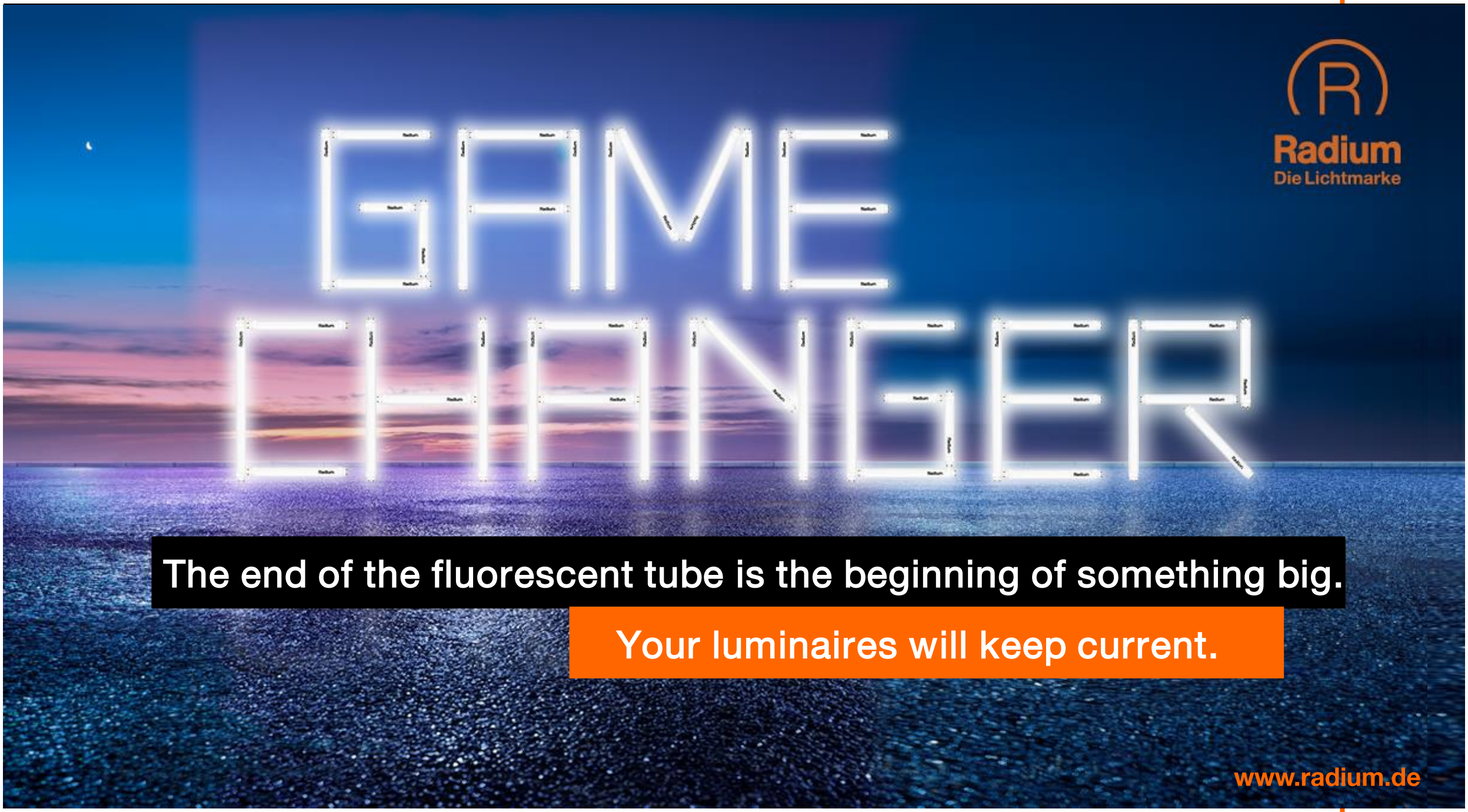

GAME
CHANGER
Radium
Die Lichtmarke
The end of the fluorescent tube is the beginning of something big.
Your luminaires will keep current.
www.radium.de

Radium LED Neo.

Brings light into the future.

- ✓ Increase in efficiency: up to 192 lm/W
- ✓ Super bright: up to 6,200 lm per lamp
- ✓ Extremely long service life: up to 100,000h L70B10
- ✓ 5 years guarantee
- ✓ Future-proof by DALI control
- ✓ Flicker-free
- ✓ Dimmable
- ✓ Suitable for Emergency power
- ✓ Low-priced
- ✓ TÜV certified

LED Neo.

That's how it works!

Unique product concept: robust, external Radium driver instead of integrated mini-driver.

Radium LED Neo

+ Very high efficiency up to 192 lm/W
+ High luminous flux up to 6,200 lm
+ Flicker-free lighting

LED T8 Neo

LED T5 Neo

Radium LED Driver

+ One Radium LED Neo driver DALI can control up to 4 Radium LED Neo.
+ External driver creates space for high quality technical components which are not usable in mini driver format.
+ High reliability
+ No compatibility check


Keep current.
Dimmable, suitable for emergency power and DALI capable.
LED Neo tubes have convinced me.
Frank Krock, Electrician
Radium LED Neo Tubes
Radium

DALI-Capable & Dimmable.

Dare the jump into the future with existing luminaires.

A unique product concept like there is no other on the market.

- Radium DALI2 Driver make your LED tubes controllable via DALI.
- Integration into an IoT network.
- LED Neo tubes luminous flux can be adjusted to one's own needs.
- Before installation, use the driver to determine whether less or more light is required than before the conversion.
- Dimmability of the LED tubes by operation with these LED drivers – in order to adjust the brightness of your system according to your wishes.

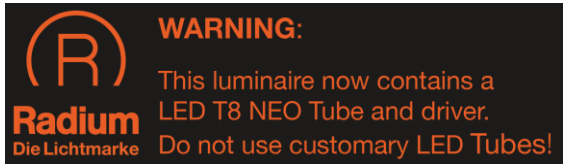
Suitable for emergency power and certified.

Safe is safe.

- Suitable for installation in emergency power systems
- DC capable driver → Radium LED Neo continues to emit the same brightness even if the power supply is switched to DC in the event of a fault
- TÜV Süd ENEC certified
- Safety extra-low voltage (SELV) ensures high operational safety

The responsible master electrician certifies the safe and standard-compliant operation of the retrofitted luminaire with LED Neo with the specialist contractor declaration.

