

PrevaLED® Linear Value

Preliminary Datasheet

Light Engines

- 650lm and 1100lm on 280mm
- 1300lm and 2200lm on 560mm



Dimension (l x w x h):

- 280mm x 32.6mm x 5.95mm
- 560mm x 32.6mm x 5.95mm

Benefits

- Efficacy: up to 130 lm/W
- Homogeneous light distribution
- Consistent white light of 4 SDCM
- Seamless: no shadows between modules
- Poke-in connectors for 0,5mm² wire
- No special connection cable needed
- Self-cooling
- SELV module for easier fixture design
- Designed for Zhaga compliance
- UL, CE, VDE under approval

Applications

- Office (workplace illumination, corridor)
- Commercials (indoor car park)
- Industry (storage, warehouse, retail)
- Public area (corridor, stairs, subway)

Basic description*

Product name	Flux (lm)	CCT (K)	CRI	SDCM	If (mA)	P (W) Module T _c 55°C	lm/W* Module T _c 55°C	L70 B50** (h)
PLVZ1-LIN-650-830-280-DC	650	3000	> 80	4	145	5,4	121	50.000
PLVZ1-LIN-650-840-280-DC	650	4000	> 80	4	136	5,0	129	50.000
PLVZ1-Lin-1100-830-280-DC	1100	3000	> 80	4	286	8,8	125	50.000
PLVZ1-Lin-1100-840-280-DC	1100	4000	> 80	4	273	8,4	131	50.000
PLVZ1-Lin-1300-830-560-DC	1300	3000	> 80	4	282	10,4	125	50.000
PLVZ1-Lin-1300-840-560-DC	1300	4000	> 80	4	271	10,0	130	50.000
PLVZ1-Lin-2200-830-560-DC	2200	3000	> 80	4	555	17,1	129	50.000
PLVZ1-Lin-2200-840-560-DC	2200	4000	> 80	4	545	16,7	131	50.000

Due to the special conditions of the manufacturing processes of LED the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

* Typical value; tolerance for optical and electrical data: +/-10%

**average Lifetime L70B50 (lumen maintenance) up to 50.000h at T_c = 55°C. Typical current 135mA for 650lm, 270mA for 1100lm and 1300lm, 540mA for 2200lm

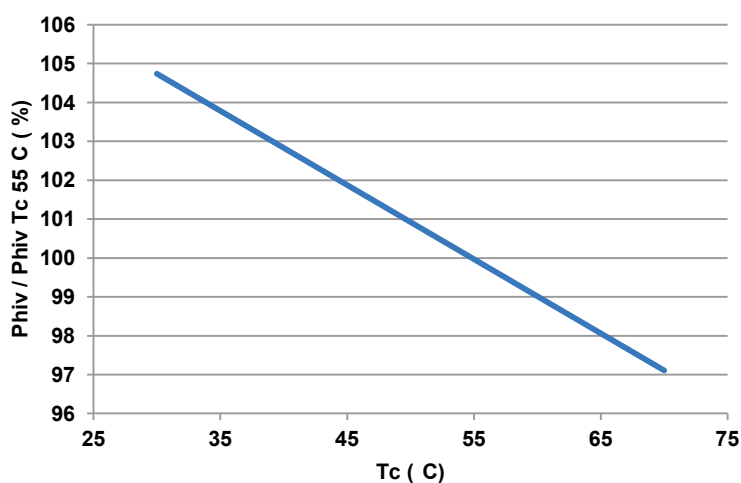
Electrical parameters

Product name	Vf (V)	If (mA)	Flux (lm)	lm/W* Module	Vf (V)	If* (mA)	Flux (lm)	lm/W** Module
PLVZ1-LIN-650-830-280-DC	36,9	135	609	121	36,5	125	578	125
PLVZ1-LIN-650-840-280-DC	36,9	135	646	128	36,5	125	610	132
PLVZ1-Lin-1100-830-280-DC	30,8	270	1016	121	30,6	250	963	125
PLVZ1-Lin-1100-840-280-DC	30,8	270	1077	128	30,6	250	1016	132
PLVZ1-Lin-1300-830-560-DC	36,9	270	1218	122	36,5	250	1156	125
PLVZ1-Lin-1300-840-560-DC	36,9	270	1292	130	36,5	250	1220	132
PLVZ1-Lin-2200-830-560-DC	30,8	540	2031	122	30,6	500	1927	125
PLVZ1-Lin-2200-840-560-DC	30,8	540	2154	130	30,6	500	2032	132

