welight

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
	4127409

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

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Accessories

pp. 4
pp. 4

Mounting Instructions



welight

TECHNICAL DATA

Packaging

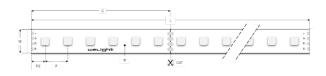
Full carton	20 pcs
Weight per pc	IP00: 320 g IP68: 700 g
Box dimensions	250 x 250 x 30 mm

Electrical ①

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 @

Length (L)	5 m
Max length in series ©	10 m
Min Bending Radius	IP00: 30 mm IP68: 50 mm
Width (W)	IPOO: 10 mm IP68: 12 mm Incl. Endcap: 14 mm
Height	IP00: 1,4 mm IP68: 4,5 mm Incl. Endcap: 6,5 mm
Cutting length (C)	83,3 mm
Pitch distance (P)	12 mm (between groups)



Temperature and Lifetime

Performance Temp Rating (Tp)	65 °C
Operating Temp Range (Ta) (S)	-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
Optical O3	
Luminous Flux (Im) 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)

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	

Dimming Performance Summary 103

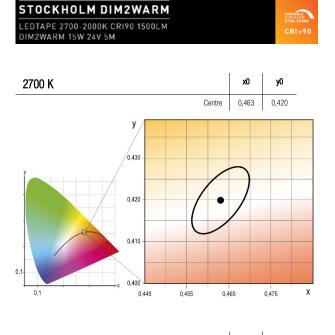
IP00 Dim Level	CCT	LPM
100%	2700 K	1500
50%	2400 K	750
20%	2200 K	300
1%	2000 K	15

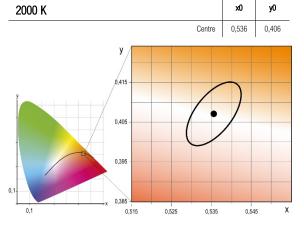
IP68 Dim Level	CCT	LPM
100%	3000 K	1500
50%	2700 K	750
20%	2500 K	300
1%	2400 K	15

© Tolerance range for electrical and optical data ±10% © Tolerance range for dimensional data ±1% ③ All values for ta = 25 °C / tc = 65 °C ④ Measured at the beginning of the LEDtape. Exceeding the maximum operating voltage leads to an overload on the tape. This may result in a significant reduction in lifetime or even destruction of the tape. ⑤ Self-cooling at te 35 °C Ø When connecting 10 meters in series, the supply voltage must be between 24-28V at the beginning of

© 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.

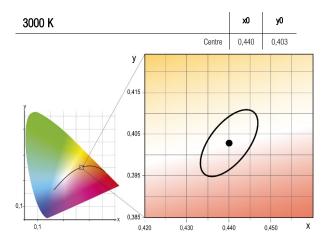
Chromaticity coordinates and tolerances (according to CIE 1931)

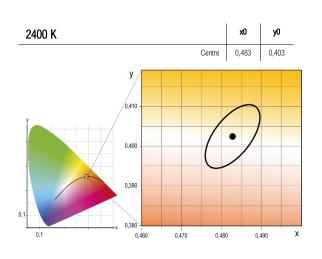




The specified color coordinates are measured by a current impulse with nominal values of module after a settling time of 100 msec. The ambient temperature of the measurement is ta = 25 °C. The measurement tolerance of the color coordinates is \pm 0.01.