System reliability after modernization is significantly higher than before!



Additional sticker for marking the luminaire is included in the package.

SELV


Keep current.
LED Neo tubes bring our luminaires to the future: efficient, up to 100,000 h lifetime, resource-saving.
Katharina Lotzek, Purchasing
Radium LED Neo Tubes
Radium

LED Neo tubes.

Convincing even in comparison with classic retrofit solutions.

Advantages LED Tube

- Retrofit - easy replacement without changing the luminaire if the ECG is compatible.
- Inexpensive

VS.

Advantages LED Neo tubes

- Dimmable via DALI or Push&DIM*
- Suitable for emergency power
- Higher efficiency and lifetime
- Higher and flexibly adjustable luminous flux
- Flicker free light
- No compatibility problems
- Components of higher quality / even higher reliability

* With Radium DALI Drivers

LED Neo tubes.

Comparison with LED luminaires.

Advantages LED luminaire

- Possibly better beam control
- Consists entirely of new and "unused" components
- Possibly more modern design

Advantages LED Neo tubes

- Much more sustainable due to keeping the old luminaires/ fixtures/holders and due to the choice of materials
- Significantly cheaper in purchasing
- No commitment to one luminaire manufacturer
- Less effort (driver replacement vs. uninstalling luminaires and installing completely new luminaire system)
- Easier and cheaper replacement of components

Comparable

- Efficiency
- Illuminance
- Product life

VS.

One lamp for everything.

Adjustable luminous flux, modular functionality.

Cost consciousness, efficiency and resource conservation are practically woven into the DNA of the new Radium LED Neo tubes. Witness the many advantages:

- **Optimized, highly efficient storage** thanks to the modular system of driver and lamp, as well as variable luminous flux
- **Sustainable and resource-saving** by modernizing and continued use of existing luminaires
- **Short delivery times** when converting to Radium LED Neo tubes instead of long waiting times when ordering new LED luminaires

High operational safety.

Glass and shatter protection.

- Quick and easy conversion: install new driver, screw in LED Neo Tube – done!
- **Big advantage:** free choice of light source thanks to T5 and T8 standard in the long term
  → Luminaire and light source are not inseparable, so in case of defect, complete replacement with assembly effort and electrical scrap is **not** necessary
- Straight appearance thanks to rigid **glass bulb**, while plastic LED tubes sag quickly or bend under heat
- **Shatter protection** for high protection during transport and operation*
  → The bulbs are more resistant and even if a bulb should break, fragments do not come out

  → Suitable for use in the food industry (IFS)

* except LED T5 Neo

Radium LED Neo tubes.

Use the LED advantage against high electricity costs.

- Around 50% lower energy consumption than conventional fluorescent tubes with the same luminous flux (in some luminaires even up to 80%)
- Further reduction of power consumption possible through efficient lighting management: via DALI, Push&DIM or setting the luminous flux directly on the driver

Radium LED Neo tubes lasts longer: reduce maintenance intervals.

- Up to 100,000 light hours provide around 11 years of non-stop illumination (LED T8 Neo® and driver)
- 5 years guarantee on drivers and LED tubes


Radium
Keep current.
We have cleverly retrofitted with the Neo tubes:
Low acquisition costs and big savings.
Christian Hoffmann, CEO
Radium LED Neo tubes

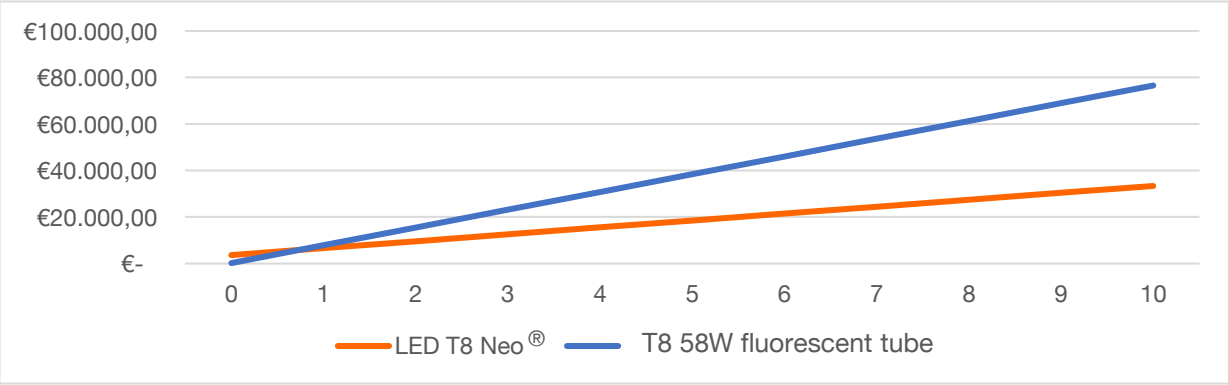
Fast amortization, low investment.

Example of LED T8 Neo®.

- Invest little - save a lot: All working T8 luminaires can be used
- Over 60% lower investment costs compared to a LED continuous row system

	LED T8 Neo®	LED Luminaire
Number of luminaires (pcs.)	40	40
Number of lamps per luminaire (pcs.)	2	1
Changeover time per luminaire (min.)	12	20
Personnel costs/hour	70,00 €	70,00 €
Investment per luminaire DALI (RRP)	110,70 €	304,90 €
Total investment costs	4.988,00 €	13.129,33 €

- Fluorescent lamp replacement pays for itself after just 8.8 months



LED T5 Neo.

The portfolio.