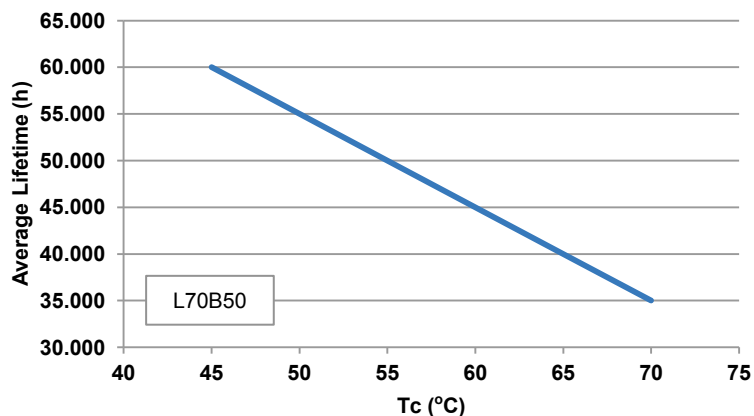
* Performance data at Tc = 55°C – typical voltage/current until Q4 2013

** Performance data at Tc = 55°C – typical voltage/current will be reduced by Q1 2014

Luminous Flux over Tc*



Average Lifetime (lumen maintenance) over Tc (case temperature)*



* Indication only, valid for specified typical current, If = 135mA for 650lm, 270mA for 1100lm & 1300lm, 540mA for 2200lm.

Optical parameters

Product name	# LED	# strings	# LED / string	Pitch (mm)
PLVZ1-LIN-650-830-280-DC	12	1	12	23,3
PLVZ1-LIN-650-840-280-DC	12	1	12	23,3
PLVZ1-Lin-1100-830-280-DC	20	2	10	14
PLVZ1-Lin-1100-840-280-DC	20	2	10	14
PLVZ1-Lin-1300-830-560-DC	24	2	12	23,3
PLVZ1-Lin-1300-840-560-DC	24	2	12	23,3
PLVZ1-Lin-2200-830-560-DC	40	4	10	14
PLVZ1-Lin-2200-840-560-DC	40	4	10	14

LED on-board circuit



Center bin*

	Cx	Cy
3000K	0,4321	0,3933
4000K	0,3862	0,3807

* minor changes possible

Minimum and Maximum Ratings

Product	Storage temperature [°C]	Tc max.* (@ typ. current)	L70 B50 @ Tc max. 70°C
PLVZ1-LIN-650-830-280-DC	-20 ... 85	70°C	35.000 h
PLVZ1-LIN-650-840-280-DC	-20 ... 85	70°C	35.000 h
PLVZ1-Lin-1100-830-280-DC	-20 ... 85	70°C	35.000 h
PLVZ1-Lin-1100-840-280-DC	-20 ... 85	70°C	35.000 h
PLVZ1-Lin-1300-830-560-DC	-20 ... 85	70°C	35.000 h
PLVZ1-Lin-1300-840-560-DC	-20 ... 85	70°C	35.000 h
PLVZ1-Lin-2200-830-560-DC	-20 ... 85	70°C	35.000 h
PLVZ1-Lin-2200-840-560-DC	-20 ... 85	70°C	35.000 h

The modules are designed for operation with OPTOTRONIC® ECG.

*) Exceeding maximum ratings for operating and storage temperature will reduce expected life time or destroy the light engine. The temperature of the LED module must be measured at the t_c -point according to EN60598-1 in thermally settled conditions with a temperature sensor. For exact location of the T_c -point see drawing below (marked as Tc1 and Tc2).

Modularity

OT FIT CS (triple current driver – SELV)

PrevaLED Linear Value is designed to be operated by OT FIT drivers in parallel connection*. Current setting via cable bridge on primary side.

OT FIT** 27V – 54V PrevaLED Linear Value	Type A	Type B	Type C	Type D
	OT FIT 80 2A1	OT FIT 80 1A6	OT FIT 50 1A0	OT FIT 35 0A7
	1,75A / 1,9A / 2,1A	1,2A / 1,4A / 1,55A	0,8A / 0,93A / 1,0A	0,5A / 0,6A / 0,7A
	423 x 30 x 21mm	360 x 30 x 21mm	280 x 30 x 21mm	280 x 30 x 21mm
650lm / 135mA	-	10	6, 8	4, 5
1100lm / 270mA	8	5	3, 4	2, 3
1300lm / 270mA	8	5	3, 4	2, 3
2200lm / 540mA	4	3	2	1

* Final release of modularity under evaluation, content table gives indication only

** Introduction of OT Fit range starts October 2013 with OT FIT 50 1A0 and OT FIT 35 0A7.

OTi DALI (wide window driver – SELV)

PrevaLED Linear Value is designed to be operated by OTi DALI drivers in parallel connection*. Current setting via DALI wizard software and DALI magic**.

