

ELEMENT

Compact Constant Current LED Drivers – Non dimmable



Areas of application

- Spotlight and downlight installations for shops
- Recessed luminaires
- Suitable for luminaires of protection classes I and II
- Suitable for indoor SELV installations

Product benefits

- Compatible with LEDs with Chip-On-Board technology and discrete LEDs
- High efficiency
- Simple installation and wiring

Product features

- Available with wattages up to 60 W
- Constant output current
- Integrated cable clamp for luminaire and independent installation
- Operated with Safety extra-low voltage (SELV): < 60 V
- Reversible overtemperature, overload, short-circuit and open-circuit protection

Technical data

Electrical data

Product description	Nominal input voltage	Mains frequency	Input voltage AC	Total harmonic distortion	Power factor λ	ECG efficiency
Element LD 8/220...240/180	220...240 V	50...60 Hz	220...240 V ¹⁾	< 30 %	0.85 ²⁾	82 % ³⁾
Element LD 15/220...240/350	220...240 V	50...60 Hz	220...240 V ¹⁾	< 30 %	0.95 ²⁾	>87 % ³⁾
Element LD 20/220...240/500	220...240 V	50...60 Hz	220...240 V ¹⁾	< 30 %	0.98 ²⁾	>87 % ³⁾
Element LD 30/220...240/700	220...240 V	50...60 Hz	220...240 V ¹⁾	< 20 %	0.98 ²⁾	>90 % ³⁾
Element LD 38/220...240/900	220...240 V	50...60 Hz	220...240 V ¹⁾	< 20 %	0.98 ²⁾	>90 % ³⁾
Element LD 45/220...240/1A0	220...240 V	50...60 Hz	220...240 V ¹⁾	< 20 %	0.98 ²⁾	>90 % ³⁾
Element LD 60/220...240/1A4	220...240 V	50...60 Hz	220...240 V ¹⁾	< 10 %	0.98 ²⁾	>90 % ³⁾

Product description	Device power loss	Inrush current	Max. ECG no. on circuit breaker 10 A (B)	Max. ECG no. on circuit breaker 16 A (B)	Max. ECG no. on circuit breaker 25 A (B)
Element LD 8/220...240/180	1.5 W ⁴⁾	< 16 A ⁵⁾	50	80	-
Element LD 15/220...240/350	2.6 W ⁷⁾	< 16 A ⁵⁾	32	50	-
Element LD 20/220...240/500	3.7 W ⁸⁾	< 16 A ⁵⁾	38	60	-
Element LD 30/220...240/700	4.4 W ⁹⁾	< 16 A ⁵⁾	25	40	-
Element LD 38/220...240/900	5.7 W ¹⁰⁾	< 16 A ⁵⁾	19	30	-
Element LD 45/220...240/1A0	6.7 W ¹¹⁾	< 16 A ⁵⁾	16	25	-
Element LD 60/220...240/1A4	8.8 W ¹²⁾	< 16 A ⁵⁾	13	20	-

Product description	Surge capability (L/N-Ground)	Surge capability (L-N)	Nominal output voltage	U-OUT (working voltage)	Nominal output current
Element LD 8/220...240/180	1 kV	1 kV	21...42 V ⁶⁾	60 V	180 mA
Element LD 15/220...240/350	1 kV	0.5 kV	21...42 V ⁶⁾	60 V	350 mA
Element LD 20/220...240/500	1 kV	0.5 kV	21...42 V ⁶⁾	60 V	500 mA
Element LD 30/220...240/700	1 kV	1 kV	21...42 V ⁶⁾	60 V	700 mA
Element LD 38/220...240/900	1 kV	1 kV	21...42 V ⁶⁾	60 V	900 mA
Element LD 45/220...240/1A0	1 kV	1 kV	21...42 V ⁶⁾	60 V	1050 mA
Element LD 60/220...240/1A4	1 kV	1 kV	21...42 V ⁶⁾	60 V	1400 mA

Product description	Output current tolerance	Output ripple current (100 Hz)	Nominal output power	Galvanic isolation
Element LD 8/220...240/180	±10 %	40 %	8 W	SELV
Element LD 15/220...240/350	±10 %	40 %	15 W	SELV
Element LD 20/220...240/500	±10 %	40 %	20 W	SELV
Element LD 30/220...240/700	±10 %	40 %	30 W	SELV
Element LD 38/220...240/900	±10 %	40 %	38 W	SELV
Element LD 45/220...240/1A0	±10 %	40 %	45 W	SELV
Element LD 60/220...240/1A4	±10 %	15 %	60 W	SELV

