

LUMAWISE DRIVE LED HOLDER TYPE Z50

TE Connectivity (TE)'s LUMAWISE drive LED Holder Type Z50 allows luminaire designers to remove driver boxes from spot and track lighting, creating a more aesthetically pleasing solution and removing cost from the system. The LUMAWISE drive Type Z50 brings integrated functionality to TE's already successful, Zhaga inspired, Z50 range of LED holders. Incorporating a DC/DC driver into the holder itself provides a low profile constant current driver for CoBs, spot and track lighting. Designed for 48VDC input, it works with a wide range of readily available constant voltage power supplies meaning powering multiple fixtures off a single power supply is now possible. A 0-10V dimming option adds dimmability to the holder for added functionality.



Applications

- Track Lighting
- Spot Lighting
- Downlights

Mechanical

- **Dimensions:** Ø50mm, 7mm height
- **Electrical connection:** 4-pin Mini CT connector 292228-4
- **Mechanical connection:** Mounting screws M3 or #4-40, 12mm length
- **Torque:** 0.4 - 0.6 Nm
- **LED Outline and LES size**
 - 24x24, Ø21.5mm
 - 20x24, Ø18.0mm
 - 19x19, Ø17.7mm
 - 16x19, Ø14.0mm
- **Form Factor** Zhaga Book 12 Inspired
- **CoB thickness:** Nominal 1mm
- **CoB types:** Both ceramic or aluminium types
- **IP rating:** IP20
- **Mating connector flush with housing:** Yes
- **Mating Cable Assembly:** **On/Off version:** 1-2058943-8
0-10V version: 1-2058943-7

Specifications

- **Standards:** EN60838-2-2
EN61347-2-13
UL8754
UL8750
- **Application Specification:** [114-133082](#)
- **Environmental:** RoHS and Reach compliant

Benefits

- Achieve an elegant luminaire design through a 'Driver on Board' solution
- Designed to meet the requirements of Zhaga book 12
- Provide thermal and electrical connection to four different CoB sizes:
 - 16x19mm - 20x24mm
 - 19x19mm - 24x24mm
- Achieve design flexibility with an LED holder available with four different current outputs:
 - 350mA - 700mA
 - 500mA - 1050mA
- Obtain added functionality with 0-10V dimming versions available

Materials

- Halogen free glass filled PBT housing
- FR4 circuit board
- Copper alloy electrical contacts

Electrical

- **Input voltage:** 48VDC (European class I & II, SELV and US NEC class 2. Both with isolated output)
- **Maximum input voltage:** 60V (not recommended, contact TE)
- **Output current:** 350mA
500mA
700mA
1050mA
- **Output current tolerance:** ±5%
- **Forward voltage (Vf):** 36VDC typical
- **Forward voltage (Vf) range:** **Min:** 25VDC
Max: 38VDC with 48VDC ±10% input
40VDC with 48VDC ±5% input
41VDC with 48VDC ±1% input
- **Dimming (dimming versions only):** **Source:** 0-10V
Sink: EN60929 annex E compatible dimmers
Potentiometer: At 10VDC the external resistor value is 100kΩ.
At 1VDC the external resistor value is 3.6kΩ
- **Dimming controller type:** European class I & II or US NEC class 1&2. Both with basic isolation
- **Dim to off:** No
- **Minimum dim level:** 3% of maximum output current
- **Flicker percentage:** 0% (<2% at minimum dim level)
- **Flicker index:** 0
- **Dimming curve:** Linear (see Figure 1)
- **Efficiency:** Up to 94% at maximum output (see Figure 2)
- **Reverse polarity protected:** Yes
- **Under voltage lock out protection:** **Yes:** 42VDC - 37VDC
- **Input safety:** Fused. Product fails safe when 230V applied
- **Noise:** 30dB average
- **Open/short circuit protection:** Yes
- **Soft startup:** 8ms (on/off), 90ms (dimnable)
- **Soft shutdown:** 30ms (on/off), 31ms (dimnable)
- **Sink current manifested:** Between 100µA - 300µA
- **Hot pluggable:** Yes

Thermal

- **Maximum operating temperature:** 125 °C (measured at equivalent Tc point)
- **Max Tc point temperature:** 110 °C (must not be exceeded)
- **Thermal protection mode:** **Yes:** Output reduces to 20% regardless of dimming level
- **Over temperature reset (dimmable versions):** After power cycle
- **Over temperature reset (on/off versions):** After cooling down
- **Thermal interface material:** **Recommended:** Use Laird PLC AS004444-25
- **Storage temperature:** -20 °C to 60 °C