– 5 – YEARS GUARANTEE

Features

Exactly like the original:

- Same Design & Material
- Same Style
- Just as bright
- **Dimmable and emergency power capable**

Better than the original:

- Very efficient with up to **192 lm/W**
- **90,000 h (L70)** main service life
- **Luminous flux** can be **adjusted flexibly**
- Less types but more flexibility
- **220°** beam angle

1

	Type	W	lm		
1	**LED T5 NEO 14/24**	5.7 – 10.0	960 – 1,800	G5	830/840/865*
1	LED T5 NEO 21/39*	10.1 – 17.9	1,670 – 3,150	G5	830/840/865*
1	**LED T5 NEO 28/54**	13.8 – 24.5	2,350 – 4,400	G5	830/840/865*
1	**LED T5 NEO 35/49**	13.2 – 23.4	2,270 – 4,300	G5	830/840/865*
1	**LED T5 NEO 49/80**	19.2 – 33.9	3,320 – 6,200	G5	830/840/865*

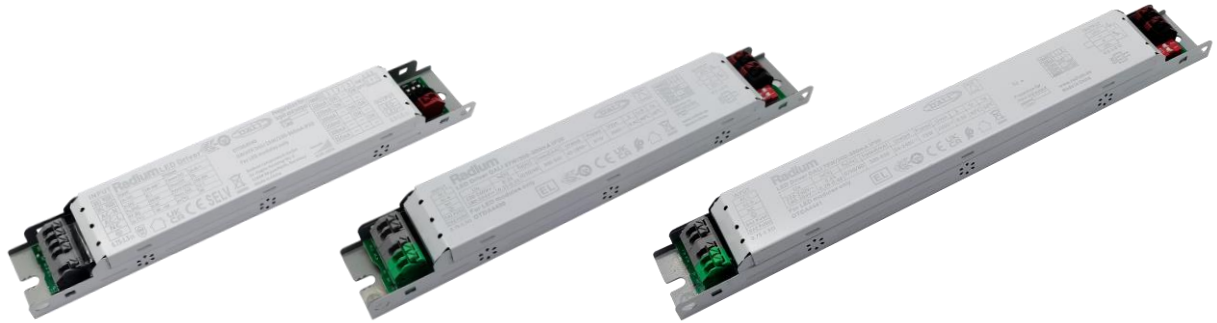
* LED T5 NEO 21/39 as well as all T5 Neo in light color 865 **only available on request**!

LED T5 Neo.

Radium DALI Driver.

Features

- **Dimmable** via DALI or Push&DIM
- Adjustable output current via dip switch
- High efficiency: 90-92%
- Protection class I
- **Flicker-free**
- Very long lifetime of up to **100,000 h**
- **Emergency power capable (EL)**
- **ENEC certified**



	DRIVER DALI 15/200-350	DRIVER DALI 37/200-350	DRIVER DALI 75/200-350
Max. Power (W)	14,7	37	75
Efficiency (%)	≥84	≥90	≥92
Output current (mA)	100, 150, …., 350	200, 250, 300, 350	200, 250, 300, 350
Output voltage (V DC)	16 – 42	46 – 185	54 – 240
Mains voltage (V AC)	220 - 240	220 - 240	220 - 240
Lifetime (h)	100,000	100,000	100,000
Guarantee	5 years	5 years	5 years
Material	Metal	Metal	Metal
Ambient temperature (°C)	-30°C…+50°C	-30°C…+50°C	-30°C…+50°C
Dimensions (mm)	195x30x21	195x30x21	245x30x21
Dimming interface	DALI 2.0, Push&DIM	DALI 2.0, Push&DIM	DALI 2, Push&DIM
Emergency power	CE, ENEC, DALI 2.0	CE, ENEC, DALI 2.0, EL	CE, ENEC, DALI 2.0, EL

LED T5 Neo.

Radium Driver ON/OFF.

Features

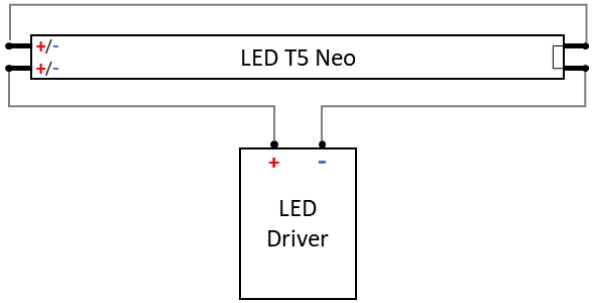
- High efficiency 93%
- Adjustable output current via dip switch
- Protection class I
- **Flickerfree**
- Very long lifetime of up to **70,000 h**
- **Emergency power capable (EL)**
- Strong price-performance ratio
- **ENEC** zertifiziert

	DRIVER 20/200-350	DRIVER 40/200-350	DRIVER 60/200-350	DRIVER 80/200-350
Max. Power (W)	20	40	60	80
Efficiency (%)	≥85	≥90	≥91	≥93
Output current (mA)	200, 250, 300, 350	200, 250, 300, 350	200, 250, 300, 350	200, 250, 300, 350
Output voltage (V DC)	25 – 57	58 – 114	115 – 172	170 – 230
Mains voltage (V AC)	220 - 240	220 - 240	220 - 240	220 - 240
Lifetime (h)	70,000	70,000	70,000	70,000
Guarantee	5 years	5 years	5 years	5 years
Material	Metal	Metal	Metal	Metal
Ambient temperature (°C)	-30°C…+50°C	-30°C…+50°C	-30°C…+50°C	-30°C…+50°C
Dimensions (mm)	156x30x21	156x30x21	195x30x21	245x30x21
Emergency power	CE, ENEC, EL	CE, ENEC, EL	CE, ENEC, EL	CE, ENEC, EL

LED T5 Neo.

Adjustability.

- All drivers (DALI and ON/OFF) can be set to 350, 300, 250 & 200mA
- The current setting allows one T5 Neo to replace two fluorescent lamp wattages (e.g. 35 & 49W)
- This reduces the number of types and the storage complexity (15 instead of 24)
- The customer can choose the preferred power and brightness during installation



1 to 4 LED T5 Neo can be operated on one LED driver

LED T5 NEO 35/49	W	lm	lm/W	Note
350mA	23.4	4,300	184	~ 1:1 Replacement of the **49W** fluorescent lamp
300mA	20.0	3,700	185	~ Same illuminance as **49W** fluorescent lamp
250mA	16.6	3,110	188	~ 1:1 Replacement of the **35W** fluorescent lamp
200mA	13.2	2,520	191	~ Same illuminance as **35W** fluorescent lamp

LED T5 Neo.

DALI Driver mapping.