¹⁾ V_{AC}

Product family datasheet

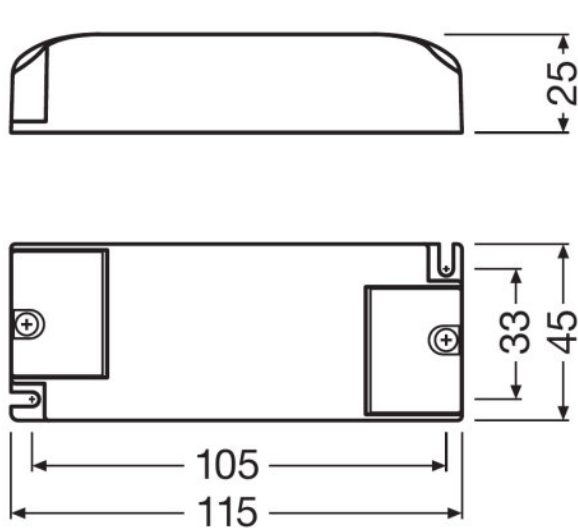
- 2) Full load at 230 V/50 Hz
 3) At full load and 230 V / Typical / At 50 Hz
 4) At 230 V / Input power 9.3 W max.
 5) $t_{\text{width}} = 50 \mu\text{s}$ (measured at 50 % I_{peak})
 6) DC voltage
 7) At 230 V / Input power 17.3 W max.
 8) At 230 V / Input power 24.7 W max.
 9) At 230 V / Input power 34.5 W max.
 10) At 230 V / Input power 43.7 W max.
 11) At 230 V / Input power 51.7 W max.
 12) At 230 V / Input power 67.8 W max.

Dimensions & weight

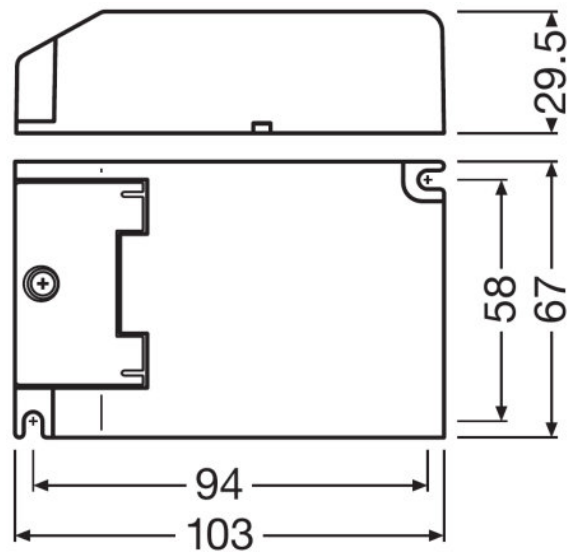
Product description	Length	Width	Height	Mounting hole spacing, length	Mounting hole spacing, width	Product weight
Element LD 8/220...240/180	115.0 mm	45.0 mm	25.0 mm	105.0 mm	33.0 mm	60.00 g
Element LD 15/220...240/350	115.0 mm	45.0 mm	25.0 mm	105.0 mm	33.0 mm	90.00 g
Element LD 20/220...240/500	115.0 mm	45.0 mm	25.0 mm	105.0 mm	33.0 mm	90.00 g
Element LD 30/220...240/700	103.0 mm	67.0 mm	29.5 mm	94.0 mm	58.0 mm	150.00 g
Element LD 38/220...240/900	103.0 mm	67.0 mm	29.5 mm	94.0 mm	58.0 mm	150.00 g
Element LD 45/220...240/1A0	103.0 mm	67.0 mm	29.5 mm	94.0 mm	58.0 mm	170.00 g
Element LD 60/220...240/1A4	110.0 mm	75.0 mm	29.5 mm	99.0 mm	64.0 mm	185.00 g