Optical

- **Optics:** Compatible with TE's Z50 optic clip type 1 and type 2 (part numbers: 2213194-1 and 2213349-1)
- **Allowable beam angle:** 135°

Other

- **Diagnostic information:** **Yes:** Dimmable version will collect limited diagnostics. Including, firmware version, current output, initial temperature, over temperature event count, time to event and dimming level. This information is only accessible by TE
- **EMC:** IEC 61547, FCC title 47 (part 15 subpart B), CISPR15, EN55015
- **Vibration:** EIA 364-28, IEC 60512-6-4, IEC 60512-6-5
- **Mechanical shock:** EIA 364-27 (test condition H), IEC 60512-6-3
- **Thermal shock:** EIA-364-32 (test condition VIII), IEC 60512-11-4
- **Damp heat cycling:** EIA-364-31 (method III), IEC 60512-11-3, IEC 60512-11-12
- **Contact normal force:** 500 hours at 125 °C

Figure 1: Dimming curve

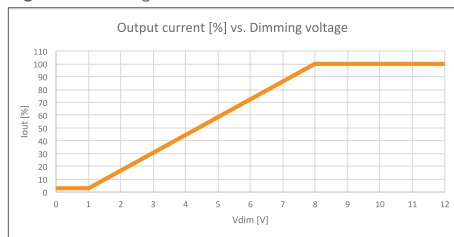
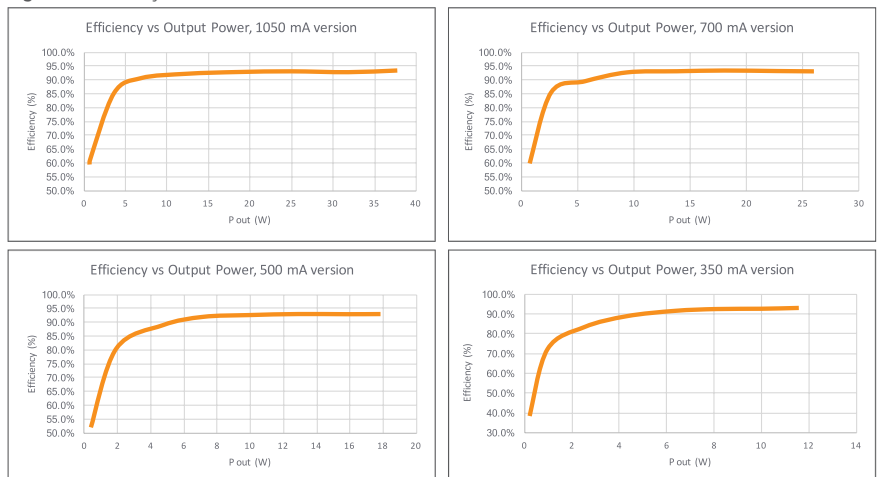


Figure 2: Efficiency



Product Selection Information - On/Off series

Series	Part Number	Description	Output Current (mA)	LED Size (mm)
On / Off	2213699-1	LUMAWISE DRIVE Z50	350	24x24
	2213699-2	LUMAWISE DRIVE Z50	350	20x24
	2213699-3	LUMAWISE DRIVE Z50	350	19x19
	2213699-4	LUMAWISE DRIVE Z50	350	16x19
	1-2213699-1	LUMAWISE DRIVE Z50	500	24x24
	1-2213699-2	LUMAWISE DRIVE Z50	500	20x24
	1-2213699-3	LUMAWISE DRIVE Z50	500	19x19
	1-2213699-4	LUMAWISE DRIVE Z50	500	16x19
	2-2213699-1	LUMAWISE DRIVE Z50	700	24x24
	2-2213699-2	LUMAWISE DRIVE Z50	700	20x24
	2-2213699-3	LUMAWISE DRIVE Z50	700	19x19
	2-2213699-4	LUMAWISE DRIVE Z50	700	16x19
	3-2213699-1	LUMAWISE DRIVE Z50	1050	24x24
	3-2213699-2	LUMAWISE DRIVE Z50	1050	20x24
	3-2213699-3	LUMAWISE DRIVE Z50	1050	19x19
	3-2213699-4	LUMAWISE DRIVE Z50	1050	16x19



