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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# TCM-ZB-D Series

ZigBee Wireless Lighting Module  
Line Voltage Control Module with On/Off & 0-10V Dimming

Intelligent Device  
**ECOSYSTEM**

## Electrical Specifications

|                             |                                  |
|-----------------------------|----------------------------------|
| Input Voltage Range:        | 100-277Vac                       |
| Frequency:                  | 50/60 Hz Nom. (47-63 Hz Min/Max) |
| AC Relay Switched Current:  | ≤9A                              |
| AC Relay Inrush Current:    | ≤60A                             |
| Input Current Module Power: | ≤0.05A power for control only    |
| Wattage:                    | 800W Max                         |

## Environmental Specifications

|                        |  |
|------------------------|--|
| Maximum Case Temp.     | 72°C   |
| Operating Temperature: | -5°C to +50°C  |
| Storage Temperature:   | -40°C to +80°C   |
| Humidity:              | 5% to 95%  |
| Cooling:               | Convection   |
| Vibration Frequency:   | 5 to 55 Hz/2g, 30 minutes  |
| Impact Resistance:     | 1g/s   |
| EMC:                   | FCC 47CFR Part 15 Class B compliant  |
| Weight:                | 3.7oz. (105g)  |
| MTBF:                  | 418,000 Hours at full load and 40°C ambient conditions per MIL-217F Notice 2 |



- 2.4GHz, +20dBm ZigBee transmit power
- ON/OFF and 0-10V Analog Dimming Control, 100mA Sink
- Compatible with LED Drivers & Electronic Ballasts that comply with IEC60929 Annex E2, 0-10V Dimming
- ON/OFF switching up to 277Vac @9A Max
- Stores last dim setting even when driver is powered off by the module
- Dust Proof Design IP50
- ZigBee HA Certified
- Daintree ControlScope Certified
- Gray 5VA PC ABS Plastic Case
- UL Dry & Damp location rated
- Reset Button for use with recommissioning
- Designed for one module per luminaire
- UL2043 Plenum Rated for use in ceiling spaces
- 5 year warranty

### Controllers

| Model    | Description   |
|----------|---|
| TCM-ZB-D | Thomas Control Module - ZigBee Wireless Dimming Control |

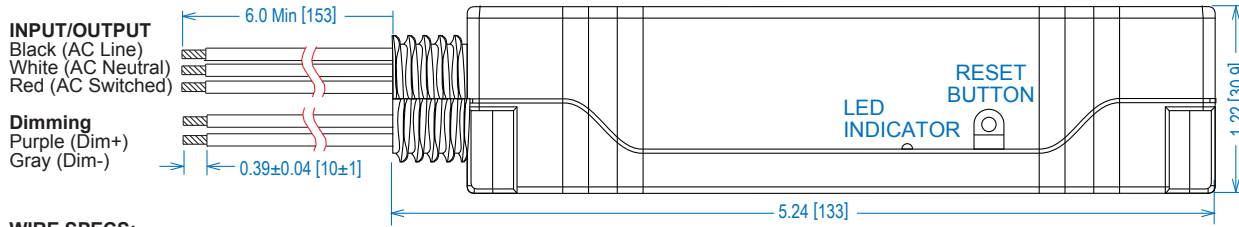
Class 2: US/Canada

| Safety Cert.                       | Standard   |
|------------------------------------|--|
| UL/CUL                             | UL8750 & CAN/CSA C22.2 No. 250.13, UL2043 Plenum Rated |
| CE                                 | EN 61347-1, EN61347-2-13                               |
| EMC Standard                       | Notes  |
| Withstand Voltage Relay            | Input to Output Across Relay Contacts: 700 Vac         |
| Withstand Voltage AC In to Dim Out | Input to DIM: >1750 Vac                                |
| Dimming Circuit                    | UL & cUL Isolated Class 2, Dim+ Purple/Dim- Gray       |
| FCC Part 15                        | Class B  |
| EN61000-4-5                        | 2kV L-N, 8/20 µsec surge protection                    |

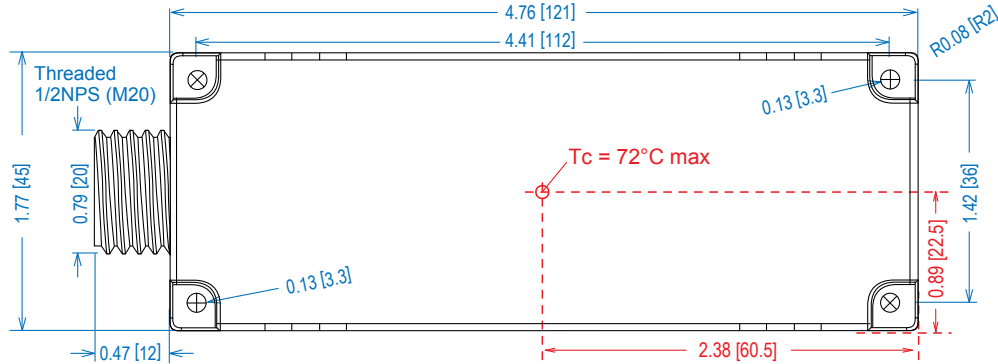
zigbee is a registered trademark of the ZigBee Alliance.  
Daintree Networks is a trademark of Daintree Networks Inc.



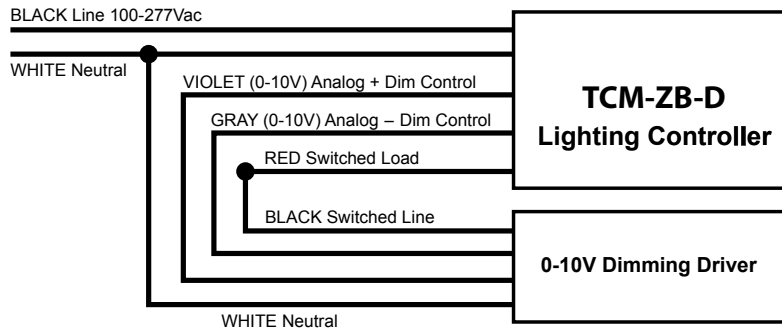
**Dimensions**



**WIRE SPECS:**  
**Input Leads:** 18 AWG, rated 600 V, 105C, min.  
**Output Leads:** 18 AWG, rated 600 V, 105C, min.  
**Dimming Leads:** 22 AWG, rated 300 V, 105C, min.  
 All wires are stranded with solder dipped ends.



**Typical Application Circuit**



**UL Conditions of Acceptability**  
 See website for additional information

**Reset Operation**

**Reset Button**

The reset button is used to un-join a Zigbee network and reset the TCM-ZB-D to factory defaults. To reset: Press and hold the reset button for 7 seconds. You will hear an internal relay click once reset occurs. The green LED indicator will flash On/Off when not joined to a Zigbee network.

**Joined**

The green LED indicator will remain ON when TCM-ZB-D has successfully joined a Zigbee network.