DATASHEET



IP00	LEDtape 2700-2000K CRI90 1500LM D2W 15W 24V 5M
Code	W1004-D2W-5M-G4
	7506488
	3201182
+	4127408
	7350102530404



IP68	LEDtape 3000-2400K CRI90 1500LM D2W 15W 24V IP68 5M
Code	W1004-D2W-IP68-5M-G4
	7506489
	3201183
+	4127409
	7350102530411

HIGHLIGHTS

- Dims to a warm glow to mimic incandescent light behaviour. The more you dim, the warmer the light.
- Compatible with standard dimmable LED drivers no special control system needed
- Flexible LED-tape for professional lighting applications with high density and light output
- Available in IP00 and IP68-version
- Best in class optical properties MacAdam 3 / CRI>90
- An onboard IC ensures that the light gets a warmer colour temperature when dimmed
- High quality adhesive 3M-tape on backside for easy mounting on common surfaces
- Long lifetime: L70 = 50 000h ①
- Optimized for high resolution digital dimming 0.1-100% using Welight LED-driver W71XX-series.
- Possible to connect 10 meters in series ©

Accessories

- Solder-free connectors and bridges (included)
- Aluminium profiles for linear and corner applications
- Wide variety of lenses and covers 15°/30°/60°/120°/Asymmetric/Batwing
- Fixed or adjustable mounting brackets
- · Optimised drivers to fit every need and application

Technical Data



pp. 2

Accessories



pp. 4

Mounting Instructions



pp. 7



TECHNICAL DATA

Packaging

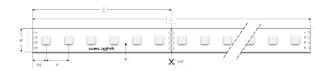
Full carton	20 pcs
Weight per pc	IP00: 600 g IP68: 900 g
Box dimensions	250 x 250 x 30 mm

Electrical ①

Elocatoui ©	
Supply voltage (VDC)	24
DC Voltage Range 46	22-26V @ L ≤5m 24-26V @ L ≤10m
Power (W) per m	15
Current (mA) per m	625
Supply Cable	L = 1 m (both ends) AWG20 UL standard BK (Black -) RD (Red +)

Dimensional @

5 m
10 m
IP00: 30 mm IP68: 50 mm
IP00: 10 mm IP68: 12 mm Incl. Endcap: 14 mm
IP00: 1,4 mm IP68: 4,5 mm Incl. Endcap: 6,5 mm
83,3 mm
12 mm (between groups)



Temperature and Lifetime

Performance Temp Rating (Tp)	65 °C
Operating Temp Range (Ta) ®	-35/+50 °C
Max PCB Temp (Tc)	75 °C
Storage Temp	-35/+80 °C
L70F10 @Tp	50 000 h
L90F10 @Tp	35 000 h
Adhesive	3M VHB 5-year warranty
Warranty Period @Tp	5 years

Safety & Compliance

Constant Current IC	Yes, bipolar IC
Insulation Voltage	0,5kV DC 10mA 60sec
IEC Standards	IEC 62031, IEC 62471 IEC 62717, IEC 61000-4-2
ESD Class	1
Risk group (EN 62471:2008)	1
Classification acc. to IEC 62031	Class III
Energy Declaration (EEEI)	A+ 10 kWh / 1000h
Optical ①③	
Luminous Flux (lm) per m	1500
Beam Angle	120
LED package	2835
LED quantity per m	168
Colour Temp @max dim-level	IP00: 2700K IP68: 3000K
Colour Temp @min dim-level	IP00: 2000K IP68: 2400K
MacAdam SDCM	≤3

Photometric Code (according to EN 62717)

CRI (R1-R8)

CRI (R1-R14)

IP00 Dim Level

White Tone	CCT	Photometric Code	
Candlelight	2000 K	920 / 349	
Sunrise	2400 K	924 / 349	
Incandescent	2700 K	927 / 349	
Warm	3000 K	930 / 349	

LPM

>90

>90

Dimming Performance Summary ①3

CCT

100%	2700 K	1500
50%	2400 K	750
20%	2200 K	300
1%	2000 K	15
IP68 Dim Level	CCT	LPM
100%	3000 K	1500
50%	2700 K	750
20%	2500 K	300
1%	2400 K	15
170	2400 K	10

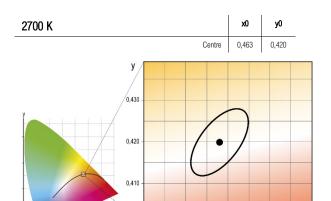
- ① Tolerance range for electrical and optical data ±10%

- Tolerance range for dimensional data ±1%
 All values for ta = 25 °C / tc = 65 °C
 Measured at the beginning of the LEDtape. Exceeding the maximum operating voltage leads to an Weasured at the beginning of the LEUtape. Exceeding the maximum operating votage leads to an overload on the tape. This may result in a significant reduction in lifetime or even destruction of the tape.
 Self-cooling at ta ≤ 35 °C
 When connecting 10 meters in series, the supply voltage must be between 24-26V at the beginning of the tape. Lower voltage can cause a significant reduction in light output at the end of length.
 Subject to change without notice.