- Depending on the tube-driver combination, 1-4 LED T5 Neo tubes can be operated on one LED driver
- Each LED T5 Neo tube is fed from one side, whereby it does not matter which PIN is + and which is –
- The PINs on the opposite side of the tube are bridged
- The wiring with the required LED driver can either be done on one socket only or you wire both sockets so it doesn't matter how around you put them (see Wiring)

OTDA4030	DRIVER DALI 15W/100-350mA IP20
OTDA4439	DRIVER DALI 37W/200-350mA IP20
OTDA4441	DRIVER DALI 75W/200-350mA IP20

DALI Driver mapping		1. Lamp	2. Lamp	3. Lamp	4. Lamp
LED T5 NEO 14/24	350mA	10,0 W	20,0 W	30,0 W	40,0 W
	300mA	8,6 W	17,2 W	25,8 W	34,4 W
	250mA	7,1 W	14,2 W	21,3 W	28,4 W
	200mA	5,7 W	11,4 W	17,1 W	22,8 W
LED T5 NEO 21/39	350mA	17,9 W	35,8 W	53,7 W	71,6 W
	300mA	15,3 W	30,6 W	45,9 W	61,2 W
	250mA	12,7 W	25,4 W	38,1 W	50,8 W
	200mA	10,1 W	20,2 W	30,3 W	40,4 W
LED T5 NEO 28/54	350mA	24,5 W	49,0 W	73,5 W	
	300mA	20,9 W	41,8 W	62,7 W	
	250mA	17,3 W	34,6 W	51,9 W	
	200mA	13,8 W	27,6 W	41,4 W	
LED T5 NEO 35/49	350mA	23,4 W	46,8 W	70,2 W	
	300mA	20,0 W	39,9 W	59,9 W	
	250mA	16,6 W	33,1 W	49,7 W	
	200mA	13,2 W	26,4 W	39,6 W	
LED T5 NEO 49/80	350mA	33,9 W	67,8 W		
	300mA	29,0 W	57,9 W		
	250mA	24,1 W	48,1 W		
	200mA	19,2 W	38,4 W		

LED T5 Neo.

ON/OFF Driver mapping.

- Depending on the tube-driver combination, 1-4 LED T5 Neo tubes can be operated on one LED driver
- Each LED T5 Neo tube is fed from one side, whereby it does not matter which PIN is + and which is –
- The PINs on the opposite side of the tube are bridged
- The wiring with the required LED driver can either be done on one socket only or you wire both sockets so it doesn't matter how around you put them (see Wiring)

OTNA4435	DRIVER 20W/200-350mA IP20
OTNA4436	DRIVER 40W/200-350mA IP20
OTNA4437	DRIVER 60W/200-350mA IP20
OTNA4438	DRIVER 80W/200-350mA IP20

Driver mapping		1. Lamp	2. Lamp	3. Lamp	4. Lamp
LED T5 NEO 14/24	350mA	10,0 W	20,0 W	30,0 W	40,0 W
	300mA	8,6 W	17,2 W	25,8 W	34,4 W
	250mA	7,1 W	14,2 W	21,3 W	28,4 W
	200mA	5,7 W	11,4 W	17,1 W	22,8 W
LED T5 NEO 21/39	350mA	17,9 W	35,8 W	53,7 W	71,6 W
	300mA	15,3 W	30,6 W	45,9 W	61,2 W
	250mA	12,7 W	25,4 W	38,1 W	50,8 W
	200mA	10,1 W	20,2 W	30,3 W	40,4 W
LED T5 NEO 28/54	350mA	24,5 W	49,0 W	73,5 W	
	300mA	20,9 W	41,8 W	62,7 W	
	250mA	17,3 W	34,6 W	51,9 W	
	200mA	13,8 W	27,6 W	41,4 W	
LED T5 NEO 35/49	350mA	23,4 W	46,8 W	70,2 W	
	300mA	20,0 W	39,9 W	59,9 W	
	250mA	16,6 W	33,1 W	49,7 W	
	200mA	13,2 W	26,4 W	39,6 W	
LED T5 NEO 49/80	350mA	33,9 W	67,8 W		
	300mA	29,0 W	57,9 W		
	250mA	24,1 W	48,1 W		
	200mA	19,2 W	38,4 W		

LED T5 Neo.

Wiring.

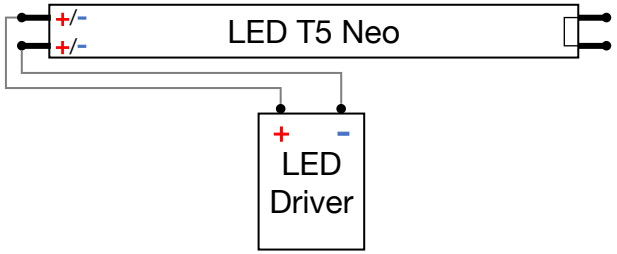
One-sided Connection

- Low wiring effort, as the tube is only connected to the marked side
- If the T5 Neo is inserted the wrong way around, it will not work, but there will be no damage to the LED tube or the driver

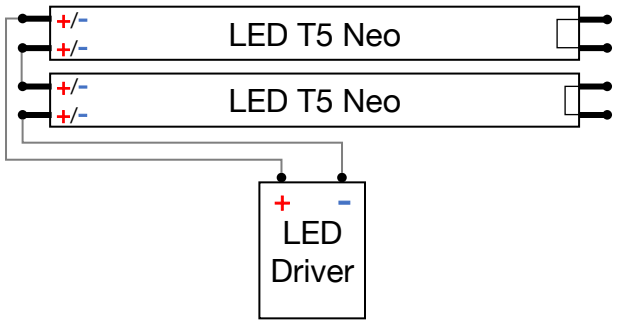
Double-sided Connection (recommended)

- Somewhat higher wiring effort, since the tube is connected on both sides
- When converting an ECG luminaire, no new cables need to be pulled out even when connecting both sides
- The tube always works, no matter how it is inserted into the socket

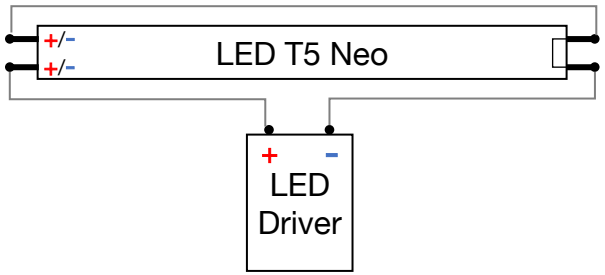
Single-flame Operation, one-sided Connection