OTi DALI*** 27V – 54V PrevaLED Linear Value	Type A	Type B	Type C	Type D
	OTi DALI 80 2A1	OTi DALI 80 1A6	OTi DALI 50 1A0	OTi DALI 35 0A7
	1,0A - 2,1A	0,6A - 1,55A	0,6A - 1,4A	0,45A - 1,05A
	423 x 30 x 21mm	360 x 30 x 21mm	360 x 30 x 21mm	360 x 30 x 21mm
650lm / 135mA	8 – 10	5 – 10	5 – 10	4 – 6
1100lm / 270mA	4 – 6	3 – 5	3 – 5	2 – 3
1300lm / 270mA	4 – 6	3 – 5	3 – 5	2 – 3
2200lm / 540mA	2 – 4	2	2	1

* Final release of modularity under evaluation, content table gives indication only

** Current setting via LEDset 2 not supported by this version of PrevaLED Linear Value.

*** Introduction of OTi DALI range starts November 2013 with OTi DALI 50 1A4 and OTi DALI 80 1A6.

OTp 40 L (wide window driver – SELV)

PrevaLED Linear Value can be operated by OTp 40 L*.

- Dimension (l x w x h): 360 x 30 x 28mm (footprint like Type B above)
- Uout: 48V - 75V / Iout: 300mA - 700mA

Modularity Module	2	4	8
650lm / 135mA	–	–	(2s4p)
1100lm / 270mA	–	2s2p	–
1300lm / 270mA	–	(2s2p)	–
2200lm / 540mA	2s1p		–

* on stock.

- () possible over-voltage due to Vf binning of the LED
- 2s1p: serial connection of two modules
- 2s2p: combined serial-parallel-connection
- 2s1p/2s2p demand 62,2V:
coding resistor 540mA = 26,289 k Ω , 500mA = 24,412 k Ω

Recommended resistors:

E24

24,0 k Ω = 491mA

27,0 k Ω = 555mA

E96

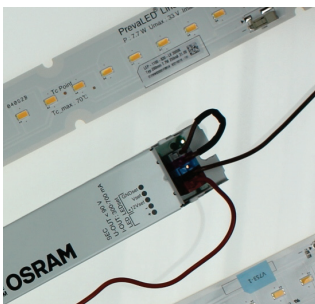
24,3 k Ω = 498mA

24,9 k Ω = 510mA

26,1 k Ω = 536mA

26,7 k Ω = 549mA

Connection of the resistor



Resistor has to be placed between Vset and GNDset and should be protected by a heat shrink tube

OTi DALI 90 1A0 (wide window driver – non-SELV)

PrevaLED Linear Value* can be operated by OTi DALI 90 1A0**.