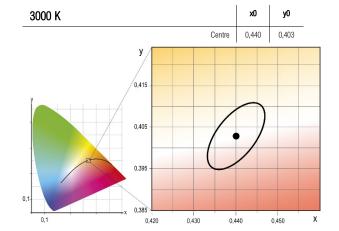


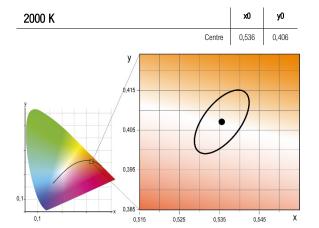
Chromaticity coordinates and tolerances (according to CIE 1931)









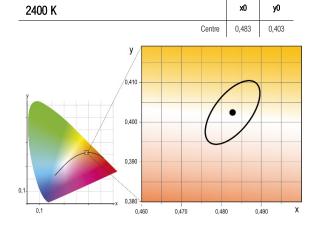


0,445

0,455

0.465

0,475

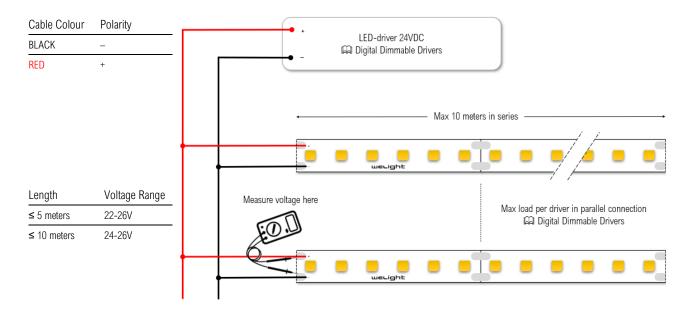


The specified color coordinates are measured by a current impulse with nominal values of module after a settling time of 100 msec. The ambient temperature of the measurement is ta = 25 °C. The measurement tolerance of the color coordinates is \pm 0.01.



WIRING

The LEDtape is delivered with colour coded connection cable at each end, L = 1 m, $2 \times 0.5 \text{ mm}^2$ (AWG20). Do not connect more than 10 meters in series and make sure that the voltage is within the specified range at the beginning of the LEDtape.



DIGITAL DIMMABLE DRIVERS

Welight offers a range of suitable LED-drivers especially designed for Dim2Warm applications.



	Control Signal	Art. Code	Driver Type	Max length per driver
1	DALI-2	W7101	LEDdriver LCV 100W 24V 1-4CH DALI SR	6.7 m
2	KNX	W7102	LEDdriver LCV 100W 24V 1-4CH KNX SR	6.7 m
3	DMX	W7103	LEDdriver LCV 100W 24V 1-4CH DMX SR	6.7 m
4	one4all ①	28001920	LCA 35W 24V one4all SC PRE	2.3 m
5	one4all ①	28001921	LCA 60W 24V one4all SC PRE	4 m
6	one4all ①	28001922	LCA 100W 24V one4all SC PRE	6.7 m
7	one4all ①	28001923	LCA 150W 24V one4all SC PRE	10 m
4	bDW / Casambi	28002677	LC 35W 24V bDW SC PRE2	2.3 m
5	bDW / Casambi	28002674	LC 60W 24V bDW SC PRE2	4 m
6	bDW / Casambi	28002675	LC 100W 24V bDW SC PRE2	6.7 m
7	bDW / Casambi	28002678	LC 150W 24V bDW SC PRE2	10 m

① The driver can be controlled via DALI DT6, DSI, switchDIM, corridorFUNCTION and ready2mains.