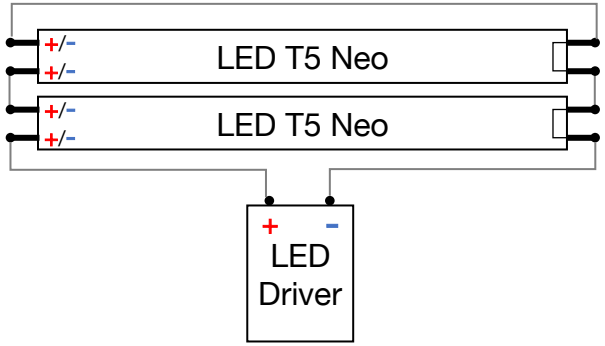
Two-flame Operation, one-sided Connection



Single-flame Operation, double-sided Connection



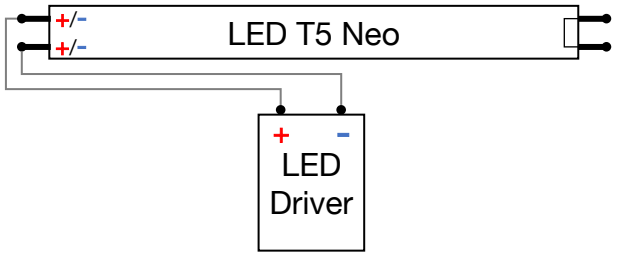
Two-flame Operation, double-sided Connection



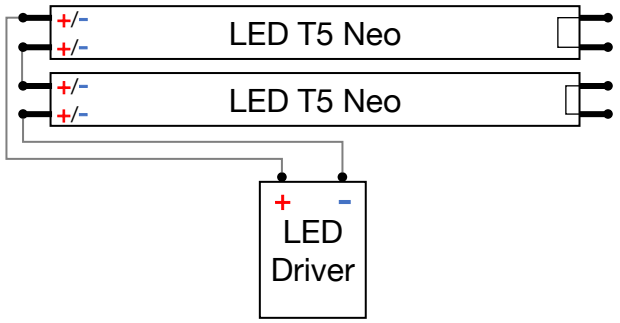
LED T5 Neo.

Wiring single- to four-flame.

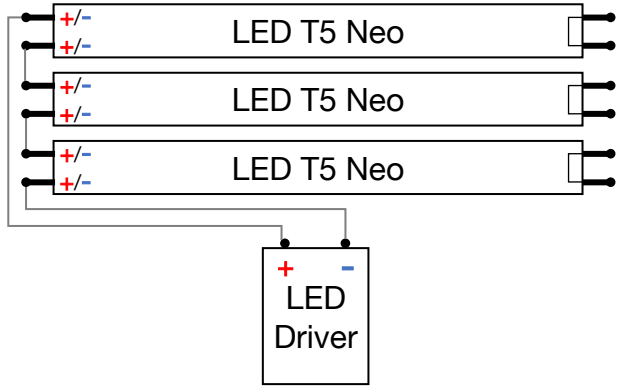
1-flame Operation, one-sided Connection



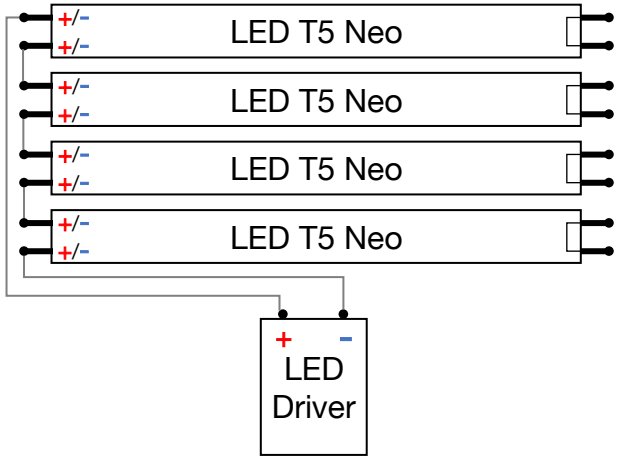
2-flame Operation, one-sided Connection



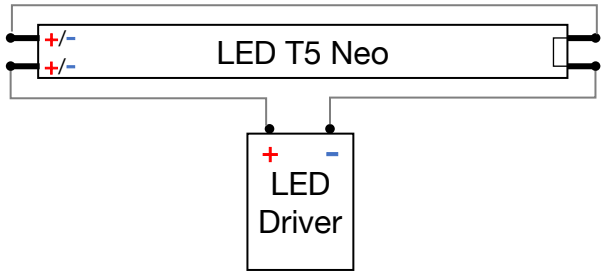
3-flame Operation, one-sided Connection



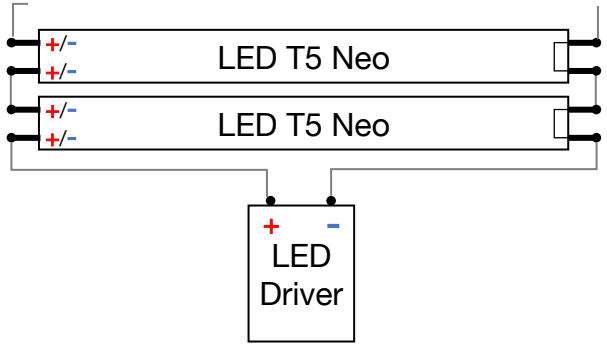
4-flame Operation, one-sided Connection



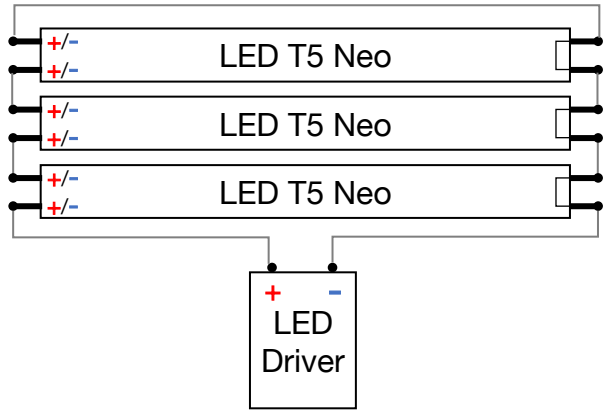
1-flame Operation, double-sided Connection