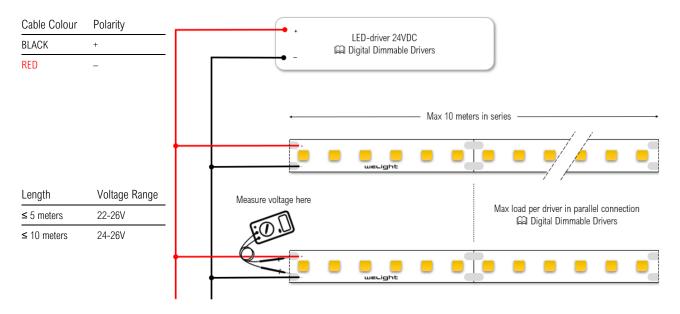




WIRING

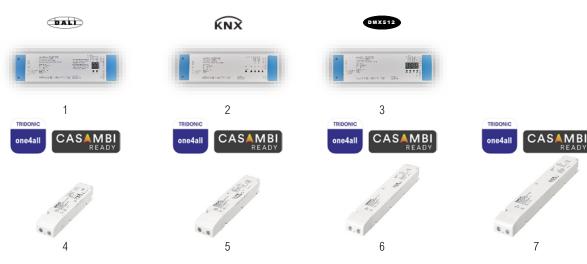
The LEDtape is delivered with colour coded connection cable at each end, L = 1 m, $2 \times 0.5 mm^2$ (AWG20).

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



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Suitable for LEDtape

Pic	Туре	Art. Code	Description	Included	IP00	IP68
1	LEDtape Connector Strip-Strip	W8434	Connect IP00 strips to each other	1 pc	\checkmark	×
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	\checkmark	×	
3	LEDtape Connector Slim Strip-Strip	e 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	\checkmark	×
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 (0,5mm ²).	1 pc	\checkmark	×
5	LEDtape Connector IP Strip-Strip	W8438	Connect IP68 strips to each other 🛕	1 pc	×	\checkmark
6	LEDtape Connector IP Strip-Cable	W8439	Connect IP68 strip to a cable (20cm cable included) 🛕	1 pc	X	\checkmark
7	LEDtape Connector Strip-Corner-Strip	W8451	Connect IP00 strips in a 90° angle. Suitable for corners.	-	\checkmark	×
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 (0,5mm ²).	Ι	\checkmark	×
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).	-	\checkmark	×
10	LEDaccessory Connector IP68 kit F+M	W8411-A2	IP68 connector with lockable female and male plug incl. 30cm cable, white	-	×	\checkmark
11	LEDcable RKUB 2X0.5 AWG20 Rd/Bk 6m	W8417	Black/red connection cable, 6m reel. Indoor use only.	-	\checkmark	\checkmark
12	LEDcable RKUB 2X0.5 AWG20 W/W 6m	W8418	White connection cable, 6m reel. Indoor use only.	-	\checkmark	\checkmark
11	LEDcable RKUB 2X0.5 AWG20 Rd/Bk 100m	W8421	Black/red connection cable, 100m reel. Indoor use only.	-	\checkmark	\checkmark
12	LEDcable RKUB 2X0.5 AWG20 W/W 100m	W8422	White connection cable, 100m reel. Indoor use only.	-	\checkmark	\checkmark
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. <u>A Not compatible with quick connectors!</u>	Ι	\checkmark	\checkmark
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.	-	\checkmark	\checkmark
15	LEDtape IP Endcap	W8432	Suitable for sealing the end of a cut LEDtape IP68. Use with W8433.	5 pcs	×	\checkmark
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	-	×	\checkmark
18	LEDtape Mounting Clip	W8430	Mounting clip with single screw for IP00-rated LEDtape	10 pcs	\checkmark	×
18	LEDtape Mounting Clip IP68	W8431	Mounting clip with single screw for IP68-rated LEDtape	10 pcs	×	\checkmark

When using the accessory properly the overall IP-rating of the solution will be IP67.

PROFILE SYSTEMS & LENSES

Start by selecting an aluminium profile (A) and a suitable lens cover (B) and then add optional accessories (C).





