

LUMAWISE DRIVE LED HOLDER TYPE Z50 DALI-2

TE Connectivity's (TE) LUMAWISE drive LED holder type Z50 DALI-2 (Digital Addressable Lighting Interface) allows luminaire designers to remove driver boxes from spot and track lighting, creating a more aesthetically pleasing lighting solution. LUMAWISE drive LED holders bring integrated functionality to TE's already successful Zhaga inspired, range of LED holders. Driver on board design incorporates DC/DC driver functionality into the LED holder providing a low profile constant current driver well suited for COBs used in spot and track lighting applications. Designed for 48VDC input, LUMAWISE drive LED holders work with a wide range of readily available constant voltage power supplies meaning powering multiple fixtures off a single power supply is now possible. The LUMAWISE drive LED holder Type Z50 DALI-2 can be controlled with the DALI protocol. DALI lamp fixtures are intelligent, dimmable and can be controlled, monitored and maintained using a two-wire global IEC 62386 open standards communication protocol. Design DALI control into your fixture today.

Applications

- Track Lighting
- Spot Lighting
- Downlights

Mechanical

- **Dimensions:** Ø50mm, 7mm height
- **Electrical connection:** 4-pin Mini CT connector
292228-4, mating connector flush with housing
- **Mechanical connection:** Mounting screws M3 or #4-4
- **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 cable assembly:** **DALI version:** 1-2058943-7

Materials

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



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 DALI control

Specifications

- **Standards:** EN60838-2-2
EN61347-2-13
UL8754
UL8750
IEC 61547
IEC 62386:101
IEC 62386:102
IEC 62386:207
- **Product specification:** 108-133109
- **Application specification:** 114-133109
- **Environmental:** RoHS and Reach compliant

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:** $\pm 5\%$
- **Forward voltage (Vf):** 36VDC typical
- **Forward voltage (Vf) range:** **Min:** 25VDC
Max: 38VDC with 48VDC $\pm 10\%$ input
40VDC with 48VDC $\pm 5\%$ input
41VDC with 48VDC $\pm 1\%$ input
- **Dimming:** DALI functionality
- **Dim to off:** Yes
- **Minimum dim level:** 3% of maximum output current
- **Flicker percentage:** $< 5\%$
- **Dimming curve:** Both logarithmic and linear
- **Efficiency:** Up to 93% at maximum output (see Figure 1)
- **Reverse polarity protected:** Yes
- **Under voltage lock out protection:** Yes: 42VDC - 37VDC
- **Input safety:** Fused. Product fails safe when 230V applied
- **Open/short circuit protection:** Yes
- **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
After power cycle
- **Over temperature reset (dimnable versions):** After cooling down
- **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

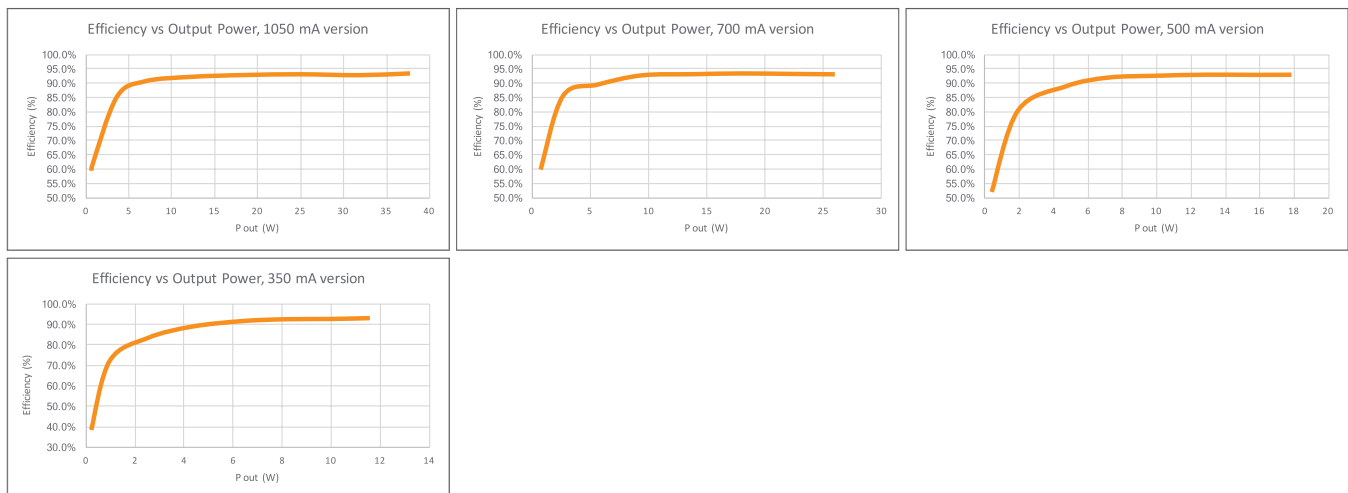
Optical

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

Other

- **Diagnostic information:** **Yes:** LUMAWISE Drive: DALI 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
- **Normal force:** 0.5 N at maximum deflection for LED contact, 0.2 N on the PCBA
- **DALI:** IEC 62386

Figure 1: Efficiency



Product Selection Information

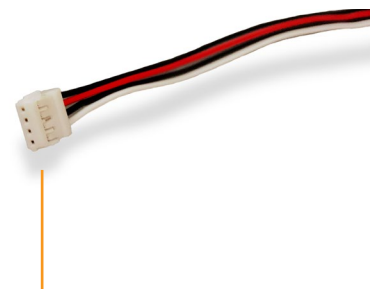
Series	Output Current (mA)	Part Number	LED / COB Size (mm)	GTIN*
 LUMAWISE Drive DALI 2.0	350	2316511-1	24x24	9421027422100
		2316511-2	20x24	9421027422117
		2316511-3	19x19	9421027422124
		2316511-4	16x19	9421027422131
	500	1-2316511-1	24x24	9421027422148
		1-2316511-2	20x24	9421027422155
		1-2316511-3	19x19	9421027422162
		1-2316511-4	16x19	9421027422179
	700	2-2316511-1	24x24	9421027422186
		2-2316511-2	20x24	9421027422193
		2-2316511-3	19x19	9421027422209
		2-2316511-4	16x19	9421027422216
	1050	3-2316511-1	24x24	9421027422223
		3-2316511-2	20x24	9421027422230
		3-2316511-3	19x19	9421027422247
		3-2316511-4	16x19	9421027422254

*GTIN (Global Trade Item Number) is a globally unique 14-digit number used to identify trade items, products, or services. The GTIN is a requirement to meet the DALI-2 standard and is, together with the part number, stored in Memory Bank 0 in the product, which can be read via the DALI interface.

LUMAWISE drive Interior

LED Holder
Type Z50 - DALI
Part Number: [2316511-1](#)

DALI Series	
P1	DA
P2	DA
P3	U+
P4	U+



Cable Assembly
Part Number: [1-2058943-7](#)



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.

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