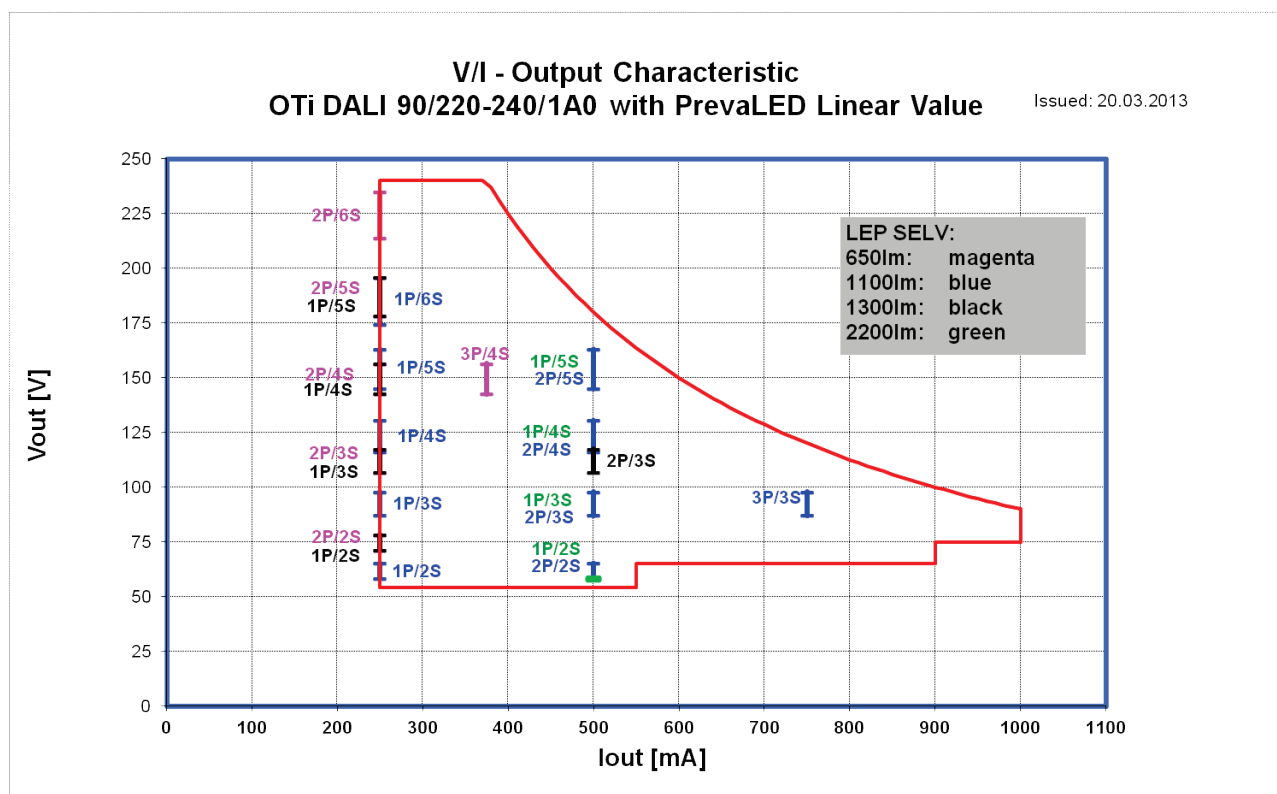
- Dimension (l x w x h): 280 x 30 x 21mm (footprint like Type C and D above)
- Uout: 60V - 200V / Iout: 250mA - 1050mA

Modularity Module	2	4	5	8	10
650lm / 135mA	–	2s2p	–	4s2p	5s2p
1100lm / 270mA	2s1p	4s1p	5s1p	4s2p	5s2p
1300lm / 270mA	2s1p	4s1p	–	4s2p	–
2200lm / 540mA	2s1p	4s1p	–	–	–

* PrevaLED Linear Value respects creepage for non-SELV operation

** Introduction of OTi DALI 90 1A0 scheduled August 2013.

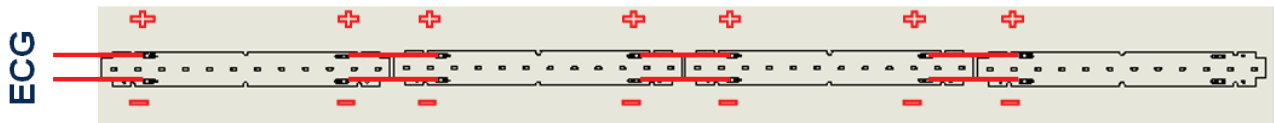
- 2s1p/4s1p/5s1p: serial connection of modules
- 2s2p/4s2p/5s2p: combined serial-parallel-connection
- Current setting via DALI wizard software and DALI magic



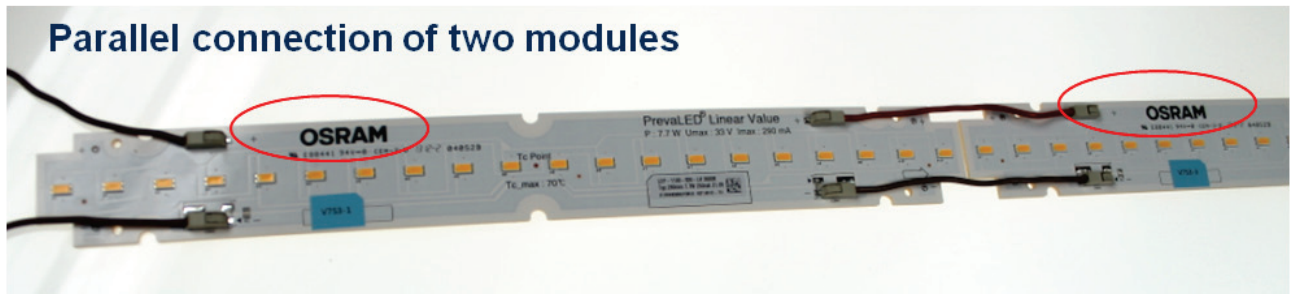
Indication only, valid for typical current, If = 125mA for 650lm, 250mA for 1100lm & 1300lm, 500mA for 2200lm.