Product description	Cable cross-section, input side	Cable cross-section, output side	Wire preparation length, input side	Wire preparation length, output side
Element LD 8/220...240/180	0.5...1.5 mm ²	0.5...1.5 mm ²	8.0...9.0 mm	8.0...9.0 mm
Element LD 15/220...240/350	0.5...1.5 mm ²	0.5...1.5 mm ²	8.0...9.0 mm	8.0...9.0 mm
Element LD 20/220...240/500	0.5...1.5 mm ²	0.5...1.5 mm ²	8.0...9.0 mm	8.0...9.0 mm
Element LD 30/220...240/700	0.5...1.5 mm ²	0.5...1.5 mm ²	8.0...9.0 mm	8.0...9.0 mm
Element LD 38/220...240/900	0.5...1.5 mm ²	0.5...1.5 mm ²	8.0...9.0 mm	8.0...9.0 mm
Element LD 45/220...240/1A0	0.5...1.5 mm ²	0.5...1.5 mm ²	8.0...9.0 mm	8.0...9.0 mm
Element LD 60/220...240/1A4	0.5...1.5 mm ²	0.5...1.5 mm ²	8.0...9.0 mm	8.0...9.0 mm

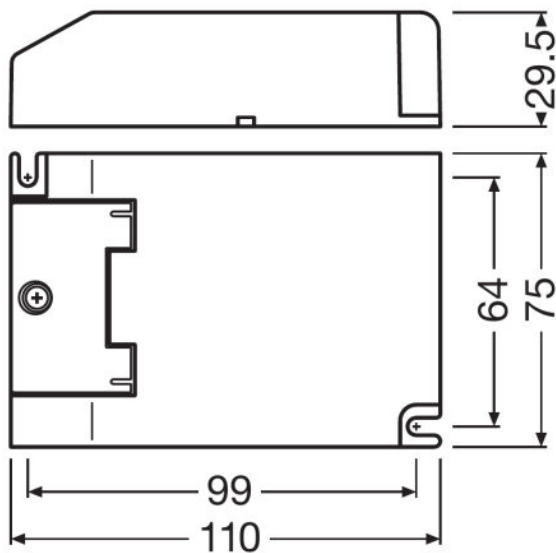
Product line drawing



Element LD 8/220...240/180, Element LD 15/220...240/350,
Element LD 20/220...240/500



Element LD 30/220...240/700, Element LD
38/220...240/900, Element LD 45/220...240/1A0



Element LD 60/220...240/1A4

Colors & materials

Product description	Casing material
Element LD 8/220...240/180	Plastic
Element LD 15/220...240/350	Plastic
Element LD 20/220...240/500	Plastic
Element LD 30/220...240/700	Plastic
Element LD 38/220...240/900	Plastic
Element LD 45/220...240/1A0	Plastic
Element LD 60/220...240/1A4	Plastic

Temperatures & operating conditions

Product description	Ambient temperature range	Maximum temperature at T_c test point	Max.housing temperature in case of fault	Permitted rel. humidity during operation
Element LD 8/220...240/180	-10...+50 °C	70 °C	110 °C	5...85 % ¹⁾
Element LD 15/220...240/350	-10...+50 °C	75 °C	110 °C	5...85 % ¹⁾
Element LD 20/220...240/500	-10...+45 °C	85 °C	110 °C	5...85 % ¹⁾
Element LD 30/220...240/700	-10...+50 °C	75 °C	110 °C	5...85 % ¹⁾
Element LD 38/220...240/900	-10...+50 °C	80 °C	110 °C	5...85 % ¹⁾
Element LD 45/220...240/1A0	-10...+50 °C	80 °C	110 °C	5...85 % ¹⁾
Element LD 60/220...240/1A4	-10...+45 °C	85 °C	110 °C	5...85 % ¹⁾

¹⁾ Maximum 56 days/year at 85 %

Lifespan

Product description	ECG lifetime
Element LD 8/220...240/180	30000 h ¹⁾
Element LD 15/220...240/350	30000 h ²⁾
Element LD 20/220...240/500	30000 h ³⁾
Element LD 30/220...240/700	30000 h ²⁾
Element LD 38/220...240/900	30000 h ⁴⁾
Element LD 45/220...240/1A0	30000 h ⁴⁾
Element LD 60/220...240/1A4	30000 h ³⁾