									Optional accessories			
Pic	Туре	Art. Code	L (mm)	W (mm)	H (mm)	W (mm) incl. lens cover	H (mm) incl. Iens cover	Application	Lens Cover	End Cap	Fixed Mount	Adjustable Mount
1	Z200-2	24166148	2000	18	9	21	16	Corner	\checkmark	×	×	×
2	Z201-2	24166149	2000	18	9	21	16	Linear Slim	\checkmark	\checkmark	\checkmark	×
3	Z22W-2	24166150	2000	18	16	21	24	Linear	\checkmark	\checkmark	\checkmark	\checkmark









							Profile	
Pic	Туре	Art. Code	L (mm)	Mounting Method	Typ. application	Z200-2	Z201-2	Z22W-2
1	15°	24166405	2000	Slide-on	Wall wash 🛆	\checkmark	~	\checkmark
2	30°	24166409	2000	Slide-on	Wall wash	\checkmark	~	\checkmark
3	60°	24166410	2000	Slide-on	Shelf/Cabinet	~	~	\checkmark
3	90°	24166411	2000	Slide-on	Shelf/Cabinet	\checkmark	\checkmark	\checkmark
4	30° x 60°	24166412	2020	Slide-on	Asymmetric	\checkmark	~	\checkmark
5	Batwing	24166123	2000	Snap-on	Side-emitting	×	×	\checkmark
6	120°	24138743	2000	Snap-on	Accent / Cove	\checkmark	~	\checkmark
7	Opal	24138742	2000	Snap-on	Accent / Cove	\checkmark	~	\checkmark













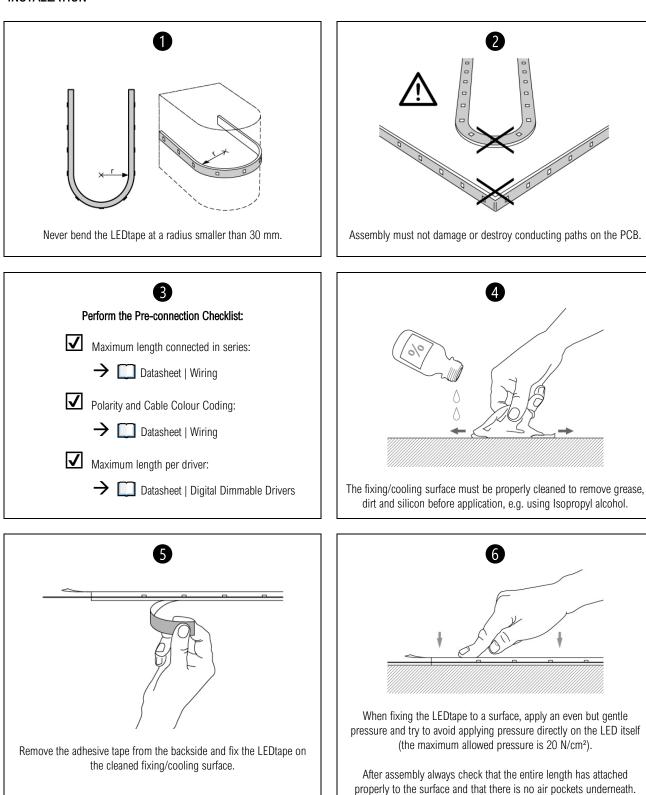
			Profile				
Pic	Туре	Art. Code	Z200-2	Z201-2	Z22W-2		
1	End cap Grey PMMA	24166334	×	\checkmark	×		
2	End Cap Aluminium	24139174	×	×	\checkmark		
2	End Cap Aluminium Cable Entry	24139173	×	×	\checkmark		
3	Mounting Bracket 0°	88166859	×	\checkmark	\checkmark		
4	Mounting Bracket 15°	88167372	×	\checkmark	\checkmark		
4	Mounting Bracket 30°	88167373	×	\checkmark	\checkmark		
4	Mounting Bracket 45°	88167374	×	\checkmark	\checkmark		
4	Mounting Bracket 60°	88167375	×	\checkmark	\checkmark		
5	Mounting Bracket Adjustable	24166024	×	×	\checkmark		