Connection

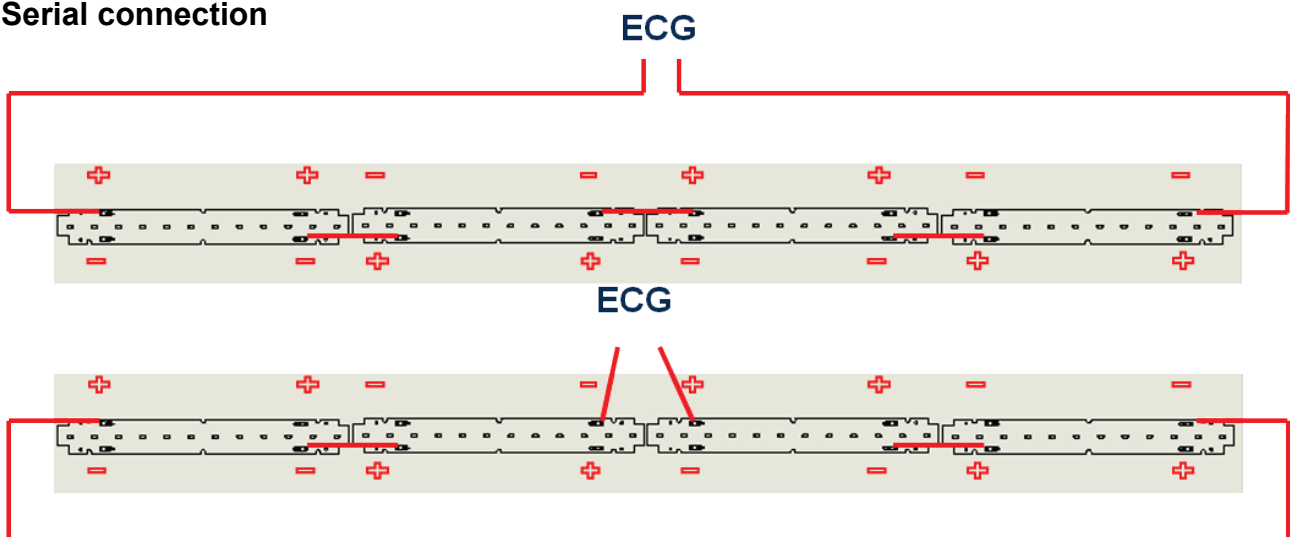
Parallel connection



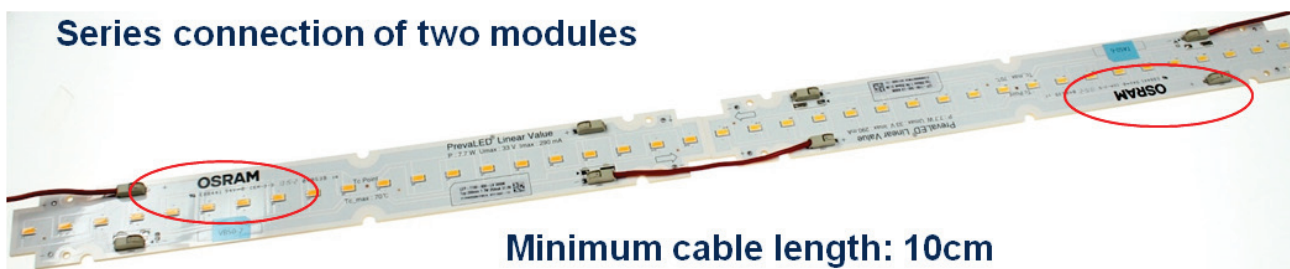
Parallel connection of two modules



Serial connection

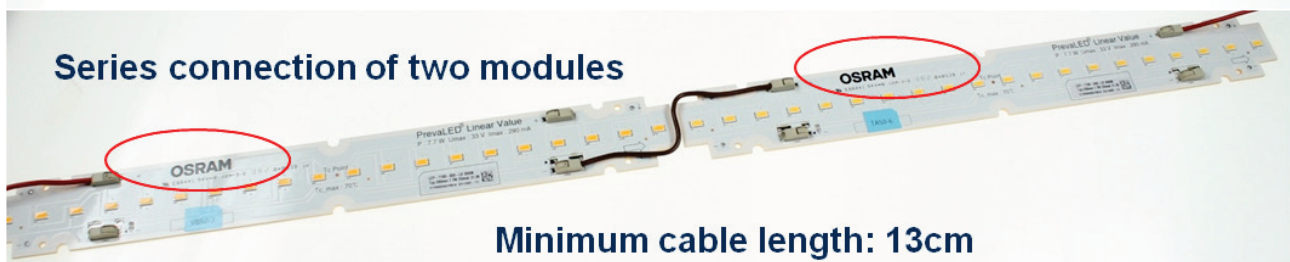