¹⁾ At $T_{case} = 70^\circ\text{C}$ at T_c point / 10% failure rate

²⁾ At $T_{case} = 75^\circ\text{C}$ at T_c point / 10% failure rate

³⁾ At $T_{case} = 85^\circ\text{C}$ at T_c point / 10% failure rate

⁴⁾ At $T_{case} = 80^\circ\text{C}$ at T_c point / 10% failure rate

Expected Lifetime

Product name				
Element LD 8/220...240/180	ECG ambient temperature [ta]	50	-	-
	Temperature at tc-point [°C]	70	-	-
	Lifetime [h]	30000 ¹⁾	-	-
Element LD 15/220...240/350	ECG ambient temperature [ta]	50	-	-
	Temperature at tc-point [°C]	75	-	-
	Lifetime [h]	30000 ²⁾	-	-
Element LD 20/220...240/500	ECG ambient temperature [ta]	45	-	-
	Temperature at tc-point [°C]	85	-	-
	Lifetime [h]	30000 ³⁾	-	-
Element LD 30/220...240/700	ECG ambient temperature [ta]	50	-	-
	Temperature at tc-point [°C]	75	-	-
	Lifetime [h]	30000 ⁴⁾	-	-
Element LD 38/220...240/900	ECG ambient temperature [ta]	50	-	-
	Temperature at tc-point [°C]	80	-	-
	Lifetime [h]	30000 ⁵⁾	-	-
Element LD 45/220...240/1A0	ECG ambient temperature [ta]	50	-	-
	Temperature at tc-point [°C]	80	-	-
	Lifetime [h]	30000 ⁶⁾	-	-
Element LD 60/220...240/1A4	ECG ambient temperature [ta]	45	-	-
	Temperature at tc-point [°C]	85	-	-
	Lifetime [h]	30000 ⁷⁾	-	-

¹⁾ Max. 10% failure rate at tc max

²⁾ Max. 10% failure rate at tc max

³⁾ Max. 10% failure rate at tc max

⁴⁾ Max. 10% failure rate at tc max

⁵⁾ Max. 10% failure rate at tc max

⁶⁾ Max. 10% failure rate at tc max

⁷⁾ Max. 10% failure rate at tc max

Product family datasheet

Additional product data

Product description	Encapsulated
Element LD 8/220...240/180	No
Element LD 15/220...240/350	No
Element LD 20/220...240/500	No
Element LD 30/220...240/700	No
Element LD 38/220...240/900	No
Element LD 45/220...240/1A0	No
Element LD 60/220...240/1A4	No

Capabilities

Product description	Dimmable	Overheating protection	Overload protection
Element LD 8/220...240/180	No	Automatic switch off, reversible by manual mains reset	Automatic switch off, reversible by manual mains reset
Element LD 15/220...240/350	No	Automatic switch off, reversible by manual mains reset	Automatic switch off, reversible by manual mains reset
Element LD 20/220...240/500	No	Automatic switch off, reversible by manual mains reset	Automatic switch off, reversible by manual mains reset
Element LD 30/220...240/700	No	Automatic switch off, reversible by manual mains reset	Automatic reversible
Element LD 38/220...240/900	No	Automatic reversible	Automatic reversible
Element LD 45/220...240/1A0	No	Automatic reversible	Automatic reversible
Element LD 60/220...240/1A4	No	Automatic switch off, reversible by manual mains reset	Automatic switch off, reversible by manual mains reset

Product description	Short-circuit protection	No-load proof	Max. cable length to lamp/LED module	Suitable for fixtures with prot. class
Element LD 8/220...240/180	Automatic reversible	Yes	2.0 m	I / II
Element LD 15/220...240/350	Automatic reversible	Yes	2.0 m	I / II
Element LD 20/220...240/500	Automatic reversible	Yes	2.0 m	I / II
Element LD 30/220...240/700	Automatic reversible	Yes	2.0 m	I / II
Element LD 38/220...240/900	Automatic reversible	Yes	2.0 m	I / II
Element LD 45/220...240/1A0	Automatic reversible	Yes	2.0 m	I / II
Element LD 60/220...240/1A4	Automatic reversible	Yes	2.0 m	I / II

Product description	Type of connection, output side
Element LD 8/220...240/180	Push terminal
Element LD 15/220...240/350	Push terminal
Element LD 20/220...240/500	Push terminal
Element LD 30/220...240/700	Push terminal

Product family datasheet

Product description	Type of connection, output side
Element LD 38/220...240/900	Push terminal
Element LD 45/220...240/1A0	Push terminal
Element LD 60/220...240/1A4	Push terminal

Certificates & standards

Product description	Approval marks – approval
Element LD 8/220...240/180	CCC / CE / ENEC 10 / RCM
Element LD 15/220...240/350	CCC / CE / ENEC 10 / RCM
Element LD 20/220...240/500	CCC / CE / ENEC 10 / RCM
Element LD 30/220...240/700	CCC / CE / ENEC 10 / RCM
Element LD 38/220...240/900	CCC / CE / ENEC 10 / RCM
Element LD 45/220...240/1A0	CCC / CE / ENEC 10 / RCM
Element LD 60/220...240/1A4	CCC / CE / ENEC 10 / RCM