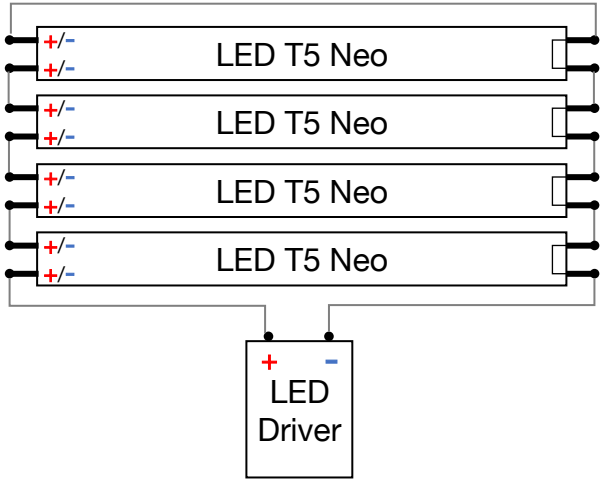
2-flam Operation, double-sided Connection



3-flame Operation, double-sided Connection



4-flame Operation, double-sided Connection



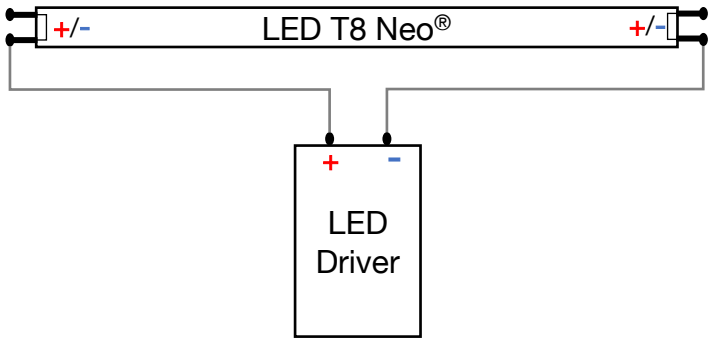
LED T8 Neo®.

The portfolio.

– 5 – YEARS GUARANTEE

Features

- **Dimmable** via DALI or Push&DIM*
- Very efficient with up to **180 lm/W**
- Super bright: very **high luminous flux**
- **Luminous flux** can be **adjusted flexibly**
- **100,000 h (L70)** main service life
- Flicker-free light
- With splinter protection and TÜV certification
- Easy to wire up
- Polarity neutral



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	Type	W	lm		
1	**LED T8 NEO 18**	3,8 – 11,0W	716 – 1,875	G13	840/865
1	**LED T8 NEO 36**	9,8 – 20,2W	1,772 – 3,418	G13	840/865
1	**LED T8 NEO 58**	20,0 – 30,8W	3,550 – 5,180	G13	840/865

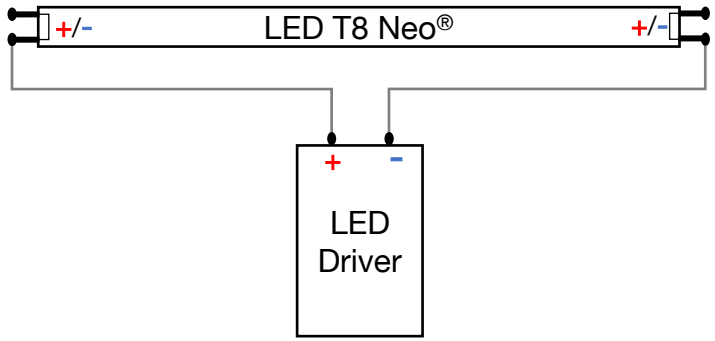
* With Radium DALI drivers

LED T8 Neo®.

Radium driver ON/OFF.

Features

- High efficiency: 87-90%
- Protection class I
- **Flicker-free**
- High lifetime of **70,000 h**
- **SELV**
- Suitable for DC operation (200 - 280 V) for use in **emergency power systems**
- Strong price-performance ratio
- **ENEC** certified



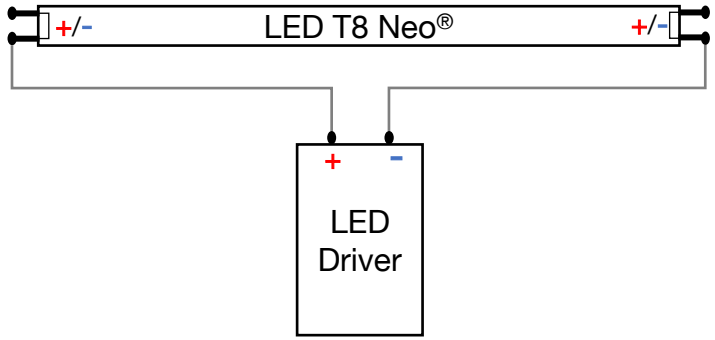
	DRIVER 15W/350mA	DRIVER 30W/700mA	DRIVER 50W/1200
Max. Power (W)	14.7	29.4	50.4
Compatible Neo tubes	2 x 600	2 x 1200	2 x 1500
Efficiency (%)	≥87	≥87	≥90
Output current (mA)	350	700	1200
Output voltage (V DC)	33 – 42	33 – 42	33 – 42
Mains voltage (V AC)	220 - 240	220 - 240	220 - 240
Lifetime (h)	70,000	70,000	70,000
Guarantee	5 Years	5 Years	5 Years
Material	Metal	Metal	Metal
Ambient temperature (°C)	-30°C…+50°C	-30°C…+50°C	-30°C…+50°C
Dimensions (mm)	156*30*20	195*30*20	245*30*21
Dimming interface	-	-	-

LED T8 Neo®.

Radium DALI Driver.