LUMAWISE drive Interior

LED Holder
Type Z50

Part Number: 2316510-1
Part Number: 2213699-1



Cable Assembly

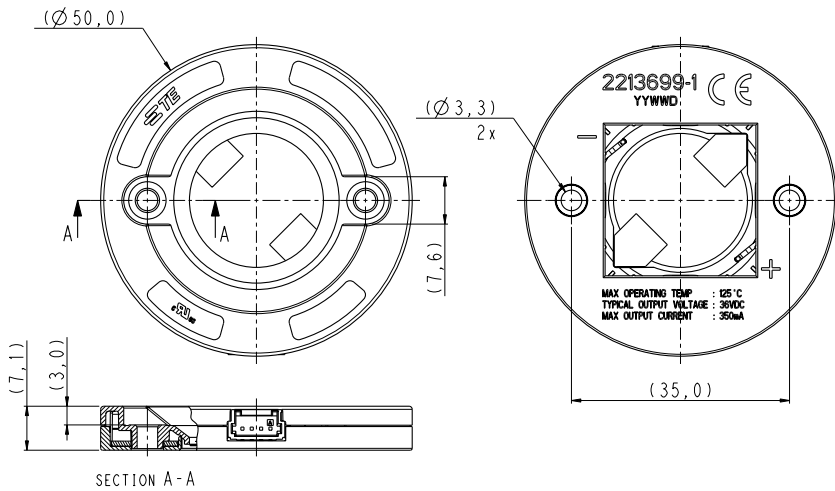
Part Number: 1-2058943-7
Part Number: 1-2058943-8

Product Selection Information - Dimmable series

Series	Part Number	Description	Output Current (mA)	LED Size (mm)
0-10V Dimmable	2316510-1	LUMAWISE DRIVE Z50	350	24x24
	2316510-2	LUMAWISE DRIVE Z50	350	20x24
	2316510-3	LUMAWISE DRIVE Z50	350	19x19
	2316510-4	LUMAWISE DRIVE Z50	350	16x19
	1-2316510-1	LUMAWISE DRIVE Z50	500	24x24
	1-2316510-2	LUMAWISE DRIVE Z50	500	20x24
	1-2316510-3	LUMAWISE DRIVE Z50	500	19x19
	1-2316510-4	LUMAWISE DRIVE Z50	500	16x19
	2-2316510-1	LUMAWISE DRIVE Z50	700	24x24
	2-2316510-2	LUMAWISE DRIVE Z50	700	20x24
	2-2316510-3	LUMAWISE DRIVE Z50	700	19x19
	2-2316510-4	LUMAWISE DRIVE Z50	700	16x19
	3-2316510-1	LUMAWISE DRIVE Z50	1050	24x24
	3-2316510-2	LUMAWISE DRIVE Z50	1050	20x24
	3-2316510-3	LUMAWISE DRIVE Z50	1050	19x19
	3-2316510-4	LUMAWISE DRIVE Z50	1050	16x19



Product Dimensions



On/Off Series

P1	DO NOT USE
P2	GROUND
P3	48Vin (+)
P4	48Vin (-) GND

Dimmable Series

P1	DIM (+)
P2	DIM (-)
P3	48Vin (+)
P4	48Vin (-) GND



TE Connectivity is a participating member of the Zhaga Consortium, an industry-wide cooperation enabling the interchangeability of LED light sources and simplifying LED applications for general lighting.

te.com

© 2017 TE Connectivity. All Rights Reserved. LUMAWISE, TE, TE Connectivity, and the TE connectivity (logo) are trademarks of the TE Connectivity. Other logos, product and Company names mentioned herein may be trademarks of their respective owners.

While TE has made every reasonable effort to ensure the accuracy of the information in this brochure, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this catalog are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.

1-1773935-6 JN 09/2017

USA: +1 (800) 522-6752
 Canada: +1 (905) 475-6222
 Mexico: +52 (0) 55-1106-0800
 Latin/S. America: +54 (0) 11-4733-2200
 Germany: +49 (0) 6251-133-1999
 UK: +44 (0) 800-267666
 France: +33 (0) 1-3420-8686
 The Netherlands: +31 (0) 73-6246-999
 China: +86 (0) 400-820-6015