Series connection of two modules



Minimum cable length: 10cm

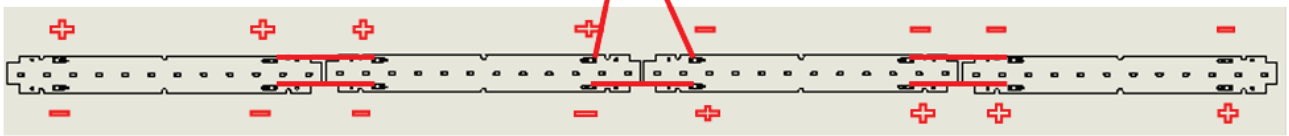
Series connection of two modules



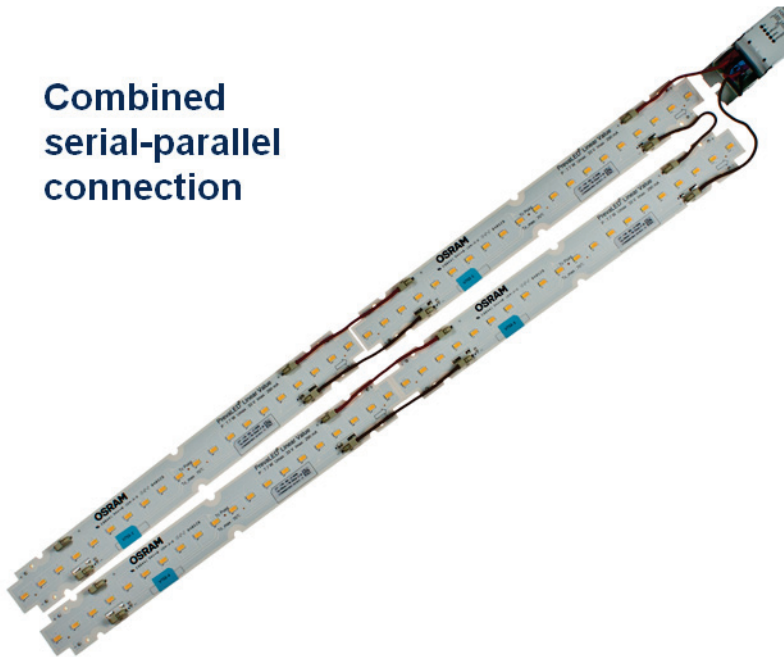
Minimum cable length: 13cm

Combined serial-parallel connection

