835, 80LED/m			
INPUT VOLTAGE	24VDC			
POWER CONSUMPTION (±10%)	1.46W/ft (4.8W/m)			
CRI	>80			
CCT	2700K	3000K	4000K	6500K
LUMINOUS FLUX (±10%)	600Lm/m	624Lm/m	648Lm/m	672Lm/m
EFFICIENCY	125Lm/W	130Lm/W	135Lm/W	140Lm/W
CUTTING LENGTH	3.94" (100mm)			
PRODUCT DIMENSION	0.47" x 0.2" x Total Length (12mm x 5mm x Total Length)			
TOTAL LENGTH	16.4'/32.8'(5/10m)			
MAX. RUNNING LENGTH	16.4ft (5m). For Longer Application Please Contact In Parallel			
PCB	0.47" (12mm), White			
IP RATING	IP67			
OPERATION TEMPERATURE	-20°C TO +90°C (-4F TO +194F)			
STORAGE TEMPERATURE	-20°C TO +45°C (-4F TO +113F)			
APPLICATIONS	Steam Room / Sauna Room			
CERTIFICATIONS	cULus Listed			
WARRANTY	2 Years			
LIFE TIME OF LED @TA=25°C	50000HRS			

TEMPERATURE CURVE

Temp(95°C)in 30min @NW(4.8W/M)



- The above curves indicate the temp. Changing in LED, resistor and PCB within 120 minutes after powering on, under the ambient temperature of 203°F (95°C).

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

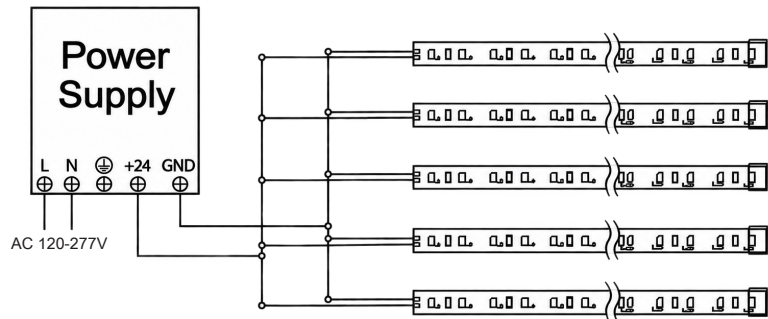


BRIGHTNESS CONSISTENCY (Based on 16.4' (5m) Running)

LENGTH	3.28' (1m)	6.56' (2m)	9.84' (3m)	13.12' (4m)	16.4' (5m)
LUMEN (Lm/m)	498	482	477	469	454

Above table shows the electrical parameters of the sampling point in 16.4' (5m).
For better brightness consistency, the recommend length is 16.4' (5m) for powering on one side

INSTALLATION



- The maximum running length is 16.4' (5 meters), for over 16.4' (5 meters) please connect in parallel.
- Make sure the power supply is operating at maximum 80% of its capacity.
- Match the polarities according to the mark ('+' and '-') in the PCB while connecting.

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

COMPATIBLE DRIVERS

The ST02 LED tape lights designed to for use with 24VDC constant voltage LED driver.
Select the appropriate driver based on the connected load, control method, and application requirements.



KVG-DWJ-60W

METAL JUNCTION BOX

INPUT VOLTAGE	100-277 VAC
OUTPUT VOLTAGE	24VDC
RATED POWER	60W
EFFICIENCY (Typ.) @FULL LOAD	≥84% @120VAC ≥85% @277VAC
DIMENSION	7.4"L x 3.75"W x 1.7"H (188x95.4x43.8mm)
DIMMING FUNCTION	Phase dimming: work with Forward phase, MLV and Reverse phase, ELV, TRIAC dimmers. 0-10V dimming: 0-10V/1-10V/Potentiometer/10V PWM 4 in 1.



KVG-DWJ-96W

METAL JUNCTION BOX

INPUT VOLTAGE	100-277 VAC
OUTPUT VOLTAGE	24VDC
RATED POWER	96W
EFFICIENCY (Typ.) @FULL LOAD	≥83% @120VAC ≥86% @277VAC
DIMENSION	8.66"L x 3.75"W x 1.72"H (220x95.4x43.8mm)
DIMMING FUNCTION	Phase dimming: work with Forward phase, MLV and Reverse phase, ELV, TRIAC dimmers. 0-10V dimming: 0-10V/1-10V/Potentiometer/10V PWM 4 in 1.