Product description	Standards	Protection class	Type of protection
Element LD 8/220...240/180	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to IEC 61000-3-2/Acc. to CISPR 15/Acc. to IEC 61000-3-3/Acc. to IEC 61547	II	IP20
Element LD 15/220...240/350	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to IEC 61000-3-2/Acc. to CISPR 15/Acc. to IEC 61000-3-3/Acc. to IEC 61547	II	IP20
Element LD 20/220...240/500	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to IEC 61000-3-2/Acc. to CISPR 15/Acc. to IEC 61000-3-3/Acc. to IEC 61547	II	IP20
Element LD 30/220...240/700	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to IEC 61000-3-2/Acc. to CISPR 15/Acc. to IEC 61000-3-3/Acc. to IEC 61547	II	IP20
Element LD 38/220...240/900	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to IEC 61000-3-2/Acc. to CISPR 15/Acc. to IEC 61000-3-3/Acc. to IEC 61547	II	IP20
Element LD 45/220...240/1A0	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to IEC 61000-3-2/Acc. to CISPR 15/Acc. to IEC 61000-3-3/Acc. to IEC 61547	II	IP20
Element LD 60/220...240/1A4	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to IEC 61000-3-2/Acc. to CISPR 15/Acc. to IEC 61000-3-3/Acc. to IEC 61547	II	IP20

Product family datasheet

Logistical data

Product description	Temperature range at storage	Commodity code
Element LD 8/220...240/180	-10...70 °C	850440829000
Element LD 15/220...240/350	-10...75 °C	850440829000
Element LD 20/220...240/500	-10...85 °C	850440829000
Element LD 30/220...240/700	-10...75 °C	850440829000
Element LD 38/220...240/900	-10...80 °C	850440829000
Element LD 45/220...240/1A0	-10...80 °C	850440829000
Element LD 60/220...240/1A4	-10...85 °C	850440829000

Application advice

For more detailed application information and graphics please see product datasheet.

Sales and Technical Support

Sales and Technical Support www.osram.com

Download Data

File	
	Product Datasheet 608218_Element Technical datasheet 8W
	Certificates VDE EMC Certificate 40011668
	Certificates VDE ENEC Certificate 40038447
	Certificates 612430_ELEMENT CE declaration
	Declarations of conformity Declaration of Conformity ELEMENT LD
	CAD data 3-dim 642297_Element LD 20 15 8 STEP
	Product Datasheet 608212_Element Technical datasheet 15W
	Product Datasheet 608213_Element Technical datasheet 20W
	Product Datasheet 608214_Element Technical datasheet 30W
	CAD data 3-dim 642298_Element LD 45 38 30 STEP

Product family datasheet

	Product Datasheet 608215_Element Technical datasheet 38W
	Product Datasheet 608216_Element Technical datasheet 45W
	User instruction ELEMENT Constant Current LED Driver
	Product Datasheet 612044_Element Technical datasheet 60W
	Certificates CCC Certificate 2018171002002203
	CAD data 3-dim 642299_Element LD 60 STEP

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899947078	Element LD 8/220...240/180	Shipping carton box 20	240 mm x 237 mm x 72 mm	4.10 dm ³	1784.00 g
4052899947085	Element LD 15/220...240/350	Shipping carton box 20	240 mm x 237 mm x 72 mm	4.10 dm ³	1984.00 g
4052899947092	Element LD 20/220...240/500	Shipping carton box 20	240 mm x 237 mm x 72 mm	4.10 dm ³	1984.00 g
4052899947108	Element LD 30/220...240/700	Shipping carton box 20	346 mm x 216 mm x 80 mm	5.98 dm ³	3315.00 g
4052899947115	Element LD 38/220...240/900	Shipping carton box 20	346 mm x 216 mm x 80 mm	5.98 dm ³	3315.00 g
4052899947122	Element LD 45/220...240/1A0	Shipping carton box 20	346 mm x 216 mm x 80 mm	5.98 dm ³	3715.00 g
4052899947139	Element LD 60/220...240/1A4	Shipping carton box 20	388 mm x 229 mm x 80 mm	7.11 dm ³	4071.00 g

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.