ECG

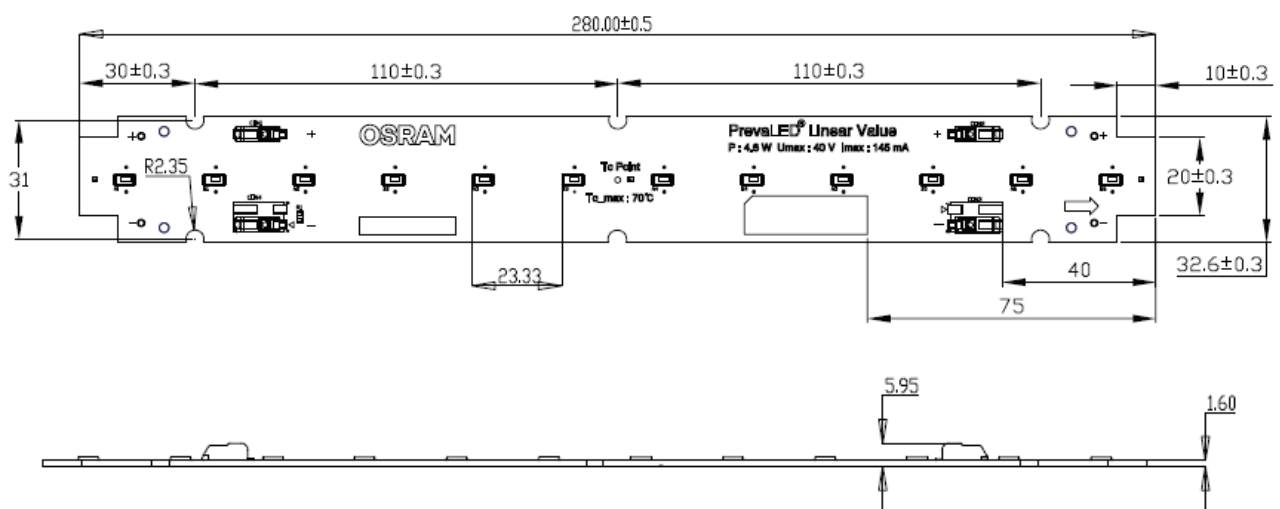


Combined
serial-parallel
connection

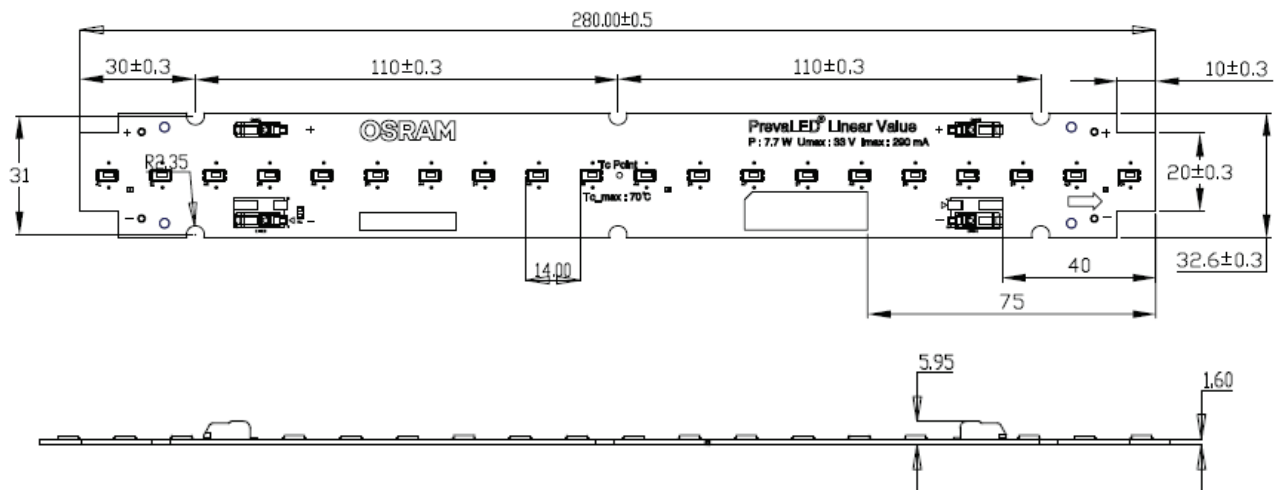


Drawings

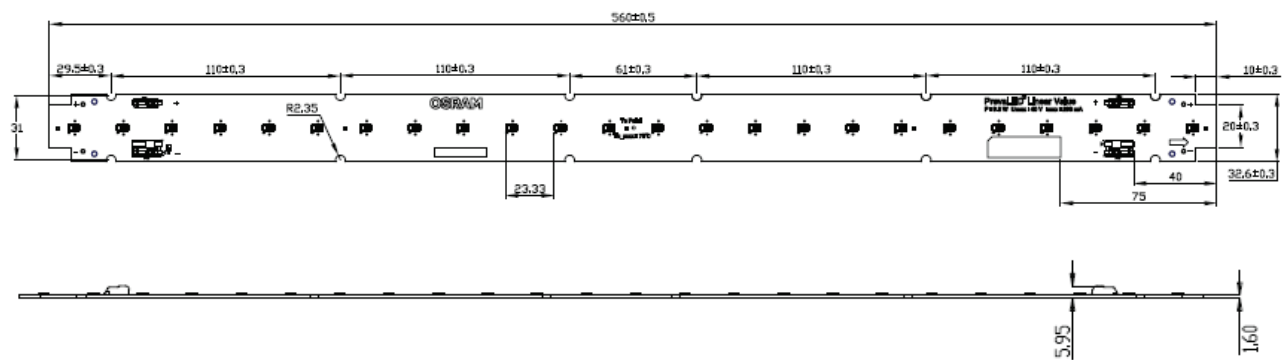
PrevaLED Linear Value: PLVZ1-LIN-650-8x0-280-DC