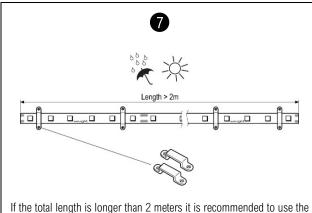
LEDtape Indoor Series IP00

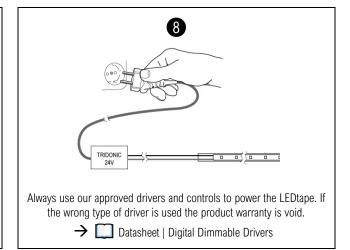
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INSTALLATION

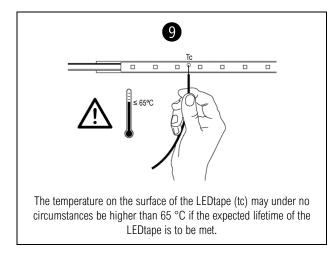




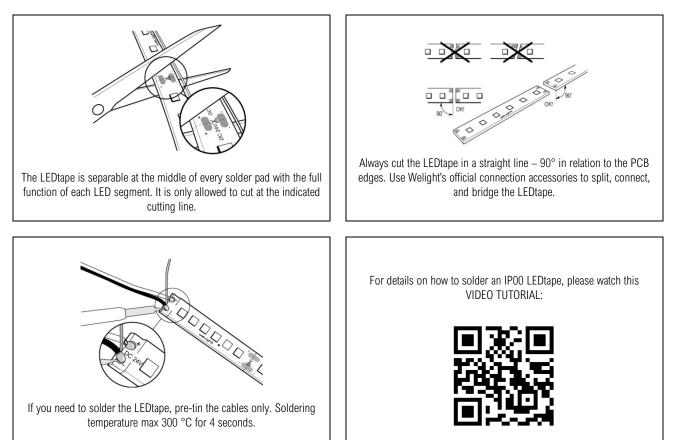




If the total length is longer than 2 meters it is recommended to use the included screw mounting clips in addition to the adhesive tape.