CABLE & CONNECTION ACCESSORIES



					Suitable for	r LEDtape
Pic	Туре	Art. Code	Description	Included	IP00	IP68
1	LEDtape Connector Strip-Strip	W8434	Connect IP00 strips to each other	1 pc	✓	×
2	LEDtape Connector Strip-Cable	W8435	Connect IP00 strip to a 2-wire cable (cable not included). Max cross section AWG20 (0,5mm²).	1 pc	√	×
3	LEDtape Connector Slim Strip-Strip	W8436	Connect IP00 strips to each other inside a confined space, e.g. a mounting profile (cable not included)	1 pc	√	×
4	LEDtape Connector Slim Strip-Cable	W8437	Connect IP00 strip to a 2-wire cable inside a confined space, e.g. a mounting profile (cable not included). Max cross section AWG20 (0,5mm²).	1 pc	√	×
5	LEDtape Connector IP Strip-Strip	W8438	Connect IP68 strips to each other 🔥	1 pc	×	✓
6	LEDtape Connector IP Strip-Cable	W8439	Connect IP68 strip to a cable (20cm cable included)	1 pc	×	✓
7	LEDtape Connector Strip-Corner-Strip	W8451	Connect IP00 strips in a 90° angle. Suitable for corners.	_	✓	×
8	LEDaccessory Plug Connector 2P IP20 36V 9A	W8412-D2	Pluggable Cable Joint. Can act as both female and male by turning it upside down. Max cross section AWG20 (0,5mm²).	_	√	×
9	LEDaccessory T Splicer 2P IP20 300V 10A	W8412-T2	T Splicer. Can be used to split the supply cable in two directions. Max cross section AWG20 (0,5mm²).	-	√	×
10	LEDaccessory Connector IP68 kit F+M	W8411-A2	IP68 connector with lockable female and male plug incl. 30cm cable, white	-	×	✓
11	LEDcable RKUB 2X0.5 AWG20 Rd/Bk 6m	W8417	Black/red connection cable, 6m reel. Indoor use only.	ı	✓	✓
12	LEDcable RKUB 2X0.5 AWG20 W/W 6m	W8418	White connection cable, 6m reel. Indoor use only.	-	✓	✓
11	LEDcable RKUB 2X0.5 AWG20 Rd/Bk 100m	W8421	Black/red connection cable, 100m reel. Indoor use only.	-	✓	✓
12	LEDcable RKUB 2X0.5 AWG20 W/W 100m	W8422	White connection cable, 100m reel. Indoor use only.	ı	✓	✓
13	LEDcable RKKB 2X1 Rd/Bk Yd 5,8mm Bk 100m	W8413	Black/red connection cable with UV-resistant insulation, 100m reel. Suitable for outdoor use. Not compatible with quick connectors!	-	✓	√
14	LEDtape 3M VHB Adhesive 10mm 33m reel	W8449	Additional adhesive for repairing or replacing the adhesive on the back of LEDtape IP00 and IP68. Pre-cut to fit PCB width 10mm. Reel length 33m.	-	√	√
15	LEDtape IP Endcap	W8432	Suitable for sealing the end of a cut LEDtape IP68. Use with W8433.	5 pcs	×	✓
16	LEDtape Silicon Tube with tip	W8433	Suitable for sealing the end of a cut LEDtape IP68. Can be used together with W8432 for optimal protection.	1 pc	×	√
17	LEDtape IP Assembly Kit 10	W8901	Endcaps, Mounting Brackets & Silicon	ľ	×	✓
18	LEDtape Mounting Clip	W8430	Mounting clip with single screw for IP00-rated LEDtape	10 pcs	✓	×
18	LEDtape Mounting Clip IP68	W8431	Mounting clip with single screw for IP68-rated LEDtape	10 pcs	×	✓

CABLE & CONNECTION ACCESSORIES



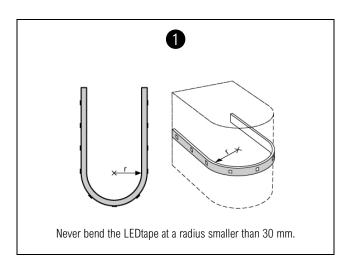
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8	LEDaccessory Plug Connector 2P IP20 36V 9A	W8412-D2	Pluggable Cable Joint. Can act as both female and male by turning it upside down. Max cross section AWG20 (0,5mm²).	_	√	×
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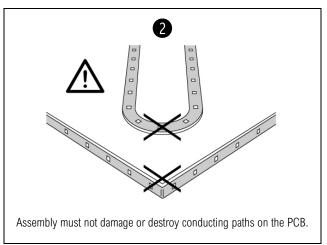
LEDtape Indoor Series IP00

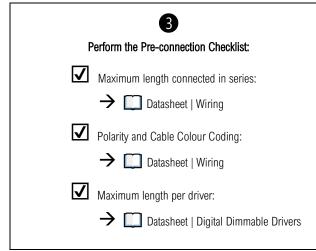
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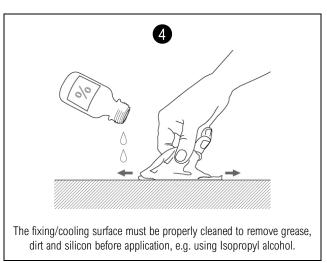