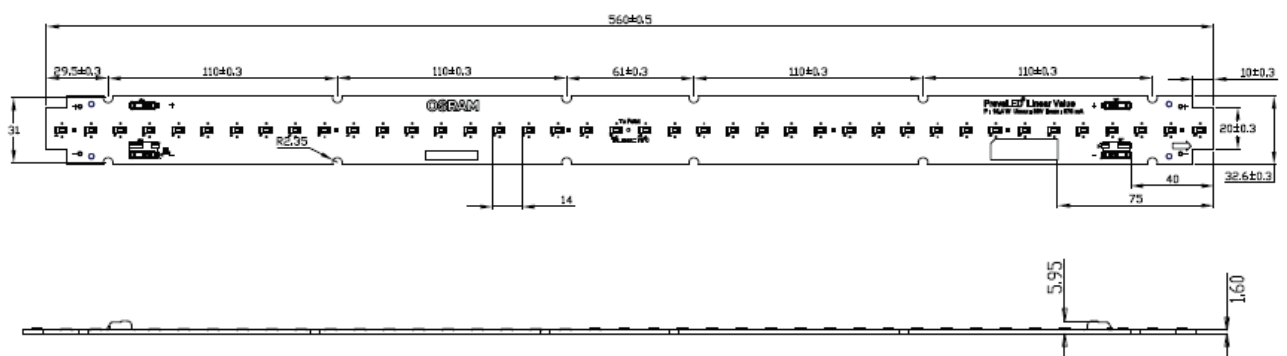
PrevaLED Linear Value: PLVZ1-LIN-1100-8x0-280-DC



PrevaLED Linear Value: PLVZ1-LIN-1300-8x0-280-DC



PrevaLED Linear Value: PLVZ1-LIN-2200-8x0-280-DC



Safety Information

- The LED module itself and all its components must not be mechanically stressed.
- When handling the module without use of mounting screws avoid excessive force on the cover as it may be separated from the PCB.
- The integrated mounting and locking mechanism on the cover of the module is intended to center and lock a reflector. Excessive force on this mechanism may cause permanent damage to the module.

The modules are intended for operation only with matching OPTOTRONIC®

To also ease the luminaire/installation approval, electronic control gear for LED or LED modules should carry the CE mark and be ENEC certified. In Europe the declarations of conformity must include the following standards:
CE: EC 61347-2-13, EN 55015, IEC 61547 and IEC 61000-3-2 - ENEC: 61347-2-13 and IEC/EN 62384.
Also check for the mark of an independent authorized certification institute.
Please see the relevant brochure for more detailed information (see "Related and Further Information")

OSRAM OPTOTRONIC® electronic control gear complies to all relevant standards and guarantees safe operation.

- Installation of LED modules (with power supplies) needs to be made with regard to all applicable electrical and safety standards. Only qualified personnel should be allowed to perform installations.
- Pay attention to standard ESD precautions when installing the module.
- Important information on photobiological safety is available in the application guide.

Assembly Information

- For optimum cooling a thermally conducting layer should be applied between module and heat sink.
- Further details and recommendation for mounting can be found in the application guide.

Ordering codes

Product name	EAN *	S-Unit **
PLVZ1-LIN-650-830-280-DC	4052899 914797	40 x 1
PLVZ1-LIN-650-840-280-DC	4052899 914810	40 x 1
PLVZ1-Lin-1100-830-280-DC	4052899 914834	40 x 1
PLVZ1-Lin-1100-840-280-DC	4052899 914858	40 x 1
PLVZ1-Lin-1300-830-560-DC	4052899 914872	40 x 1
PLVZ1-Lin-1300-840-560-DC	4052899 914896	40 x 1
PLVZ1-Lin-2200-830-560-DC	4052899 914919	40 x 1
PLVZ1-Lin-2200-840-560-DC	4052899 914933	40 x 1

*) EAN: Ordering number per single PRODUCT **) S-Unit: products per shipping unit

Note: Typical performance data are subject to change without any further notice, particularly as LED technology evolves.

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