CUT & SOLDER

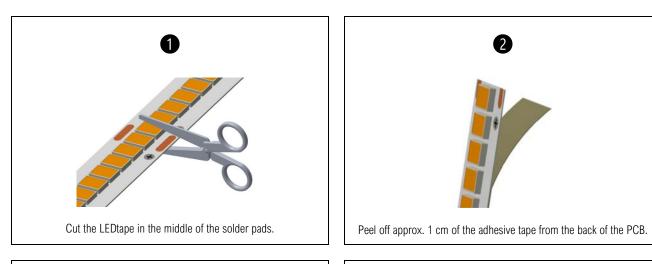


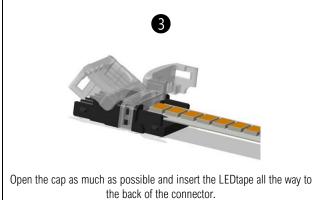
LEDtape Indoor Series IP00

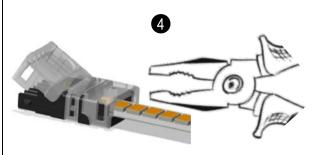
KOPPLINGSDON CONNECTORS VERBINDER CONNETTORI CONECTORES

STRIP TO CABLE

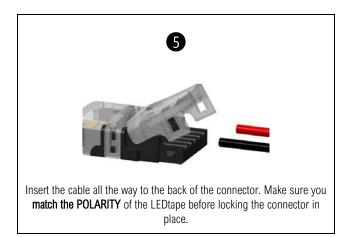


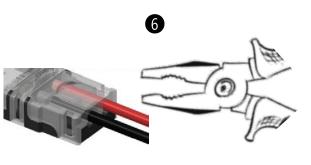






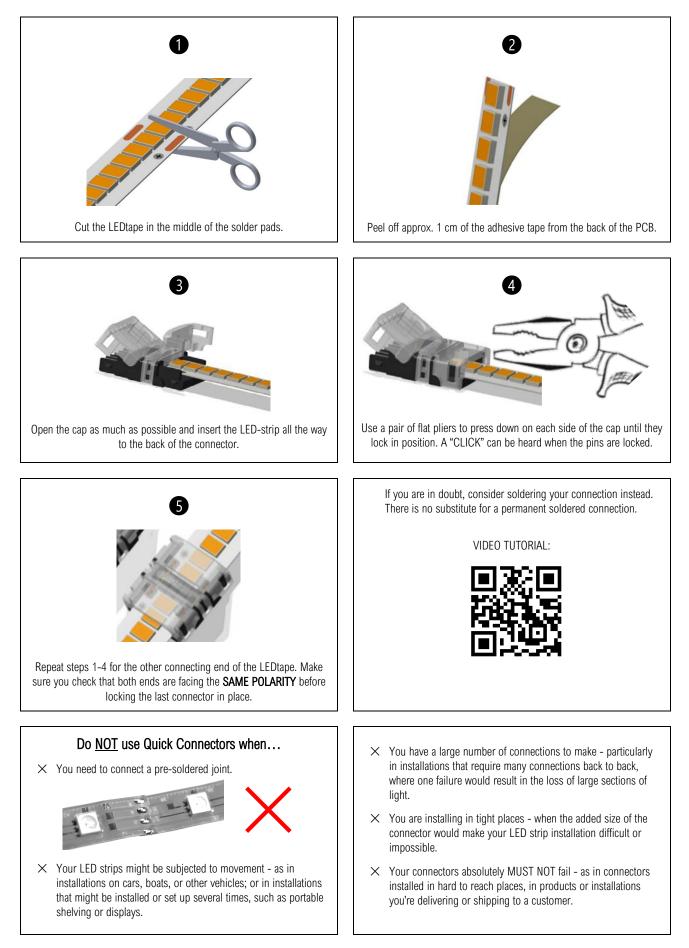
Use a pair of flat pliers to press down on each side of the cap until they lock in position. A "CLICK" can be heard when the pins are locked.





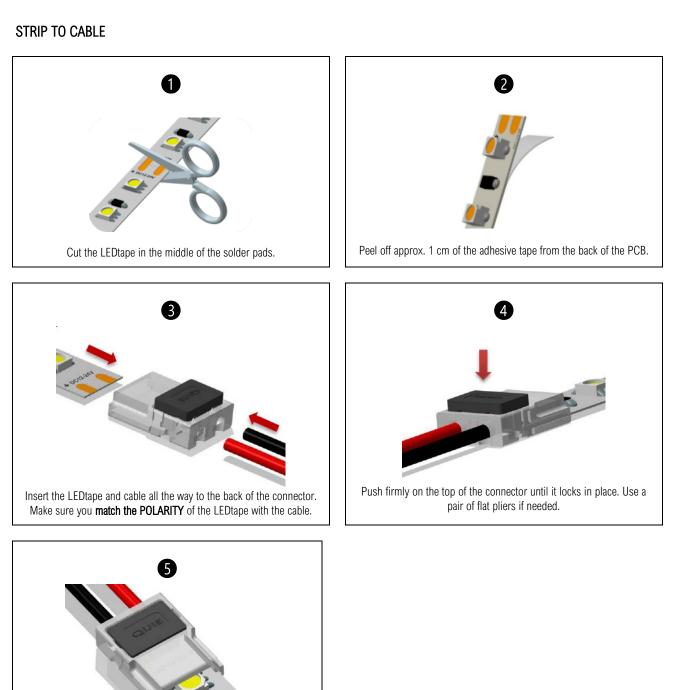
Use a pair of flat pliers to press down on each side of the cap until they lock in position. A "CLICK" can be heard when the pins are locked.