KVG-DWJ-150W

METAL JUNCTION BOX

INPUT VOLTAGE	100-277 VAC
OUTPUT VOLTAGE	24VDC
RATED POWER	150W
EFFICIENCY (Typ.) @FULL LOAD	≥86% @120VAC ≥87% @277VAC
DIMENSION	10.3"L x 4.2"W x 1.93"H (260.6x106x49mm)
DIMMING FUNCTION	Phase dimming: work with Forward phase, MLV and Reverse phase, ELV, TRIAC dimmers. 0-10V dimming: 0-10V/1-10V/Potentiometer/10V PWM 4 in 1.

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

COMPATIBLE DRIVERS

The ST02 LED tape lights designed to for use with 24VDC constant voltage LED driver.
Select the appropriate driver based on the connected load, control method, and application requirements.



KVG-DWJ-200W

METAL JUNCTION BOX

INPUT VOLTAGE	100-277 VAC
OUTPUT VOLTAGE	24VDC
RATED POWER	200W
EFFICIENCY (Typ.) @FULL LOAD	≥88% @120VAC ≥90% @277VAC
DIMENSION	10.3"L x 4.2"W x 1.93"H (260.6x106x49mm)
DIMMING FUNCTION	Phase dimming: work with Forward phase, MLV and Reverse phase, ELV, TRIAC dimmers. 0-10V dimming: 0-10V/1-10V/Potentiometer/10V PWM 4 in 1.



KVG-DWJ-300W

METAL JUNCTION BOX

INPUT VOLTAGE	100-277 VAC
OUTPUT VOLTAGE	24VDC
RATED POWER	300W
EFFICIENCY (Typ.) @FULL LOAD	≥88% @120VAC ≥91% @277VAC
DIMENSION	10.94"L x 4.33"W x 1.92"H (278x110x48.8mm)
DIMMING FUNCTION	Phase dimming: work with Forward phase, MLV and Reverse phase, ELV, TRIAC dimmers. 0-10V dimming: 0-10V/1-10V/Potentiometer/10V PWM 4 in 1.

HOW TO CALCULATE THE PROPER DRIVER SIZE

1 CALCULATE TOTAL LOAD

Multiply the total tape length by the tape light's power consumption.

$$\text{Total Load (W)} = \text{Tape Length (ft or m)} \times \text{Power (W/ft or W/m)}$$

Example:
10m x 8W/m = 80W

2 CALCULATE MINIMUM DRIVER SIZE

Since the connect load should not exceed 80% of the driver's rated capacity.

$$\text{Minimum Driver Size (W)} = \frac{\text{Total Load}}{0.80}$$

Example:
80W / 0.80 = 100W

3 SELECT THE DRIVER

Choose the next available driver size equal to or greater than calculated minimum requirement.

Example:
100W required → Select the next available driver rated ≥ 100W

Example:
Proper Driver: **KVG-DWJ-150W**

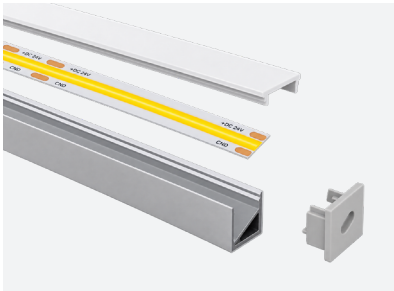
Quick Reference	ST02-COB: 2.5W/ft (8W/m)	ST02-DIM-TO-WARM: 3.6W/ft (12W/m)	ST02-SAUNA: 1.46W/ft (4.8W/m)
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ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

MOST COMMON CHANNELS

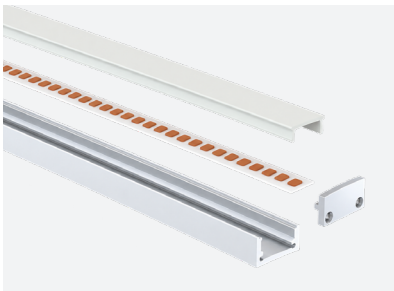
A selection of commonly used aluminum channels for clean installation, improved light diffusion, and professional integration of ST02 tape lights.