Features

- **Dimmable** via DALI or Push&DIM
- Adjustable output current via dip switch
- High efficiency: 84-89%
- Protection class I
- **Flicker-free**
- Very long lifetime of up to **70,000 h**
- **SELV**
- **ENEC** certified



	DRIVER DALI 15	DRIVER DALI 30	DRIVER DALI 60
Max. Power (W)	14.7	31.5	63.0
Compatible Neo tubes	1 x 600 / 2 x 600	1 x 1,200 / 2 x 1,200	1 x 1,500 / 2 x 1,500
Efficiency (%)	≥84	≥87	≥89
Output current (mA)	200 – 350	550 – 750	1,100 – 1,500
Output voltage (V DC)	16 – 42	18 – 44	19 – 44
Mains voltage (V AC)	220 – 240	220 – 240	220 – 240
Lifetime (h)	70,000	70,000	70,000
Guarantee	5 Years	5 Years	5 Years
Material	Metal	Metal	Metal
Ambient temperature (°C)	-30°C…+50°C	-30°C…+50°C	-30°C…+50°C
Dimensions (mm)	195*30*21	245*30*21	285*30*21
Dimming interface	DALI 2, Push&DIM	DALI 2, Push&DIM	DALI 2, Push&DIM

LED T8 Neo®.

Adjustable luminous flux LED T8 Neo® 58.

Adjust the luminous flux by setting the DC driver:

- Luminous flux of each LED T8 Neo® Tube can be adjusted on the DALI driver by the customer via dip switches.
- ON/OFF drivers are supplied with 1,200mA as standard, but can be set to other currents on a project-by-project basis during installation.
- Various luminous fluxes from **3875 lm to 5180 lm*** can be retrieved with Radium LED T8 Neo® 58 840.

Current	1	2	3	4
1100mA	ON	-	-	-
1150mA	-	ON	ON	ON
1200mA	-	ON	ON	-
1250mA	-	ON	-	ON
1300mA	-	ON	-	-
1350mA	-	-	ON	ON
1400mA	-	-	ON	-
1450mA	-	-	-	ON
1500mA	-	-	-	-

Adjustable currents via dip switches on the DALI driver

High Output

High Efficiency

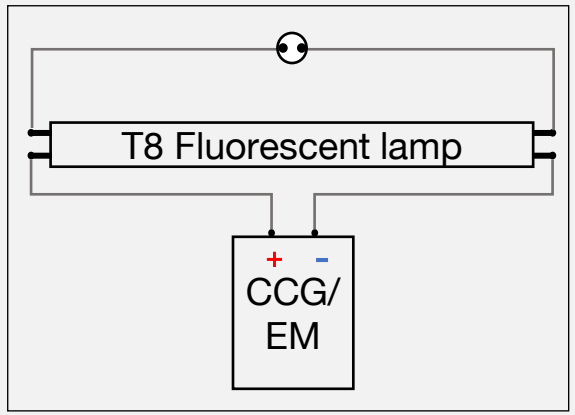
Current	Power	Efficiency	Luminous flux
1,500 mA	30.8 W	168 lm/W	5180 lm
1,450 mA	29.7 W	169 lm/W	5017 lm
1,400 mA	28.6 W	170 lm/W	4853 lm
1,350 mA	27.5 W	170 lm/W	4690 lm
1,300 mA	26.5 W	171 lm/W	4527 lm
1,250 mA	25.4 W	172 lm/W	4363 lm
1,200 mA	**24.3 W**	**173 lm/W**	**4200 lm**
1,150 mA	23.2 W	174 lm/W	4038 lm
1,100 mA	22.1 W	175 lm/W	3875 lm

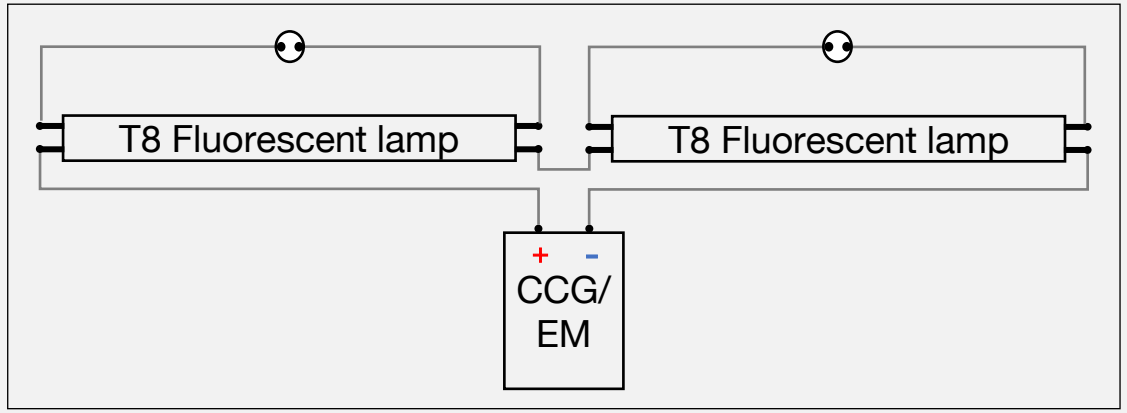
* At 1,500 mA operating current

LED T8 Neo®.

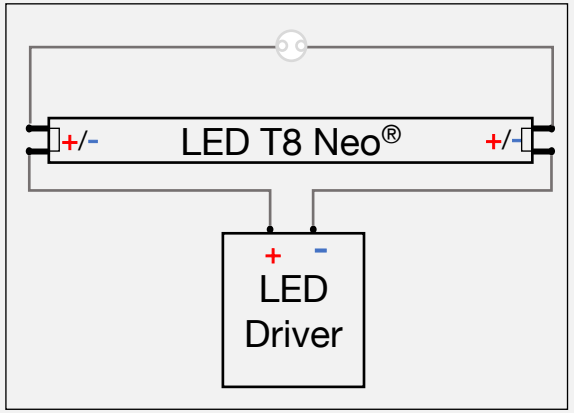
Rewiring for CCG luminaires.