STRIP TO STRIP



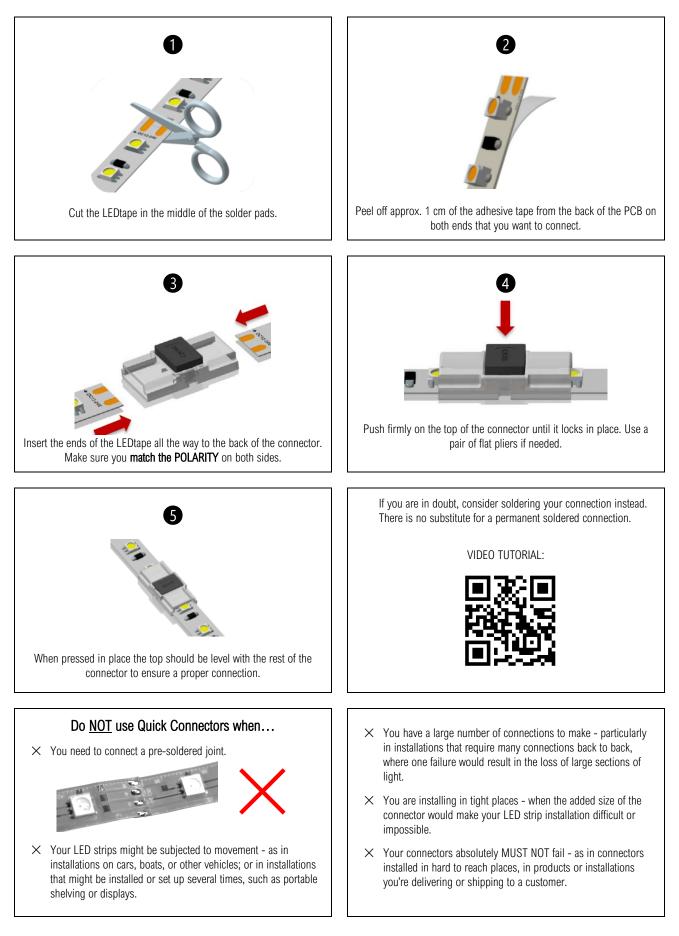
LEDtape Indoor Series IP00

KOPPLINGSDON MINI CONNECTORS SLIM VERBINDER KLEIN CONNETTORI SOTTILE CONECTORES DELGADO



When pressed in place the top should be level with the rest of the connector to ensure a proper connection.