LP1212 / LP1212-1 / LP2012

SURFACE-TO-RECESS PROFILES

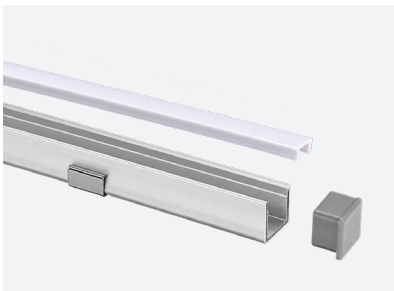
MOUNTING OPTIONS	Surface/Recessed
PC COVER	Opal/Transparent/Diffuser
FINISH	Anodized Painting
COLOR	Black/White/ Silver
IP Rating	IP20
DIMENSION	120"L*0.57"W *0.57"H



LP1709

SURFACE MOUNT ALUMINUM EXTRUSION

MOUNTING OPTIONS	Surface
PC COVER	Opal/Transparent/Diffuser
FINISH	Anodized Painting
COLOR	Black/White/ Silver
IP Rating	IP20
DIMENSION	120"L*0.62"W *0.34"H



LP1715

SURFACE MOUNT ALUMINUM EXTRUSION

MOUNTING OPTIONS	Surface
PC COVER	Opal/Transparent/Diffuser
FINISH	Anodized Painting
COLOR	Black/White/ Silver
IP Rating	IP20
DIMENSION	120"L*0.69"W *0.59"H



LP2515

RECESSED MOUNT ALUMINUM EXTRUSION

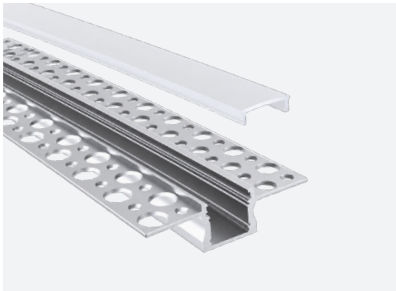
MOUNTING OPTIONS	Recessed
PC COVER	Opal/Transparent/Diffuser
FINISH	Anodized Painting
COLOR	Black/White/ Silver
IP Rating	IP20
DIMENSION	120"L*0.97"W *0.59"H

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

MOST COMMON CHANNELS

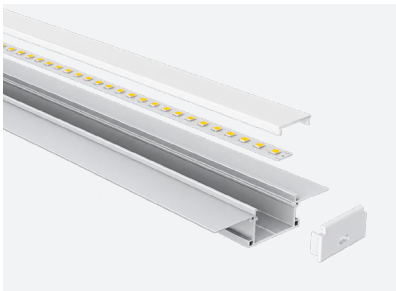
A selection of commonly used aluminum channels for clean installation, improved light diffusion, and professional integration of ST02 tape lights.



LD5015C

RECESSED / MUD-IN PROFILES

MOUNTING OPTIONS	Surface
PC COVER	Opal/Transparent/Diffuser
FINISH	Anodized Painting
COLOR	Black/White/ Silver
IP Rating	IP20
DIMENSION	120"L x 0.67"W x 0.57"H



LD6214

RECESSED / MUD-IN PROFILES

MOUNTING OPTIONS	Recessed
PC COVER	Opal/Transparent/Diffuser
FINISH	Anodized Painting
COLOR	Black/White/ Silver
IP Rating	IP20
DIMENSION	120"L x 0.81"W x 0.55"H

ST02 SERIES

LED STRIP LIGHT SPECIFICATIONS

PRODUCT ORDERING GUIDE

EXAMPLE: ST02-COB-IP20-L5-35K-T

ST02	-COB	-IP20	-L5	-35K	-T
Series	Model	IP Rating	Roll Length	CCT	Dimming

SERIES	MODEL	IP RATING ^①	ROLL LENGTH	CCT	DIMMING
ST02	COB: COB	IP20	L5: 16.4' (5m) L10: 32.8' (10m) L20: 65.6' (20m)	27K: 2700K 30K: 3000K 35K: 3500K 40K: 4000K	T: Triac V: 0-10V N: None
		IP65	L5: 16.4' (5m) L10: 32.8' (10m)		
		IP68	L5: 16.4' (5m)		
	DTW: Dim-To-Warm	IP54	L5: 16.4' (5m) L10: 32.8' (10m) L20: 65.6' (20m)	1830:1800-3000K	T: Triac V: 0-10V N: None
		IP65	L5: 16.4' (5m) L10: 32.8' (10m)		
		IP67	L5: 16.4' (5m) L10: 32.8' (10m)		
		IP68	L5: 16.4' (5m)		
	SUN: Sauna SMD	IP67	L5: 16.4' (5m) L10: 32.8' (10m)	27K: 2700K 30K: 3000K 40K: 4000K 65K: 6500K	T: Triac V: 0-10V N: None

① NOTE: For each IP rating, only the roll lengths listed in the corresponding row are available for order.