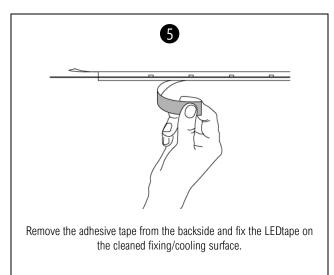
INSTALLATION

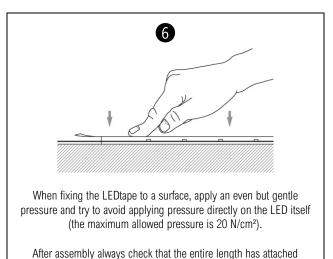




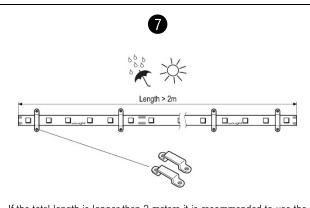




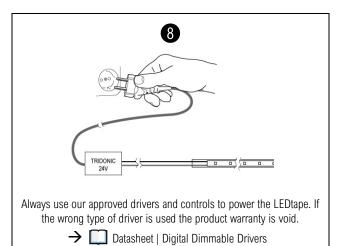


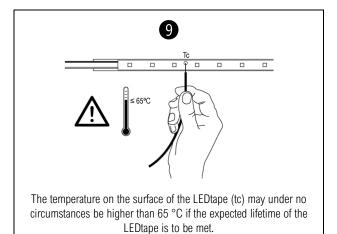


properly to the surface and that there is no air pockets underneath.

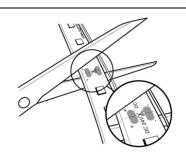


If the total length is longer than 2 meters it is recommended to use the included screw mounting clips in addition to the adhesive tape.

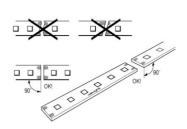




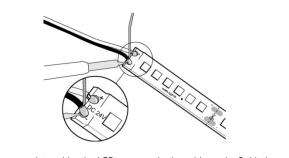
CUT & SOLDER



The LEDtape is separable at the middle of every solder pad with the full function of each LED segment. It is only allowed to cut at the indicated cutting line.



Always cut the LEDtape in a straight line -90° in relation to the PCB edges. Use Welight's official connection accessories to split, connect, and bridge the LEDtape.



If you need to solder the LEDtape, pre-tin the cables only. Soldering temperature max 300 °C for 4 seconds.

For details on how to solder an IPOO LEDtape, please watch this VIDEO TUTORIAL:

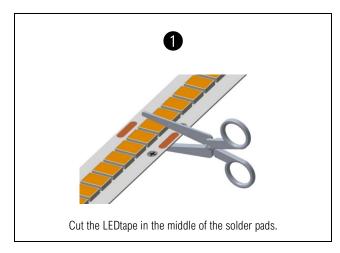


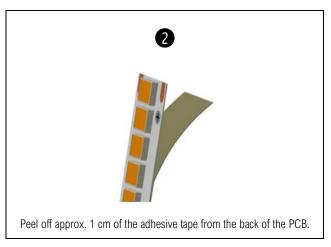
LEDtape Indoor Series IP00

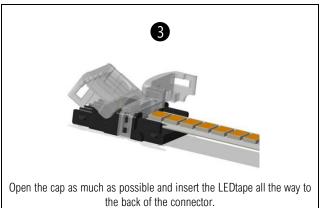
KOPPLINGSDON CONNECTORS VERBINDER CONNETTORI **CONECTORES**

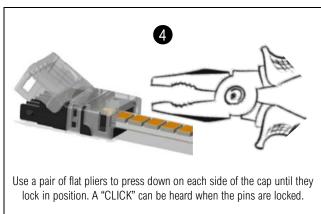


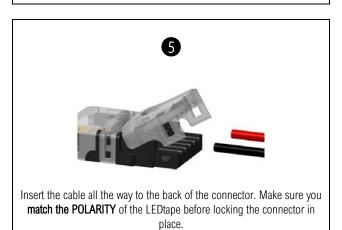
STRIP TO CABLE

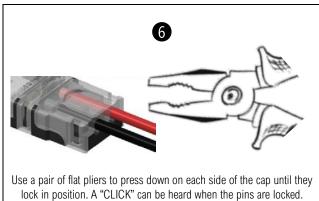




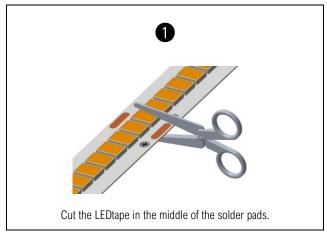


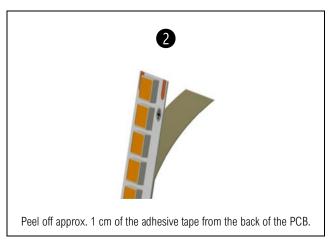


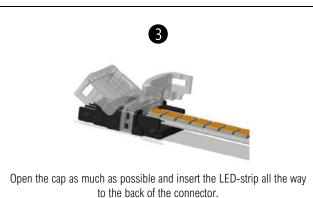


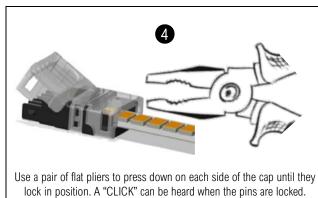


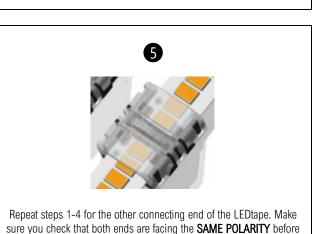
STRIP TO STRIP











If you are in doubt, consider soldering your connection instead. There is no substitute for a permanent soldered connection.

VIDEO TUTORIAL:



Do **NOT** use Quick Connectors when...

locking the last connector in place.

× You need to connect a pre-soldered joint.





- X Your LED strips might be subjected to movement as in installations on cars, boats, or other vehicles; or in installations that might be installed or set up several times, such as portable shelving or displays.
- × You have a large number of connections to make particularly in installations that require many connections back to back, where one failure would result in the loss of large sections of
- imes You are installing in tight places when the added size of the connector would make your LED strip installation difficult or impossible.
- imes Your connectors absolutely MUST NOT fail as in connectors installed in hard to reach places, in products or installations you're delivering or shipping to a customer.

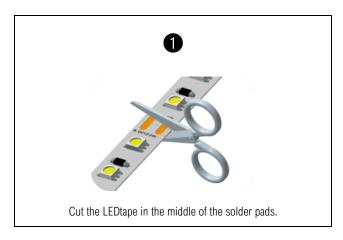
LEDtape Indoor Series IP00

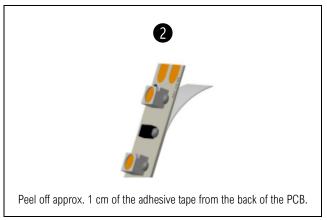
KOPPLINGSDON MINI **CONNECTORS SLIM** VERBINDER KLEIN CONNETTORI SOTTILE **CONECTORES DELGADO**

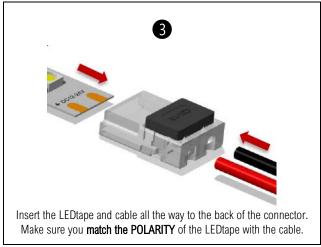


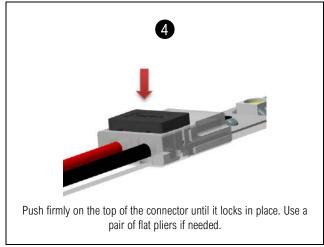


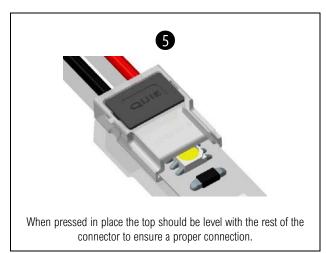
STRIP TO CABLE



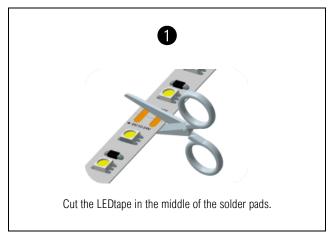


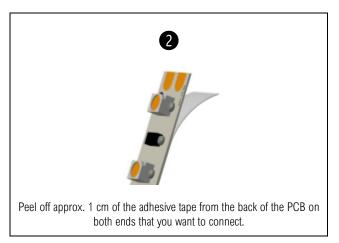


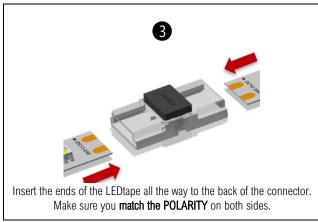


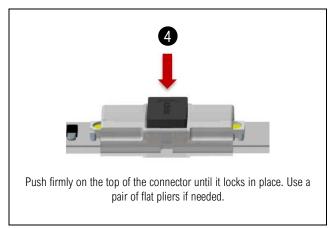


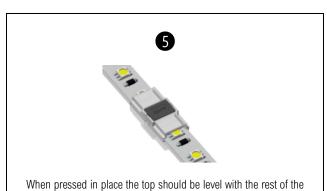
STRIP TO STRIP











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VIDEO TUTORIAL:



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× You need to connect a pre-soldered joint.