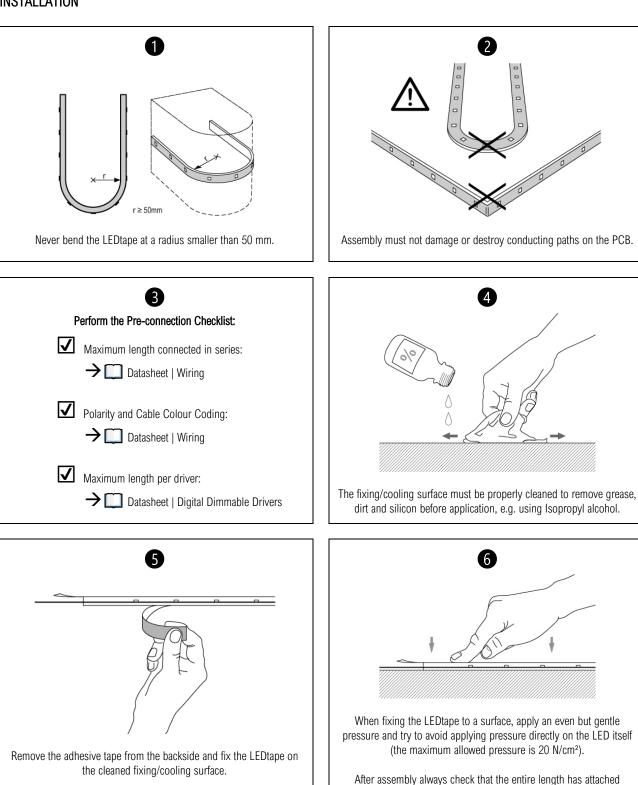
STRIP TO STRIP



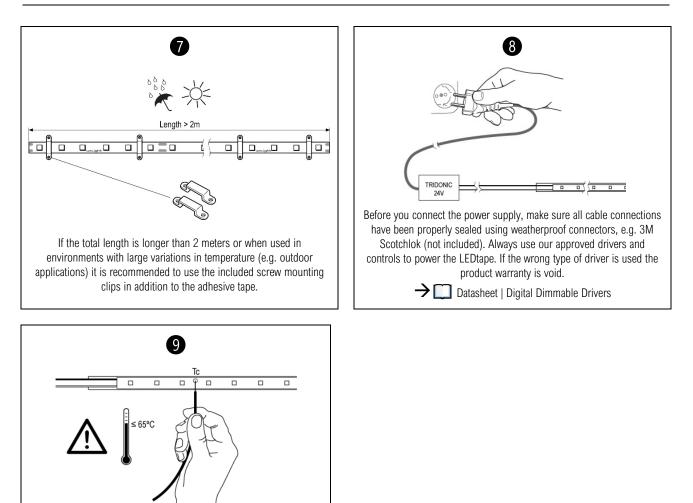
LEDtape Outdoor Series IP68

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INSTALLATION

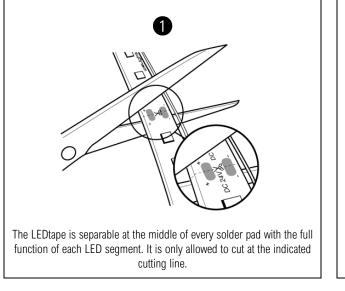


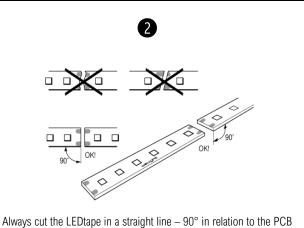
properly to the surface and that there is no air pockets underneath.



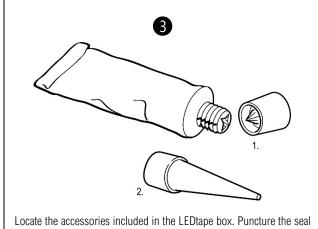
The temperature on the surface of the LEDtape (tc) may under no circumstances be higher than 65 °C if the expected lifetime of the LEDtape is to be met.

CUT & RE-SEAL

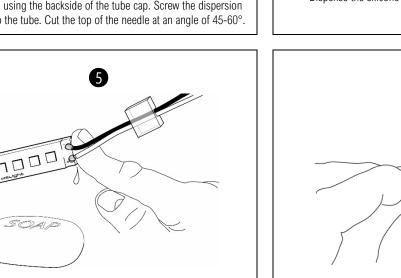




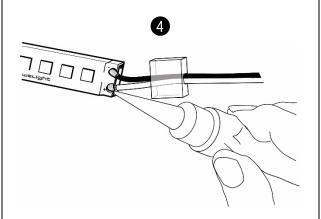
edges. Failure to do so can result in damage of the internal conducting paths. Use Welight's official connection accessories to split, connect, bridge and re-seal the LEDtape.



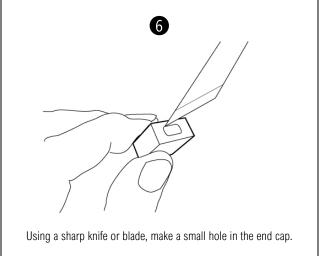
of the tube using the backside of the tube cap. Screw the dispersion needle onto the tube. Cut the top of the needle at an angle of 45-60°.