Conventional wiring CCG

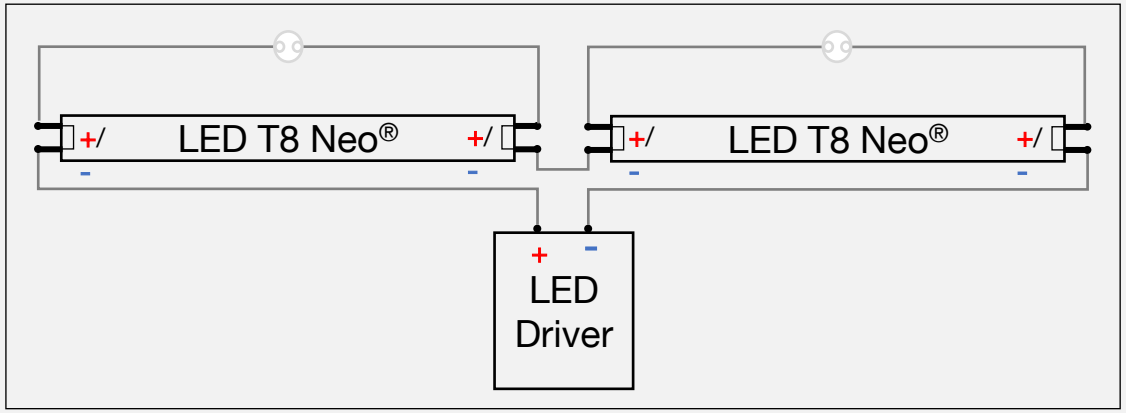




Wiring LED T8 Neo® Tube



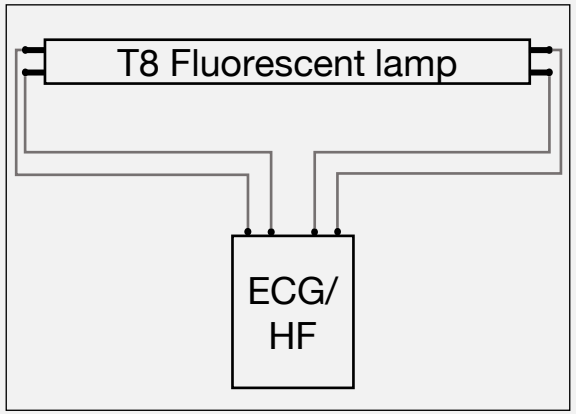
- Replace CCG 1:1 with Radium LED driver
- Remove starter
- Insert LED T8 Neo® Tube

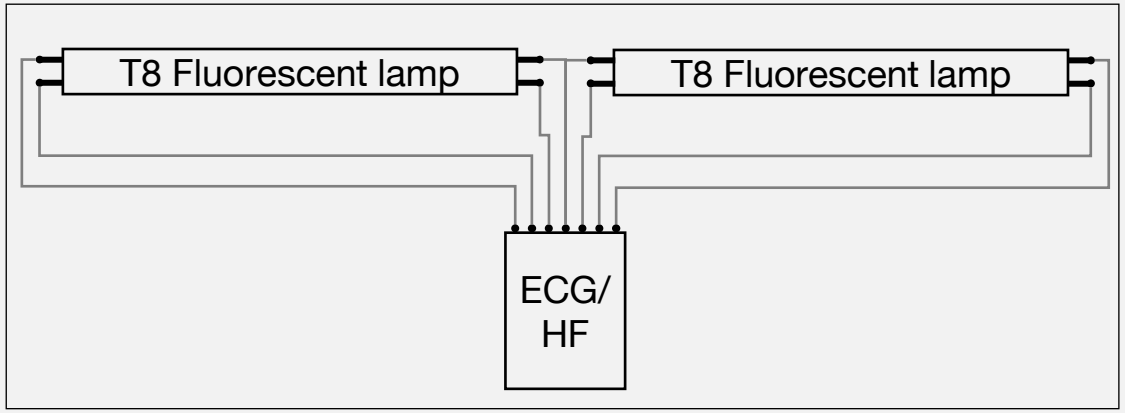


LED T8 Neo®.

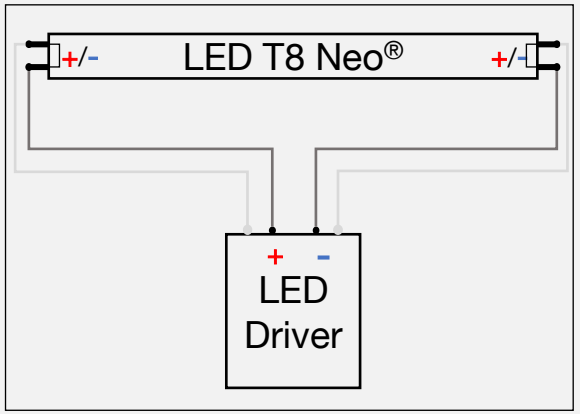
Rewiring for ECG luminaires.

Conventional wiring ECG

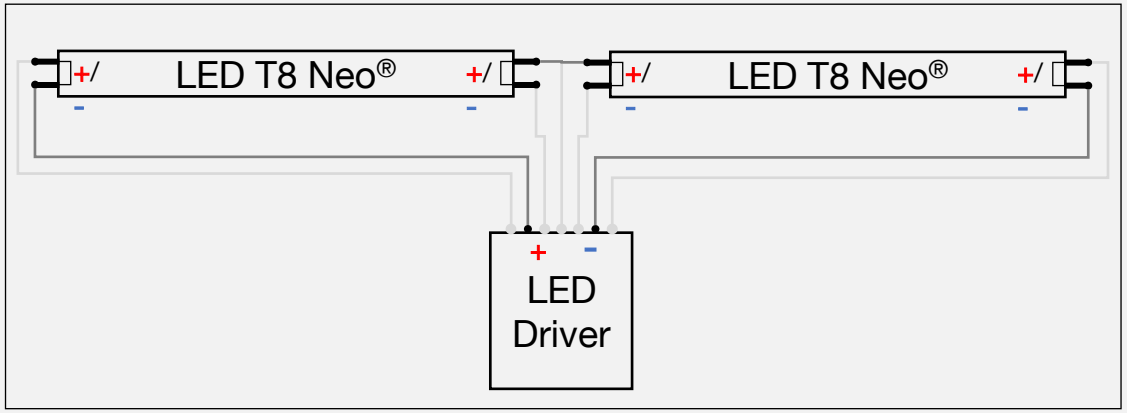




Wiring LED T8 Neo® Tube wiring



- Replace the electronic ballast 1:1 with the Radium LED driver.
- Remove wires that are no longer in use
- Insert LED T8 Neo® Tube



Radium
Die Lichtmarke

Do you need support for large projects? Just get in touch with us. We are happy to help!

customerservice@radium.de

Thanks.

Radium Lampenwerk GmbH

Dr.-Eugen-Kersting-Str. 6
51688 Wipperfürth
Germany

Telefon +49 (0) 2267 81-1
Fax +49 (0) 2267 81-353

radium@radium.de

www.radium.de/led-t8-neo