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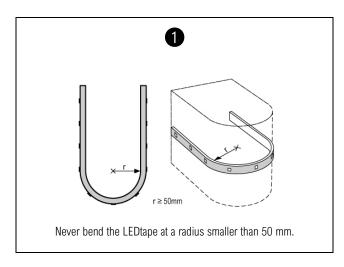
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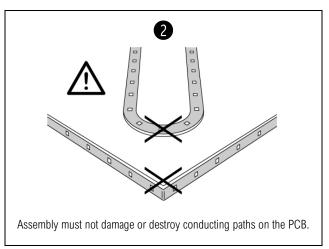
LEDtape Outdoor Series IP68

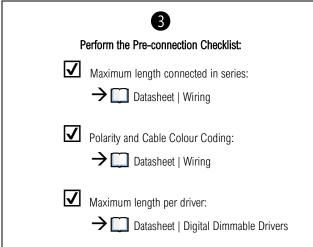
INSTRUKTIONER INSTRUCTIONS ANLEITUNG ISTRUZIONI INSTRUCCIONES

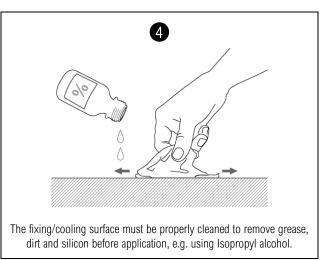


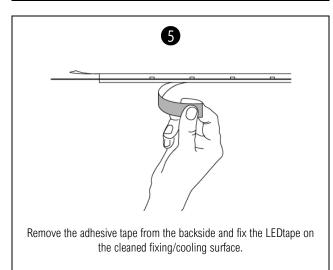
INSTALLATION

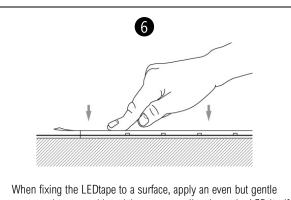






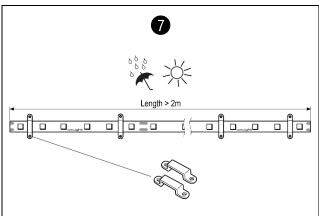




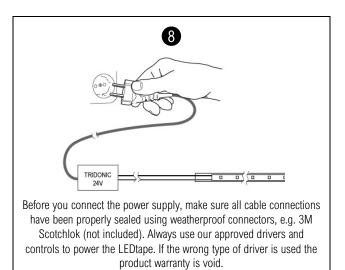


pressure and try to avoid applying pressure directly on the LED itself (the maximum allowed pressure is 20 N/cm²).

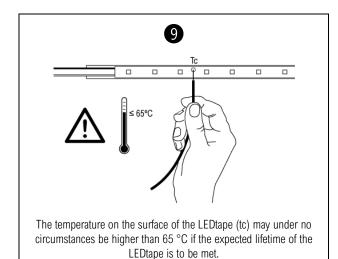
After assembly always check that the entire length has attached properly to the surface and that there is no air pockets underneath.



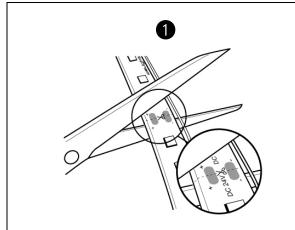
If the total length is longer than 2 meters or when used in environments with large variations in temperature (e.g. outdoor applications) it is recommended to use the included screw mounting clips in addition to the adhesive tape.



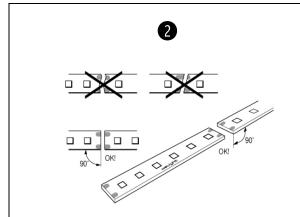
→ □ Datasheet | Digital Dimmable Drivers



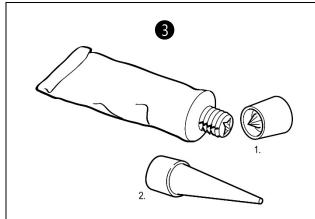
CUT & RE-SEAL



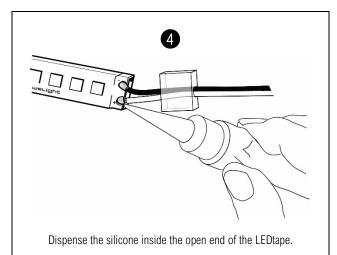
The LEDtape is separable at the middle of every solder pad with the full function of each LED segment. It is only allowed to cut at the indicated cutting line.

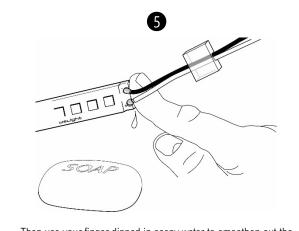


Always cut the LEDtape in a straight line - 90° in relation to the PCB edges. Failure to do so can result in damage of the internal conducting paths. Use Welight's official connection accessories to split, connect, bridge and re-seal the LEDtape.