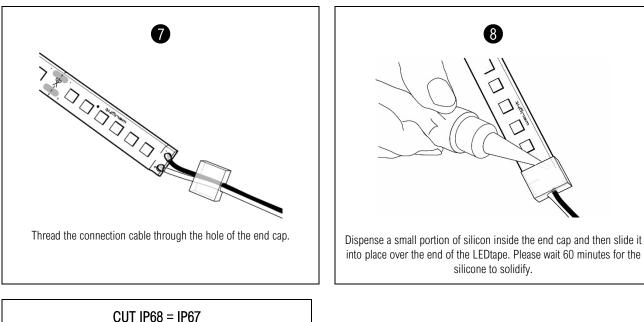


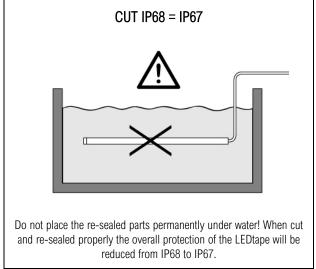
Then use your finger dipped in soapy water to smoothen out the opening creating a solid wall of silicon.



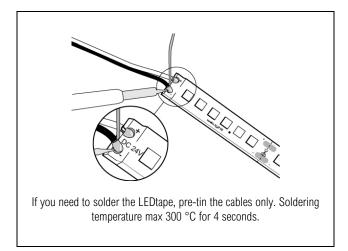
Dispense the silicone inside the open end of the LEDtape.







SOLDERING



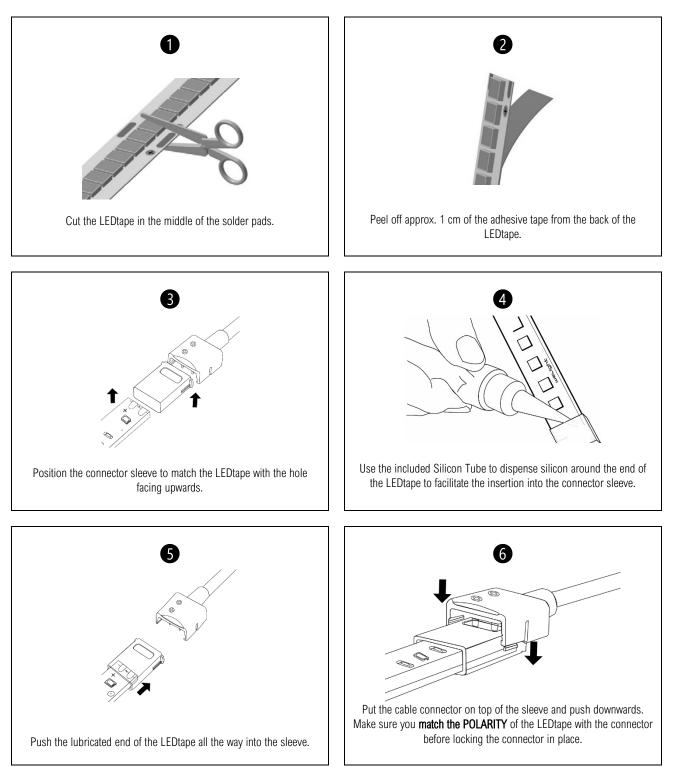


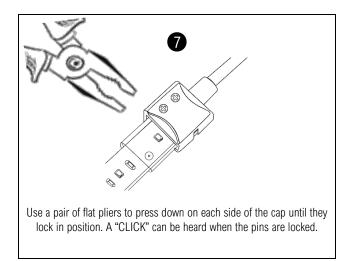
LEDtape Outdoor Series IP68

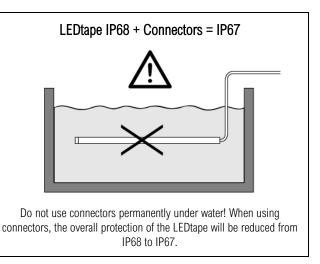
KOPPLINGSDON CONNECTORS VERBINDER CONNETTORI CONECTORES

STRIP TO CABLE









STRIP TO STRIP