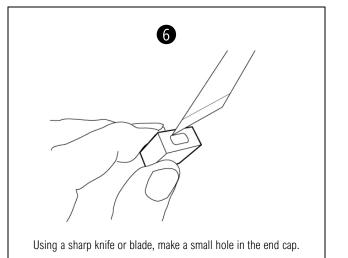


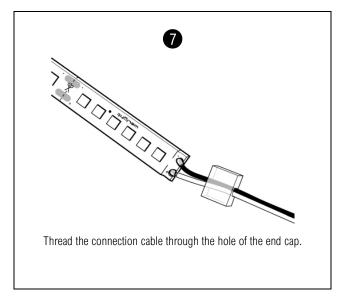
Locate the accessories included in the LEDtape box. Puncture the seal of the tube using the backside of the tube cap. Screw the dispersion needle onto the tube. Cut the top of the needle at an angle of 45-60°.

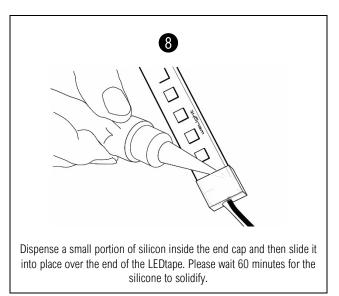


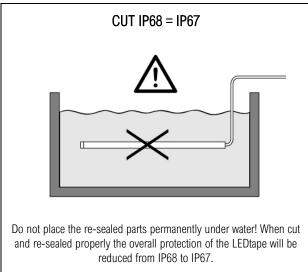


Then use your finger dipped in soapy water to smoothen out the opening creating a solid wall of silicon.

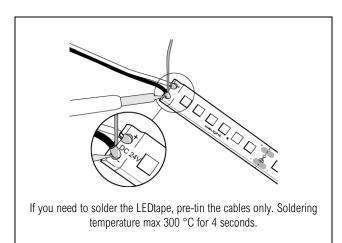








SOLDERING



For details on how to solder an IP68 LEDtape, please watch this VIDEO TUTORIAL:

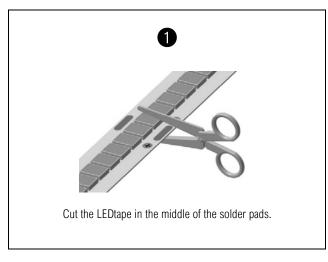


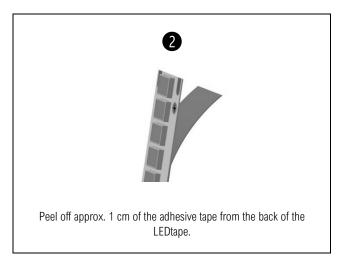
LEDtape Outdoor Series IP68

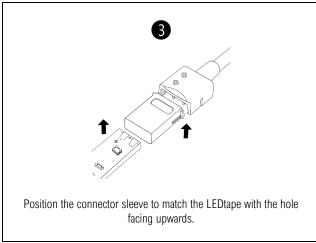
KOPPLINGSDON CONNECTORS VERBINDER CONNETTORI **CONECTORES**

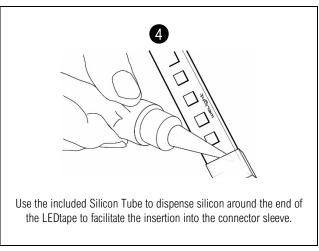


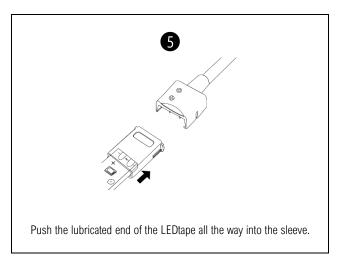
STRIP TO CABLE

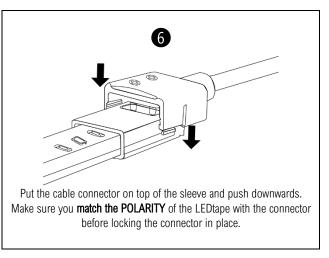


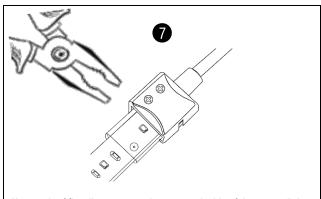




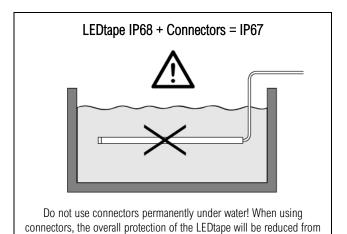






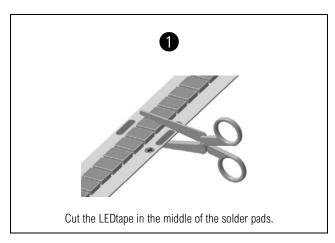


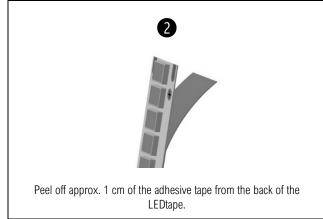
Use a pair of flat pliers to press down on each side of the cap until they lock in position. A "CLICK" can be heard when the pins are locked.

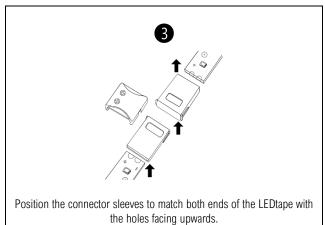


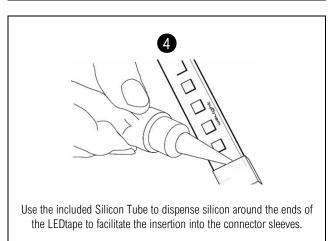
IP68 to IP67.

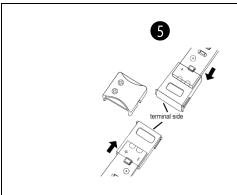
STRIP TO STRIP



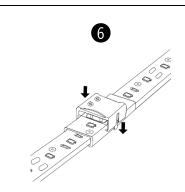




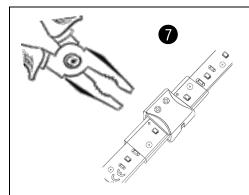




Push the lubricated ends of the LEDtape all the way into the sleeves.

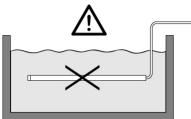


Put the bridge connector on top of the sleeves and push downwards. Make sure you match the POLARITY of the LEDtape with the connector before locking the bridge connector in place.



Use a pair of flat pliers to press down on each side of the cap until they lock in position. A "CLICK" can be heard when the pins are locked.

LEDtape IP68 + Connectors = IP67



Do not use connectors permanently under water! When using connectors, the overall protection of the LEDtape will be reduced from IP68 to IP67.

Do NOT use Quick Connectors when...

× You need to connect a pre-soldered joint.





X Your LED strips might be subjected to movement - as in installations on cars, boats, or other vehicles; or in installations that might be installed or set up several times, such as portable shelving or displays.

- X You have a large number of connections to make particularly in installations that require many connections back to back, where one failure would result in the loss of large sections of
- × You are installing in tight places when the added size of the connector would make your LED strip installation difficult or impossible.
- × Your connectors absolutely MUST NOT fail as in connectors installed in hard to reach places, in products or installations you're delivering or shipping to a customer.

If you are in doubt, consider soldering your connection instead. There is no substitute for a permanent soldered connection.

VIDEO TUTORIAL:



SAFETY INSTRUCTIONS

- Read these instructions carefully before starting the installation and save for future reference. All connections to the device must be made by a qualified electrician or person with the necessary expertise in electrical installation EN in accordance with relevant rules and standards. Make sure that the mains voltage is disconnected before installation or maintenance.
- Läs dessa instruktioner innan installationen påbörjas och lämna dem vidare till brukaren av anläggningen. All SE anslutning till enheten får endast utföras av behörig elektriker eller person med kännedom om elektrisk installation i enlighet med gällande regler och standard. Se till att spänningen är frånslagen före installation eller underhåll.
- Lue nämä ohjeet ennen asentamista ja luovuta ohjeet valaisimen seuraavalle käyttäjälle. Kytkennät ohjaimeen saa FI tehdä ainoastaan pätevä sähköasentaja tai sähköasennukset hallitseva henkilö voimassa olevien määräysten ja standardien mukaisesti. Varmista, että jännite on kytketty päältä ennen asennusta ja huoltoa.
- Les disse instruksjonene før du starter installeringen, og gi den deretter videre til anleggets bruker. All tilkobling NO til enheten skal utføres av godkjent elektriker eller person med nødvendig kunnskap om elektrisk installasjon i henhold til gjeldende forskrifter og standard. Sørg for at strømmen er koblet fra før installering og ved vedlikehold.
- Læs disse anvisninger før du starter installationen og aflever vejledningen til anlæggets bruger. Alle tilslutninger DK på enheden skal udføres af en autoriseret elinstallatør i overensstemmelse med gældende regler og standarder. Afbryd spænding før installation og vedligeholdelse.